

VisualAge Pacbase



# Character Mode User Interface

*Version 3.0*





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*Version 3.0*

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# Chapter 1. Introduction

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## Purpose of the Manual

This Manual intends to explain the implementation, in on-line mode and in the character-mode interface, of the principles described in 'The VisualAge Pacbase Metamodel and Repository' Manual.

These principles are supposed to be known here.

The implementation via the Developer workbench is described in the Developer workbench on-line help.

---

## Use in On-line Mode

Several types of screens are available in on-line mode:

- An initial screen, where you set up your work context,
- A set of hierarchical 'MENUS' via which you can access the various screens of the System.
- A set of screens used to consult and to update the contents of the Database. Some may have several presentation options.

Some are used for consultation only. These are the lists of instances and the lists of cross-references between entities.

The instance's Definition and Description screens are used both for consultation and update.

- Comments screens.
- A screen used to request the printing or generation of instances contained in the Database.
- A screen used to execute searches on keywords.
- A screen used to view the Database update transactions.

You can access all these screen via an input in the Choice (CH:) field located in the bottom left of the screen.

---

## Principles of Description

This Manual describes some of the entities managed by VisualAge Pacbase. For each, you will find;

- An introduction which explains the purpose and the general characteristics of the entity,

- A detailed description of all the entity's input fields. These fields are assigned order numbers in the screen map. These numbers are also used in the screen description that follows.

>>>: If you use Developer workbench, refer to its on-line help.

>>>: If you use the VisualAge Pacbase WorkStation, the graphical interface of the corresponding windows is described in the WorkStation User Interface Guide (formerly WorkStation Reference Manual).

---

## Chapter 2. Initializing, Modifying and Ending Work Context

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### Initializing the Work Context

You initialize your work context on the sign-on screen, which is the first screen displayed once you have entered the transaction code of the Database you want to work in.

**Note:** This code is four characters long. It depends on the type of hardware you are working on. A transaction code is unique. You cannot connect to two different Databases with the same transaction code.

**Note:** This code is four characters long. It depends on the type of hardware you are working on. A transaction code is unique. You cannot connect to two different Databases with the same transaction code.

#### THE SIGN-ON SCREEN

- CONNECTION DATABASE

The DATABASE field displays the logical code of the connection Database. To change your work context, use the PF12 function key and enter a new transaction code.

- USER IDENTIFICATION

Each user must be identified by a personal user code and password.

You may modify this password at any time by using the two fields located at the bottom of the sign-on screen (PASSWORD MODIFICATION and CONFIRMATION fields).

After a PF12 exit from VisualAge Pacbase, a reconnection displays the USER code and the message 'ENTER YOUR PASSWORD FOR CONVERSATION RETRIEVAL'.

If the password is correct, the last-accessed screen is displayed in its context.

- LIBRARY SELECTION

You must select a library in which to work. All the Libraries of the sub-network to which the selected Library belongs may be consulted, but only the selected Library can be updated.

The value '\*\*\*' ('Inter-Library' mode) enables you to consult all the Libraries of the sub-network. However, it does not allow for any updates, except those of the Keyword Thesaurus, which is managed in the Inter-library mode by the Database Administrator. (Refer to the 'Data Dictionary' Manual).

- SELECTION OF A SESSION

If no session number is entered, the current session is selected by default.

If you want to work in a frozen session, enter the code of a frozen session followed by 'T' ('T' = Test version).

- DSMS CHANGE NUMBER

This selection is required only if the connection library is under the control of the DSMS function. If such is the case, you must enter a product code followed by a change number.

```

!
!
!00  00 0          0  00
!00  00          0 0000
!00  00 0 000 0 0 000 0 00 00 000 000
!00  00 0 0 0 0 0 0 000000 0 0 0 0
! 00 00 0 0 0 0 0000 0 00 00 0 0 0000
! 000  0 0 0 0 0 0 0 00 00 0 0 0 0000          0
!  0  0 0 000 0000 0000 0 00 00 000 00 00 00 00 00
!
!          0  00 00 000 000 0000 000 000 000
!
!          00  00000  0 0 0 0 0 0 0 0
!
!          00  0000 0 0 0 0000 0 0000
!Licensed Materials - Property of IBM      00  0 0 0 0 0 0 0 0
!(C) Copyright IBM Corp. 1983, 2001.      00  0000 000 0000 0000 000 00
!All Rights Reserved.                      3.0 V03  5655-F37
!* Trademarks of International Business Machines Corp.
!----- LICENSE GRANTED TO CGISTMRC 001 -----
!
!
!
!
!          DATABASE.....: VD03
!          USER.....: SG000 1  PASSWORD.....: 2
!          LIBRARY.....: CIV  3  SESSION.....: 2001T 4 5
!          CHANGE NUMBER...: P 6 123456 7
!          PASSWORD MODIFICATION.: 8  CONFIRMATION.: 9
!
!
! 0: C1 CH:

```

NUMLEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	8	USER CODE (REQUIRED)
		To access a database, each user must be given a user code and associated password.
		For each user code, the VA Pac Administrator defines the authorized Libraries, the actions allowed (read, update of current session, update of all sessions).
		The user code is memorized for each transaction in the journal.
		The management of user codes and access authorizations is the responsibility of the VA Pac Administrator, who can be consulted for information on each user's access authorizations.
2	8	USER PASSWORD
		The password is associated with a user code. Using blanks between two characters is forbidden.

NUMLEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		NOTE: On sites using the Security Systems Interface (RACF or TOPSECRET), passwords are managed by the Security System, not by the VA Pac user code management function.
3	3	LIBRARY CODE (REQUIRED)
		This code identifies a Library. The Library code is assigned at the time a Library is created and cannot be modified.
		Special characters are not allowed in a Library code but any alphabetic or numeric character can be used.
	***	INTER-LIBRARY MODE
		Reserved for selection of all the Libraries (referred to as 'Inter-Library' mode). This is commonly used when viewing the Database.
		SESSION
		This field is made up of the session number and the version of a session.
4	4	NUMER.
		SESSION NUMBER
		The session number represents the time scale of the Database.
		Its value is 0001 when the Database is created. It is incremented:
		-Daily, when the first user logs on (batch or on-line, for consultation, update, or program generation);
		-By certain utility procedures (see the individual utility descriptions).
5	1	
		VERSION OF THE SESSION
		The version of a session pertains to 'frozen' sessions only (no input is required when accessing the current session).
		There are two possible values:
	blank	Initial version of a frozen session (consultation only). This version will be in the same state as it was when it was frozen.
	T	Test version This is used to consult or update the test version of a previously frozen session.
		Note: Changes made to the test version of a particular frozen session do not affect any other session.
6	3	
		PRODUCT CODE/DSMS



NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			Input in this field is required when the connection Library is under the control of the DSMS (Development and Management System) function.
			It is the code of a Product whose development and follow-up is managed by the DSMS function.
			For further details, see the DSMS Reference Manual.
7	6	NUMER.	CHANGE NUMBER/DSMS
			Input in this field is required when the Database is under the control of the DSMS (Development and Support Management System) function.
			It is the Change number of the Product indicated in the previous field.
			For further details, see the DSMS Reference Manual.
8	8		PASSWORD MODIFICATION
			Enter a new password in this field. Once changed, a password is valid until it is modified
			again. NOTE: At sites controlled by RACF, passwords cannot be modified on-line.
9	1		CONFIRMATION
			The new password entered in the PASSWORD MODIFICATION field must be reentered in the CONFIRMATION field for validation.

## Defining and Initializing a Library

The creation of a new Library in the Database must be done by the Database Administrator, in two or three steps:

- First, the Database Administrator must create the Library, indicating its code, its hierarchical relationship to existing Libraries and its status (virtual or not initialized). This operation is performed by the MLIB procedure. The Administrator creates a virtual Library for future development projects and is visible to Administrators only.
- Second, the Administrator may change the virtual Library into a non-initialized Library (and change its code too) by entering a 'V' action code on the Library Definition (\*) screen, accessed by entering the following input in the CHOICE field:  
CH: \*111 ('111' = Library code)
- Third, the Administrator must initialize the Library. In on-line mode, this is done on the Library Definition (\*) screen, accessed by entering the following input in the CHOICE field:

CH: \*111 ('111' = Library code)

Only initialized Libraries can be updated.

**Note::** Even if it is possible in character-mode, you should preferably use the Administration workbench.

**Note::** Even if it is possible in character-mode, you should preferably use the Administration workbench.

### GENERAL CHARACTERISTICS

The initialization of a Library includes:

- The Library name.
- General options for the presentation of printed documentation.
- General options regarding adaptation to the operating system in use. This includes: use of single or double quotes, conversion of Data Elements' internal usages, generated COBOL variants, etc. The same application can be generated for several operating systems.
- Options to change the modification/protection of extracted entities for a given Library; once chosen, these options are permanent.

### MODIFICATION AND DELETION

Only the Database Administrator can update the Library Definition screen or delete a Library.

```

-----
!                               APPLICATION DEVELOPMENT          SG000008.LILI.CIV.1583  !
!LIBRARY DEFINITION              AN1                               !
!                               !                               !
!LIBRARY NAME.....: 1 APPLI CICS/VSAM                          !
!GENERATED LANGUAGE.....: 2 C                                   !
!TYPE OF COBOL TO GENERATE.....: 3 0                           !
!TP MONITOR AND MAP TYPE.....: 4 N                             !
!MODE OF PROGRAMMING.....: 5 P                                 !
!CONTROL CARDS IN FRONT OF STREAM....: 6                      BACK OF STREAM...: 7  !
!CONTROL CARDS IN FRONT OF PROGRAMS...: 8                      BACK OF PROGRAMS.: 9  !
!COBOL FORMATTING OPTION.....: 10                               !
!ALPHANUMERIC DELIMITER.....: 11                               !
!COMMENTS INSERTION OPTION.....: 12 0                          !
!DOCUMENTATION PAGE SKIP OPTION.....: 13 0                      !
!LINES PER PAGE IN DOCUMENTATION.....: 14 60                   !
!VERTICAL CHARACTER OF DOC. FRAME....: 15 *                    !
!HORIZONTAL CHARACTER OF DOC. FRAME..: 16 *                    !
!MODIFICATION OF EXTRACTED LINES.....: 17 A                    !
!PROTECTION OF EXTRACTED ENTITIES....: 18 A  DATES GENERATION OPTIONS...:  !
!SYSTEM DATE FORMAT INDICATOR.....: 19 I  CENTURY SYSTEM DATE : N 20  !
!DATE FORMAT IN GENERATED PROGRAMS...: 21 E  WINDOWING YEAR VALUE: 61 22  !
!DECIMAL POINT PRESENTATION CHARACTER: 23 .                    !
!                               !                               !
!O: C1 CH: *an1                               ACTION:          !
-----

```

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	36		Library name
2	1		GENERATED LANGUAGE
			This option indicates the program generation language, depending on the hardware in use.
		C	COBOL (default option).
		D	COBOL II, 85, or 370.
3	1		Type of cobol to generate
			Default option: See 'N' below.
			Automatically adapts extracted entities from higher- level libraries to the COBOL types specified.
			Extracted entities include Programs, Data Structure calls, COBOL literals, Reports with a "WRITE AFTER" or "WRITE BEFORE" mode specified, and the internal usage of Data Elements.
		0	Adaptation to ANSI COBOL: IBM MVS
		1	Adaptation to ANSI COBOL: IBM DOS
		2	Adaptation to COBOL : IBM 36

NUMLEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
	3	Adaptation to COBOL : PC/MICROFOCUS
	4	Adaptation to COBOL : BULL DPS7
	5	Adaptation to ANSI COBOL: (74) BULL DPS8
	6	Adaptation to COBOL : (BCD) BULL DPS8 Adaptation to COBOL : TP8 for OLSD screens
	8	This variant is required at the Library level to work in half-byte packed mode with UNISYS Series A or DPS8 hardware (values 5, 6 and 8 for the TYPE OF COBOL TO GENERATE on the Dialogue or Program Definition).
		IMPORTANT NOTE: If this value is entered on the Library Definition after data element formats have been defined, the element formats on the Element definition and Segment/Screen Call of Elements, including FILLERS and undefined elements, will have to be re-entered so that the lengths are taken into account.
	9	Adaptation to ANSI COBOL: UNISYS 90/30
	A	Adaptation to COBOL : (74) PRIME
	B	Adaptation to COBOL : UNISYS Series B
	C	Extraction of COBOL Source. See STRUCTURED CODE Reference Manual, chapter "APPENDIX: PURE COBOL SOURCE CODE".
	D	Adaptation to ANSI COBOL: (74) CONTROL DATA Corp.
	E	Adaptation to ANSI COBOL: (68) CONTROL DATA Corp.
	F	Adaptation to COBOL : TANDEM
	I	Adaptation to COBOL : DEC/VAX
	J	Adaptation to ANSI COBOL: PERKIN ELMER-7-32
	K	Adaptation to ANSI COBOL: ICL 2900
	M	Adaptation to COBOL : BULL DPS6
	N	No adaptation selected at this level.
		Note: With this value the user must specify the TYPE OF COBOL TO GENERATE at the Dialogue, Screen, or Program levels.
	O	Adaptation to COBOL : AS 400
	R	Adaptation to COBOL : IBM 34
	S	Adaptation to COBOL : SFENA
	T	Adaptation to ANSI COBOL: SIEMENS

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		U	Adaptation to ANSI COBOL: (74) UNISYS 1100 Series
		V	Adaptation to ANSI COBOL: UNISYS 90/60
		W	Adaptation to COBOL : DPPX IBM 8100
		X	Adaptation to ANSI COBOL: IBM MVS VS COBOL II
		Y	Adaptation to COBOL : IBM 38
4	1		TP MONITOR & MAP TYPE
		blank	Not valid on the Library Definition screen.
			For other screens: the default value (Library value; Dialogue value).
		N	No generation
			OLSD FUNCTION
			TP MONITOR
		0	Variants 0, 1, X for CICS (IBM) (programs and BMS maps).
			Variant 2 for IBM 36, monochrome map.
			Variant 3 for PC/MICROFOCUS (MS/DOS).
			Variants 4, 5, 6 for QUESTAR.
			Variant I for DEC/VAX.
			Variant U for UNISYS 2200 (programs and FLDP maps).
			Variant 8 for UNISYS Series A SDF format.
			Variant Y for IBM 38.
			Variant O for AS 400.
			Variant M for GCOS6-DTF-DFC-Vision.
			Variant 7 for VPLUS.
		1	Variants 0, X for IMS (IBM) (programs and MFS maps).
			IMS (IBM) (programs and MFS maps).
			Variant 2 for IBM 36, map in color.
			Variant 3 for PC/MICROFOCUS (OS2).
			Variants 4, 5, 6 for VIP TYPE.
		2	Variants 0, 1, X for CICS (IBM), BMS map in color.
			Variant 3 for MICROFOCUS (UNIX).
		3	Variants 0, X for IMS (IBM), MFS map in color.
		4	Variants 0, 1, X for IMS (IBM) monitor.
			Variant 3 for IBM VISUALAGE COBOL program.

NUMLEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
	5	Variants 0, 1, X for CICS (IBM) monitor.
	C	Variants 4, 5, 6, U for MULTI-TERMINAL.
		Variants 0, 1, X for CICS MULTI-TERMINAL.
		Variant K for ICL.
		Variant 8 for UNISYS Series A Logical Screen.
	F	Variant 4 for TDS FORMS (BULL GCOS7).
		Variant M for DM6 TP FORMS.
		Variant R for 'TPSVRINIT service' type Program or 'TPSVRDONE service' type Program.
	R	Variant F for 'REQUESTER' type Program. or variant R for 'CLIENT' type program.
	S	Variant F for 'SERVER' type program. or variant R for 'SERVICE' type program.
		PACBENCH CLIENT/SERVER
		TP MONITOR
	0	Variants 0, X for CICS (IBM) (Program and BMS map for the client).
		Variant 3 for MICROFOCUS MS/DOS.
		Variant F for TANDEM Pathway.
		Variant R for TUXEDO.
		Variant 7 for VPLUS.
		Variant U for UNISYS-2200.
		Variant 8 for UNISYS-A.
	1	Variants 0, X for IMS.
		(program and MFS map for the client).
		Variant 3 for MICROFOCUS OS/2.
		Variant F for TANDEM TUXEDO.
		Variant 8 for UNISYS-A Open/OLTP.
	C	Variants 0, 1 for MULTI-SCREEN CICS or variant X for CLIENT ONLY.
		Variant 4 for MULTI-SCREEN GCOS7.
		Variant 5 for MULTI-SCREEN GCOS8.
		Variant R for TUXEDO (from release 6.2 and TUXEDO (from release 6.2 and higher).

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		2	Variants 0, X for CICS (IBM) (program and BMS color map). Variant 3 for MICROFOCUS UNIX.
		3	Variants 0, X for IMS (program and MFS color map). Variant 3 for MICROFOCUS.
		4	Variant 3 for IBM VISUALAGE COBOL.
5	1		MODE OF PROGRAMMING
		P	Default value when creating a Library. Programming in Structured Code on '-P' lines (Procedural Code).
		S	Cobol generator (in conjunction with the Reverse Engineering function)
			Specific procedures composed of Source Code (-SC) and Procedural Code (-P).
			With this value, the Type and structure of Program field must also be 'S'.
		8	Programming with '-8' type of lines.
			Used only to maintain applications written with former VisualAge Pacbase versions.
			The value entered on the Definition line of the Library is channeled down by default to the Definition line of a Program when it is created.
			At the Program level, the programming type can be modified.
			The combination of '-P' and '-8' lines called in the same Program, either directly, or via Macro-structures, is rejected.
6	1		CONTROL CARDS IN FRONT OF STREAM
			Option code of the set of job control cards to be inserted at the beginning of the generated stream.
			At the library level this option represents default options to assign to the generated streams (Database Blocks, Screens, Programs, or Data Structures) when they are created.
			These sets may be overridden by options specified with the flow control commands (FLB, FLO, FLP, FLD).
7	1		CONTROL CARDS IN BACK OF STREAM
			Option code of the set of job control cards to be inserted at the end of the generated stream.

NUMLEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		At the library level this option represents default options to assign to the generated streams (database blocks, screens, programs, or data structures) when they are created.
		These sets may be overridden by options specified with the flow control commands (FLB, FLO, FLP, FLD).
8	1	CONTROL CARDS IN FRONT OF PROGRAMS
		Enter the one-character code that identifies the job card to be inserted before the generated program.
		Default: Code entered on the Library Definition Screen
		NOTE: This value may be overridden on the relevant entities' Definition screens. It may also be overridden at generation time.
9	1	CONTROL CARDS IN BACK OF PROGRAMS
		Enter the one-character code that identifies the job card to be inserted after the generated program.
		Default: Code entered on the Library Definition Screen
		NOTE: This value may be overridden on the relevant entities' definitions screens. It may also be overridden at generation time.
10	1	COBOL FORMATTING OPTION
		This option specifies whether or not generated programs (batch or on-line) from a given Library will be formatted.
	blank	No formatting (Default option).
	Y	Formatting of generated COBOL requested. Programs will be formatted as follows:
		.Indentation of DATA DIVISION fields according to their hierarchical level. .One COBOL instruction per line in the PROCEDURE DIVISION. .IF statements are indented within (sub-)functions.
		NOTE
		With the Batch Systems Development Function, this option cannot be modified at the program level: all batch programs generated from the same library will either be formatted or not, depending on the value entered in this field.



NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			With the On-Line Systems Development Function or Pacbench C/S, this option can be modified for a given Dialogue. Refer to ON-LINE SYSTEMS DEVELOPMENT Manual, chapter 'Description of a Transaction', subchapter 'Dialogue Complement' and to the PACBENCH C/S Business Logic and TUI Clients Manuals, chapter 'TUI Clients', subchapter 'Dialogue Complement'.
11	1		ALPHANUMERIC DELIMITER
			This is the character used to delimit alphanumeric literals in COBOL programs generated by the system.
			Depending on the value in the TYPE OF COBOL TO GENE- RATE field, the default option will be a single quote ('), or a double quote (").
			NOTE : If you keep these default options, the single and double quotes, if any, included in the Data Element clear names will appear as blanks in the Screen Call of Elements (-CE).
12	1		COMMENTS INSERTION OPTION
		Y	The titles and frames of (sub-)functions as well as the inserted comments ('*' operator) are present in the generated COBOL. Moreover punctuation is automatically calculated for comment lines which do not include a block type. The block type of the next processing is then taken into account for this calculation.
		S	The titles and frames of (sub-)functions as well as the inserted comments ('*' operator) are ignored at generation time.
			You can use the two following values but you are advised to use one of the two values presented above.
		O	Same as the 'Y' value, except for the Batch Function in which the punctuation of comments is not calculated ; it varies according to the block type present on these lines.
		N	Default option when the Library is created. Same as the 'S' value, except for the Pacbench C/S and OLSD Functions, in which the inserted comments lines ('*' operator) are included in the generated COBOL.
13	1		DOCUMENTATION PAGE SKIP OPTION
			VA Pac generates standard reports depending on the generation and/or printing requests. These reports are composed of sub-reports.

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			This option is used to control page breaks for each of these sub-reports.
		O	No page skip between sub-reports (Default option when a library is defined).
		N	Page skip: each sub-report will begin on a new page.
14	2	NUMER.	LINES PER PAGE IN DOCUMENTATION
			PURELY NUMERIC FIELD
		60	This field is used for all the System documentation, including User Manuals. Default option (when a Library is defined).
15	1		VERTICAL CHARACTER OF DOC. FRAME
			Used to modify the frame that surrounds the documentation printed by the system.
			When the Library is created, the vertical character is set to blank.
			If you leave it to blank, it will be transformed into an asterisk ("*") when the document is printed.
			If you enter any other value different from blank, this value will be taken into account when the document is printed.
16	1		HORIZONTAL CHARACTER OF DOC. FRAME
			Used to modify the frame that surrounds the documentation printed by the system.
			When the Library is created, the horizontal character is set to blank.
			If you leave it to blank, it will be transformed, when the document is printed: . into an asterisk ("*") if the vertical character is an asterisk. . into a dash ("-") if the vertical character is neither an asterisk nor a blank.
			If you assign the horizontal character any value different from blank, this value will be taken into account when the document is printed.
17	1		MODIFICATION OF EXTRACTED LINES
			As a default option, the modification of Definition or Description lines originating from higher-level Libraries is not allowed.
			However, when a single system runs in a multi-hardware environment, it may be useful to modify certain extracted entities.

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		N	Default option No modification in this Library of entities in a higher-level library.
		A	Modification of entities in higher-level Libraries is authorized in this Library; the higher-level Library must have the value "A" in the PROTECTION OF EXTRACTED ENTITIES field.
			Deletion of higher-level entity lines is not possible.
			WARNING
			Once this field has been set to "A", it cannot be reset to "N".
18	1		PROTECTION OF EXTRACTED ENTITIES
		N	Modification is not authorized. Redefinition of entities in this Library is not allowed. Extracted entities are protected.
		A	Modification is authorized from lower-level Libraries as long as the Library concerned has the value "A" in the MODIFICATION OF EXTRACTED LINES field.
			NOTE: Changes made in the lower-level Library are not reflected in the higher-level Library.
			WARNING
			Once this field has been set to "A", it cannot be reset to "N".
19	1		SYSTEM DATE FORMAT INDICATOR
			For IBM hardware:
			This option is used to indicate the position of the day and month in the system date. It is used for date operations in the Structured Code function.
		N	Machine date obtained in the format 'day-month-year'.
		I	Machine date obtained in the format 'month-day-year'. (Default option when a Library is defined.)
			For other hardware:
			This option cannot be used. Date operations will be executed in a unique way.
			NOTE: This field cannot be used to indicate the position of day and month in the date field used for printed documentation; this is obtained with a parameter in the Database Restoration (REST) procedure.
20	1		CENTURY SYSTEM DATE
			This option enables you to make sure that the System Date indicates the century in the generated applications.

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		N	USING COBOL II OR COBOL 85: Default value at the creation of the Library. If the year is smaller than the value entered in the WINDOWING YEAR VALUE field, it is prefixed by 20. If it is greater, it is prefixed by 19.
		C	USING COBOL II OR COBOL 85 COMPATIBLE YEAR 2000: Direct retrieval of the System Date including the century according to the COBOL capabilities.
		W	USING OTHER COBOLS: A value is set for the century as with the 'N' value.
21	1		Date format in generated programs
			When using the On-Line Systems Development function or the Pacbench C/S facility, this field specifies the date format to be used in generated programs.
		E	MM/DD/YY format.
		F	DD/MM/YY format.
22	2		WINDOWING YEAR VALUE
			Reference year for calculation of century during a Date transformation containing only the year.
			This calculation is done in the following cases: . The System Date does not include the century. The calculation is explained in the DATE GENERATION OPTIONS field and is performed with the 'N' or 'W' value in this same field. . Use of a date transformation operator The calculation mode depends on the operator used.
		61	Default value at the creation of the Library.
23	1		DECIMAL POINT PRESENTATION CHARACTER
			When using the On-Line Systems Development function or the Pacbench C/S facility, this field specifies the character to be used as the decimal separator.
		.	Period. Example: 1000.00.
		,	Comma. Example: 1000,00.

**NOTE::**

LIBRARY: ACCESS MODE

LIST OF LIBRARIES

CHOICE	SCREEN	UPD
LC*aaa	List of Libraries by code (starting with Library 'aaa')	NO

LN*aaa	List of Libraries by name (starting with Library 'aaa')	NO
CHARACTERISTICS OF LIBRARY 'aaa'		
CHOICE	SCREEN	UPD
*aaa	Definition of Library 'aaa'.	YES
*aaaGCbbb	Comments on the 'aaa' Library (starting with line number 'bbb').	YES
*aaaXQbbbbb	List of occurrences linked to the 'aaa' Library through the 'bbbbbb' User Relation.	NO
*aaaCR	Occurrences linked to the 'aaa' Library through User Relations.	YES

---

## Modifying the Work Context

Once the work context has been initialized on the sign-on screen, the following data is displayed at the top of each accessed screen:

- The name of the selected library,
- The DSMS change number, if the Database is under the control of DSMS,
- The user code, preceded by an asterisk (\*) or a plus sign (+) which indicates the user authorization level:
  - '\*' if updating is authorized,
  - '+' for a Database Administrator.
- The transaction code,
- The code of the selected library,
- The session number, followed by:
  - 'H' when consulting a frozen session,
  - 'T' when consulting the test version of a frozen session.

You can modify the work context at any time of the conversation, within the limitations of your access authorizations.

To modify:

- the Library, enter N\*bbb in the choice field ('bbb' is the code of the new Library). This choice can be entered simultaneously with the following one and/or can be followed by any choice.
- the session, enter NHsssv in the choice field ('sssv' is the session number and 'v' is the version of the session). This choice can be entered simultaneously with the preceding one.
- the Product code / Change number, enter NCpppnnnnnn ('ppp' is the Product code and 'nnnnn' is the Change number).

The Product code must be left-justified, with one or two "&" if it contains less than three characters. The Change number must also be entered left-justified but with no need to add some "0" if it contains less than six characters.

EXAMPLE: if the Product code is P and the Change number is 2330, you must enter, in the choice field: NCp&&2330.

If you enter the NC choice without any Product code or Change number, you can work in a Library / session environment which is not under DSMS control. Transactions will then be recorded in the Journal without any DSMS references.

---

## Modifying the Display

### MODIFYING THE DISPLAY

By default you can see the data coming from your connection Library and from its higher Libraries.

You can change the view of the sub-network, that is you can display the data which comes from lower Libraries, or all the Libraries of the sub-network, or only the selected Library.

You can change the view of the sub-network via the operation code (O: ) located in the lower left-hand corner of the screen.

The OPERATION CODE is made up of two characters:

- The first character indicates which part of the sub-network (to which the selected Library belongs) will be viewed.
- The second character indicates the requested screen presentation option. There can be up to four options (numbered from 1 to 4) corresponding to four different presentations of the same screen.

WARNING: update is possible with some presentations only (C1 generally).

The following table lists all the possible values for the first character of the OPERATION CODE.

OPERATION	MEANING
Cn*	Display of lines from the selected Library and from higher-level Libraries. If duplicate lines are found, those of the lower-level Library only are displayed. This is the normal view of a selected library. It is the Default value.
In*	Display of lines from all the sub-network Libraries.
Un*	Display of lines from the selected library only.

OPERATION	MEANING
An*	Identical to 'Cn', with display of duplicate lines.
>1	Display of lines from higher-level libraries only.
<1	Display of lines from lower-level libraries only.
Zn*	Display of lines from the selected library and from lower-level libraries.

\* n=1, 2, 3 or 4 (see the description of each entity).

---

## Closing the Work Context

You close the work context, that is the transaction, by entering FT in the operation code. You will then return to the sign-on screen.

In this case, or if you clear the screen, the current conversation is NOT saved.

If the system is set up to use function keys, an exit with a save can be executed (normally using PF12). The message "CURRENT CONVERSATION IS SAVED" will be displayed.

To resume the 'saved' conversation, simply enter the transaction code.





---

## Chapter 3. Screen Branching

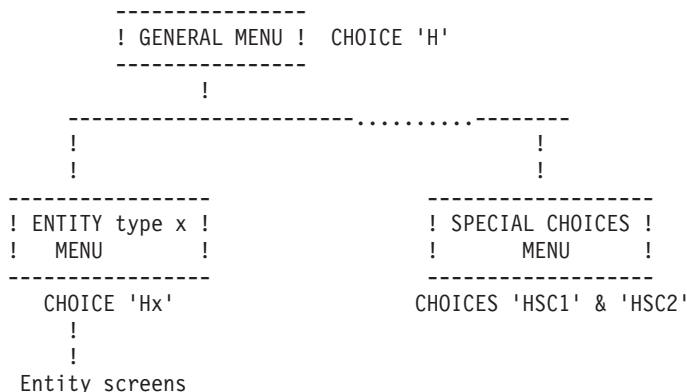
---

### From the General Menu to the Entity Menu

You can access the screens directly through the CHOICE field if you know the explicit CHOICES ('expert' mode).

If not, you can browse through the System's hierarchical menus to access the various screens, and also become familiar with the explicit CHOICES for all entities, which are listed on the various menus.

Two levels of menus are available:



#### NOTE

There is sometimes a third level of menus. Generally, this level concerns the lists available for an entity type.

#### THE GENERAL MENU

You access the General Menu:

- by entering 'H' in the CHOICE field,
- from the sign-on screen, by pressing ENTER with no input in the CHOICE field,
- via a PFkey (PF5 is standard or CH: .5).  
(Assignment of PFkeys is site-dependent.)

The General menu displays the list of entities available at a site, and the corresponding CHOICE for access to each entity sub-menu.

Special sub-menus display the Program Function Key (PFkey) assignments and lists of Special Choices.

A sub-menu may be accessed by positioning the cursor on the desired sub-menu line and pressing ENTER. (An instance code may be indicated on the line; it will be displayed on the instance definition line on the sub-menu).

If the cursor position is not supported by the hardware in use, sub-menus may be accessed by entering a slash '/' in the input field of the corresponding line and pressing ENTER.

### SUB-MENUS

Sub-menus can be accessed in two ways:

- by entering 'Hx' in the CHOICE field, 'x' being the entity type (Example: 'HT' will display the Text sub-menu),
- by positioning the cursor (or entering a '/') on the desired line of the General Menu (see above).

Each sub-menu displays a list of all the screens available for the entity, and the corresponding CHOICE for each screen.

A screen may be accessed by positioning the cursor (or entering a '/') on the desired line and pressing ENTER. The entity code must be entered in the input field if it was not entered at the (sub-)menu level; optional input of an additional key, such as a line number is also possible.

It can also be accessed by entering the corresponding choice.

---

## Accessing the Definition of an Instance

You can access an entity type (ex: Text entity, Data Element entity...) or directly an instance (ex: text "TEXT1", Data Element "DELCO"...).

**NOTE:** To know how to find an instance which already exists in the Repository, refer to Chapter "Search for Instances".

**NOTE:** To know how to find an instance which already exists in the Repository, refer to Chapter "Search for Instances".

To select an entity (in order to create an instance), you simply have to enter the character which represents the entity type in the choice field (ex: "T" for Text entity, "E" for Data Element entity...) and to validate. The empty Definition screen of the requested entity will then appear and you will have to fill it in.

To select an instance, you must enter, in the choice field, the entity type directly followed by the instance code (ex: "Ttexte1", "Edelco" ...). You will then access the instance Definition screen.

If a blank is included in an instance code (possible with a retrieval of old versions), you must replace the blank with a '&'.

From the Description screen of an instance, you simply have to enter "-" in the choice field to go back to the Definition screen.

---

## Accessing the Description of an Instance

From the Definition screen, you can scroll through an entity's family of screens (if they are not empty).

**Note:** All the available choices are listed in the Pocket Guide.

**Note:** All the available choices are listed in the Pocket Guide.

You can also access the desired screen directly, by entering, in the choice field:

- entity type + instance code + specific choice (ex: Ttext1 D, Edelco D),
- or '-' + specific choice (ex: -D) if you have already accessed the instance.

Entering just '-' in the CHOICE field returns to the entity Definition screen.

The CHOICE field is used to access the various screens of an entity.

Most CHOICES branch to an entity's work screens. You can enter a simple or more detailed choice, for example:

entity type + instance code only or

entity type + instance code + Description + line number.

Once an entity has been selected, the combination 'entity type/instance code' can be replaced with a '- '.

The contents of the CHOICE field are validated one against the other, for example: if the entity type is 'S' (Segment entity), the entity code must be four characters.

Blanks may be used to separate the entries in the CHOICE field (at least one). A blank(s) is required if, for example, the entity code is less than its maximum length (a 5-character Data Element code, for example).

Example: Cross-references of Data Element 'da' to On-Line Screen 'SCREEN' are accessed via CHOICE:

.Eda XO SCREEN, or

.E da XO SCREEN, etc...

When a blank is to be taken into account, it must be replaced by an '&'. To access paragraph 'A' of text 'AB C', use choice: 'TAB&C D&A', for example.

The most frequent choices are detailed below. It's assumed that the entity has already been accessed.

There are several types of descriptions:

1. Call of other entities (for example: the Segment Call of Elements; the Screen Call of Segments). The corresponding CHOICE is '-Cx', where C = call and 'x' = type of entity to be called.
2. Description specific to the entity.  
'EdateleD' (or -D) is used to access the Description screen of the data element 'datele'.
3. Comments. Accessed via the choice -GC.
4. Cross-references. Accessed via the choice -Xs (where x is the type of the cross-referenced entity).

---

## Accessing On-Line Help

### BRANCHING TO THE ON-LINE HELP

The on-line help makes the system easier to use in on-line mode.

Two types of HELP documentation are available:

- Screen HELP: Describes the purpose of the screen, general characteristics, and its uses;
- Input field HELP: Describes coding rules, possible values, and error messages.

#### A. SCREEN HELP:

Two methods may be used in order to request Screen HELP:

- Enter '?' in any ACTION CODE field on the screen,
  - Press the ENTER key.
- Press the PF4 key.

## B. INPUT FIELD HELP:

Two methods may be used in order to request Input Field HELP:

- Enter '?' in the ACTION CODE of the line which contains the input field,
  - Enter '?' in the first position of the input field,
  - Erase end of field,
  - Press the ENTER key.
- Enter '?' in the first position of the input field,
  - Erase end of field,
  - Press the PF4 key.

**NOTES::** A '?' in the ACTION CODE field inhibits update of the line which contains it.

If you want to request on-line HELP documentation on an input field located on the same line as an input field which already contains a '?', you must first erase this '?'. Since update is inhibited, this operation will not affect the Database.

Any VA Pac screen may be accessed from a HELP screen via input in the CHOICE field.

### RETURN TO THE INITIAL HELP SCREEN

To return to the initial HELP screen, enter a dash ('-') in the CHOICE field.

### RETURN TO THE INITIAL ENTITY SCREEN

To return to the the initial entity screen from a HELP screen, enter 'END' in the CHOICE field.

**NOTE::** 'END' is automatically displayed in the CHOICE field of the last HELP screen.

**NOTE::** 'END' is automatically displayed in the CHOICE field of the last HELP screen.

If you have viewed only one help screen, you can return to the initial screen by entering 'JP' in the CHOICE field.

### RETURN TO THE ENTITY DEFINITION SCREEN

To return to the entity definition screen, enter an underscore ('\_') in the CHOICE field.

---

## Other accesses

Besides the accesses presented previously, you can:

- Access the Journal (CH: JO). This is documented in chapter 'Journal Consultation'.
- Access the generation-print commands screen (CH: GP). This is documented in chapter 'Generation-print'.
- Access the screen previously displayed (CH: JP),
- Access the following screen (CH: JF),
- Access the same screen (CH: JI).

### Screen memorization

You can store or 'memorize' screens and recall them when you need them. You can store up to nine screens.

The screen is stored until the end of the transaction or until a new screen is memorized using the same operation code.

The data actually stored is the 'key' of the screen, which means that a modification affecting the contents of the memorized screen is taken into account when the screen is recalled.

To memorize a screen in its current state, enter in the operation field:

O: Mx (x = 1 to 9).

You can simultaneously enter a choice in the choice field.

Then to recall the screen, enter in the operation field:

O: Rx.

You can also use function keys or choices from R1 to R3.

When a screen is recalled, the contents of the choice field are ignored.

If no screen has been memorized, the message: EMPTY SCREEN MEMORY is displayed.

---

## Chapter 4. Search for Instances

---

### Searching by Keywords

#### Keywords Management

##### Implicit and Explicit Keywords

The thesaurus groups all the existing keywords.

Implicit keywords are included in the thesaurus in the following way:

- Blanks within the NAME are considered as delimiters. All the characters other than digits or letters are replaced with blanks ;
- Works with more than 13 characters are truncated ;
- Only the first ten words are taken into account ;
- Words of only one characters are ignored ;
- A certain number of words are ignored ( THE, AN, AND, OR OF, IS, ARE, OUT, IN, NOT, AT, BUT, IT, ON, NO et IF), and their French equivalents ( LE, LA, LES, UN, UNE, DES, ET, OU, SUR, EST, DE, DU, NE, NI and EN ).

The Database Manager may define empty words by declaring them synonyms of the "\*" keyword. No search can be done on these empty words.

Explicit keywords are assigned under the following conditions:

- Keywords must be separated by a blank ;
- Keywords cannot be longer than 13 characters ;
- A maximum of 10 keywords can be entered.

**Note:** Modifications made to explicit keywords (in the EXPLICIT KEYWORDS field on the Entity Definition screen) do not change the instance's last update session.

##### Updating the Thesaurus

You can create keywords and/or assign them synonyms in the 'K' screen, titled 'Keyword Enrichment of Thesaurus'.

You can view this screen in any Library but you can update it in inter-library mode (\*\*\*) only.

**Note:** Uppercase is automatically applied to all keywords.

**Note:** Uppercase is automatically applied to all keywords.

## Keyword creation and definition

Once you have created a new keyword, you may give it a definition, which can then be consulted by users who need explanations. This may prove helpful in case of codes, abbreviations, or words specific to an application.

Also, keywords may be used as a tool to categorize instances according to your own criteria.

For example, you can define keywords which correspond to the various development phases of an application, such as "VAL" meaning "To be validated", "OK" meaning "Ready for Production", etc.

## Synonym Assignment

When a keyword is assigned a synonym, it means that instances that have this synonym as keyword are found by a search using the principal keyword as only criterion.

For example, you can assign several synonyms to the keyword "VAL": "Validation", "Validate"... This eases the coding rules of keywords.

You can assign one or more synonyms to a keyword (maximum 9 synonyms per line).

Building a 'synonym chain' is not allowed. For example, if 'A' is a principal word, with words 'B' and 'C' as synonyms, it is not possible to use word 'B' or word 'C' as principal words, nor is it possible to attach 'B' or 'C' to another principal word.



```

-----
!          PURCHASING MANAGEMENT SYSTEM           SG000008.LILI.CIV.1583 !
! KEYWORD ENRICHMENT OF THESAURUS                 !
!          !                                       !
!  1  2           3  4  5                             !
! A KEYWORD      C : T SYNONYMS OR DEFINITION        !
! *             : S REPORT SCREEN LIST PROGRAM      !
!  PRODUCT      : S GOODS                           !
!  VENDOR       : S SUPPLIER PRODUCER MANUFACTURER  !
!               :                                     !
!               :                                     !
!               :                                     !
!               :                                     !
!               :                                     !
!               :                                     !
!               :                                     !
!               :                                     !
!               :                                     !
!               :                                     !
!               :                                     !
!               :                                     !
!               :                                     !
!               :                                     !
!               :                                     !
!               :                                     !
!               :                                     !
!               :                                     !
!               :                                     !
!               :                                     !
!               :                                     !
!               :                                     !
! *** END ***                                       !
! O: C1 CH: K                                       !
-----

```

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	1		ACTION CODE
		C	Creation of the line
		M	Modification of the line
		D	Deletion of the line
		A	Deletion of the line
		T	Transfer of the line
		B	Beginning of multiple deletion
		G	Multiple transfer
		?	Request for HELP documentation
		E or -	Inhibit implicit update
		X	Implicit update without upper/lowercase processing
2	13		KEYWORD
3	1		CONTINUATION LINE
			You must enter a continuation line if a line exists already for a keyword (even if the type of this line differs from that of the line you want to enter).

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			To enter a continuation line, enter the keyword to which it refers and then an alphabetic or a numeric character in this field. The lines will be sorted by this code, alphabetic characters preceding numeric characters.
4	1		TYPE OF LINE
		D	Definition.
		S	Synonym.
5	55		Synonym or definition
			With TYPE OF LINE = 'D': You may enter here a definition for the keyword, explaining its meaning.
			With TYPE OF LINE = 'S': Enter a synonym for the keyword (9 synonyms maximum per line).

### Keywords List

Before carrying out a search by keyword, if you are not sure which keyword(s) to use, you can display the keywords list (LCKaaaaaaaa, choice, where aaaaaaaaa is a keyword), sorted in alphabetical order.

The number of uses of each keyword is indicated in the 'USES' field.

The keywords and associated information entered on the 'Keyword Enrichment of Thesaurus' screen (accessed via the value 'K' in the choice field) are also displayed.

This list is for consultation only. To create or modify a keyword, go to the 'Keyword Enrichment of Thesaurus' screen.

```

-----
!                               PURCHASING MANAGEMENT SYSTEM          SG000008.LILI.CIV.1583 !
! LIST OF KEYWORDS BY CODE                                           !
!                               !                                       !
! USES KEYWORD                KEYWORD INFORMATION                    !
! *                            *** INSIGNIFICANT KEYWORDS ***      !
! 4 ----                      !                                       !
! 2 -NUMBER                    !                                       !
! 1 AADA10                     !                                       !
! 1 AAER                       !                                       !
! 1 AAOPF1                     !                                       !
! 1 ABEND                      !                                       !
! 1 ACCESS                     !                                       !
! 1 ACCOUNT                    !                                       !
! 3 ACTION                    !                                       !
! 1 ACTIVITY                   !                                       !
! 4 ACTUAL                     !                                       !
! 24 ADABAS                   !                                       !
! 4 ADD                        !                                       !
! 7 ADDRESS                   !                                       !
! 11 AGENCY                   !                                       !
! 1 AID                       !                                       !
! 2 ALTERNATE                 !                                       !
!                               !                                       !
! 0: C1 CH: LCK              !                                       !
-----

```

## Word Search Screen

The WS screen enables you to search for instances via a search argument which can be:

- Word(s) that make up the instance's name (i.e., implicit keywords), and their synonyms,
- Explicit keywords, and their synonyms.

### GENERAL CHARACTERISTICS

A search by keyword is normally performed on all the entities of the Library sub-network, selected via the OPERATION CODE (O:). The scope of the search can be limited to a particular entity type, by entering the desired entity type in the ENTITY TYPE "ENT:" field (for ex.: 'E' for Data Element).

The appropriate keyword or combination of keywords is indicated in the SEARCH ARGUMENT field (third input field).

It is possible to restrict the search to either explicit or implicit keywords only, using the following values in the SELECTION OF KEYWORD TYPE 'SEL:' field:

- 'L' = Implicit keywords and synonyms,
- 'M' = Explicit keywords and synonyms.

Several keywords may be used as a search argument, using the operators 'AND' or 'OR' (any other operator between keywords is ignored).

- 'AND' Operator (represented by a 'blank')
- 'OR' Operator : ( represented by the '=' sign)
- Both the 'AND' and 'OR' Operators:

No search is done on empty words.

Keywords' synonyms are included in the search.

If the character string used as the search argument ends with an asterisk (\*), the search will look for all keywords starting with that character string.

**EXAMPLE::** If 'PURCHAS\*' is entered in the SEARCH ARGUMENT field, the word search will look for all instances which begin with these letters. For example: PURCHASING (policy), PURCHASE (order), PURCHASED (item), etc.

**EXAMPLE::** If 'PURCHAS\*' is entered in the SEARCH ARGUMENT field, the word search will look for all instances which begin with these letters. For example: PURCHASING (policy), PURCHASE (order), PURCHASED (item), etc.

### LIMITATION

If a child Data Element has no name (i.e. the name is indicated on the parent Data Element), a search on this name only gives the parent Data Element.

### NOTE

From the search result screen, you can access the Definition of the found instances by placing the cursor on the desired line and by using a function key (standard: PF10).

```

-----
!                               PURCHASING MANAGEMENT SYSTEM            SG000008.LILI.CIV.1583 !
!WORD SEARCH                                                         ENT: 1 SEL: 2          !
!DATE 3                                                                !
!                               !                                       !
!TYPE   CODE   CLEAR NAME AND EXPLICIT KEYWORDS                                LIBR. !
!ELEM.  DATEV  DATE VALIDATION                                  X(8)  *CEN  !
!PROGR. CVRSD  CONVERSION OF ONE DATE                                  *CEN  !
!                               !                                       !
!                               !                                       !
!                               !                                       !
!                               !                                       !
!                               !                                       !
!                               !                                       !
!                               !                                       !
!                               !                                       !
!                               !                                       !
!                               !                                       !
!                               !                                       !
!                               !                                       !
!                               !                                       !
!                               !                                       !
!                               !                                       !
!                               !                                       !
!                               !                                       !
!                               !                                       !
!*** END ***
!CH: WS
-----

```

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	3		ENTITY TYPE
			A keyword search can be done by entity type.
		blank	All entities.
		B	Database Block.
		D	Data Structure.
		E	Data Element.
		F	Meta Entity.
		I	Parameterized input aid.
		M	PACMODEL.
		O	Screen, C/S Screen, Business Component, Folder (View), Monitor.
		P	Program.
		Q	User-Defined Relationship.
		R	Report.
		S	Segment, Logical View.
		T	Text.
		U	User Manual.

NUMLEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
	V	Volume.
	\$	User Entity.
	\$tt	'tt'-type User Entity.
2	1	SELECTION OF KEYWORD TYPE
	blank	This generates a search through names (implicit keywords), explicit keywords, and synonyms.
	L	This search is limited to implicit keywords and their synonyms,
	M	This search is limited to explicit keywords and their synonyms.
3	79	SEARCH ARGUMENT
		This field is used to indicate the word or words to be used as the search argument (or criterion).
		A blank between two words indicates that the search will be done on the first word AND on the second, i.e., both words must appear for a match.
		The equal sign ('=') between two words indicates that the search will be done on the first word OR on the second, i.e., either word must appear for a match.
		The asterisk ('*') at the end of a character string allows a search of all words beginning with the same string of characters. For example, to search for all words beginning with 'AT', enter 'AT*'. NOTE: It is possible to combine logical operators AND (blank) and OR ('='). EXAMPLE: 'DATA BASE=ELEMENT'.

## Access Modes

CHOICE	SCREEN	UPD
LCKaaaaaaaaaaaa	List of keywords (starting with keyword 'aaaaaaaaaaaa').	NO
Kaaaaaaaaaaaaaa	Enrichment of the Thesaurus	YES
WS	Word Search (using a search argument entered on the 'WS' screen).	NO

## Print Commands

**LCK:** List of keywords. You may limit the Keywords to explicit or implicit only.

**LCK:** List of keywords. You may limit the Keywords to explicit or implicit only.

The number of times each Keyword is used and its synonyms are also printed.

NOTE The maximum number of Keywords and Synonyms per list is 500.

.C1 OPTION: Only option.

**DCK:** This command provides the same list as above, plus the Keywords Definitions.

.C1 OPTION: Only option.

---

## Search by Lists

All the instances which exist in the Database are referenced in lists.

According to the entity types, various lists are available.

To obtain a list, enter, in the CHOICE field:

- An 'L' as the first character of the CHOICE,
- A character specifying the type of list (by code, by type, by name, etc.),
- The entity type.

EXAMPLES: LCD = List (by code) of Data Structures,  
LTT = List (by type) of Texts.

A list of instances sorted by code is available for any entity, with CHOICE: LCx (x = the entity type).

Entities with specific types or external names can be listed as follows:

- LTx = List (by type) of entity 'x',
- LNx = List (by external name) of entity 'x'.

The list by code (LCx) is available for all entities, the list by type (LTx), for all entities having a type.

From a list screen, you can access the Definition of one of the instances of the list by placing the cursor on the desired line and by using a function key (standard: PF10).

---

## Search by Cross-References

Cross-references are accessed by entering '-Xx' where 'x' = entity type.

**EXAMPLE:** 'EddddddXP' (or -XP if you have already accessed the instance) displays the cross-references of Data Element 'dddddd' to Programs ('P').

**EXAMPLE:** 'EddddddXP' (or -XP if you have already accessed the instance) displays the cross-references of Data Element 'dddddd' to Programs ('P').

CHOICE '-X' displays all the cross-references of the instance, beginning with the first cross-referenced entity.

From this screen, you can access the screen on which the reference was created by placing the cursor on the desired line and by using a function key (standard: PF10).



---

## Chapter 5. On-Line Updating

---

### Possible Update Actions

An instance is normally updated in the library where it is defined. (It is possible to modify an entity in a library other than the one in which it has been defined if the options for the modification/protection of extracted entities allow it.)

Any update of an instance is reflected in all of the uses of that instance. For example, if a Data Element format is modified, this will be reflected automatically in any Segment Call of Elements containing that Data Element.

Only users who have update authorization in a Library can do on-line updates, and in certain screen presentations only (usually with a C1 Operation Code).

Lines are updated directly on the screen. There are two different types of updatable screens:

- The DISPLAY type screen (entity definition),
- The LIST type screen, which displays several occurrences of the same line (entity descriptions).

Updating (creation, modification, deletion) is done by entering an ACTION CODE (optional) and then modifying the relevant fields.

On a DISPLAY type screen, there is a single ACTION CODE field located at the bottom of the screen. On LIST type screens, there is an ACTION CODE field in the left margin of each line.

There are two categories of ACTION CODES:

.Explicit Action Codes

.Implicit Action Codes

(see below).

#### INHIBITING ALL UPDATES (IMPLICIT & EXPLICIT)

A special CHOICE enables you to request that both implicit and explicit updates entered on a displayed screen be ignored by the System:

CH: .NT

## UPDATE RESULT DISPLAYED ON THE SCREEN

The type of updates performed are indicated to the user (in the bottom righthand corner of the screen) when the updated screen is re-displayed, or even if another CHOICE was entered.

### EXAMPLE

C 1 M 2 D 3

which indicates that there was One Creation, Two Modifications, and Three Deletions.

### IMPLICIT UPDATE

The system default option is implicit update, in which case it is not necessary to enter an Action Code.

A screen line is considered to be an update transaction if the line received by the system is different from the one previously entered. In this case, the transaction is considered a Creation or Modification depending on whether or not the key exists for the line concerned.

There is no implicit deletion.

In order to inhibit an implicit update on a screen line, enter "E" or "-" in the ACTION CODE field.

It is also possible to inhibit the implicit updates entered on the displayed screen lines by using a specific PFkey (standard: PF7 or CH: .7). In this case, only EXPLICIT Action Codes are taken into account, if entered.

### EXPLICIT UPDATE

Explicit update can be chosen as a default option (refer to the Database Restoration (REST) procedure in chapter "DATABASE MANAGEMENT"). In this case it is necessary to enter an Action Code (see paragraph "ACTION CODE VALUES" below).

Explicit update can also be requested via the following CHOICE:

CH: .NU (NO update).

This option applies only to the terminal on which it has been entered. It remains valid as long as the terminal is connected to the System (exit other than 'CLEAR').

To return to Implicit update, enter the following CHOICE:

CH: .U (Update).

### **Values of the Action Code**

- .C = Creation of the line
- .M = Modification of the line
- .D or A = Deletion of the line
- .T = Transfer of the line
- .B = Beginning of multiple deletion
- .G = Multiple transfer
- .L = End of multiple deletion or multiple transfer  
(see paragraph "Multiple Deletion" below and Chapter "Text Editing Facilities", Subchapter "Line Transfer").
- .? = Request for HELP documentation
- .E or - = Inhibit implicit update
- .X = Implicit update without upper/lowercase processing (on certain lines only)

There are other Action Codes which relate to the editing facility. They are described in chapter "Text Editing Facilities".

### MULTIPLE DELETION

On all updatable LIST type screens, it is possible to delete several lines without having to enter a "D" in the ACTION CODE field of each line.

Multiple deletion begins on the first line with the value 'B' in the ACTION CODE field, and ends on the line with the value 'L' in the ACTION CODE field, or on the last line displayed on the screen if an 'L' is not entered.

Multiple deletion operates the same way either in Implicit or Explicit update mode.

If there are lines that should not be deleted between the "B" and "L" lines, the deletion must be inhibited by entering an "E" in the ACTION CODE field of these lines. Creations or modifications can also be specified by entering a 'C' or 'M', respectively, in the ACTION CODE field of the relevant lines.

### ACTION CODES AUTOMATICALLY ASSIGNED BY THE SYSTEM

In some cases, the System automatically assigns Action Codes to some entity description lines:

- Comment line indicating the 'parent' Data Element when viewing the 'child' Data Element, Call of Macro- Structures when viewing procedure lines (Action Code: '\*'),
- Lines that originate from a higher-level library (Action Code: '.'),
- Call of an entity description: Segment in a Segment, Screen in a Screen (numeric Action Code indicating the level of the call: 1, 2 or 3).

Since these lines do not belong to the displayed entity, they cannot be modified unless the MODIFICATION OF EXTRACTED LINES is authorized in both the library where these lines were created and in the library where they are displayed. In this case, an update is taken into account by changing the ACTION Code value, or by entering a 'blank' (for implicit update) in the ACTION CODE field.

### Copying an Instance

Each type of line is identified by a logical key. The structure of this key varies, depending on the screen: for example, on an entity Definition, it is the instance code, on Description and Comments screens, it is the instance code plus a line number.

The System takes the contents of these keys into account in order to identify the lines to be updated. Thus, the indication of these key fields is required for updating.

Since the key is an updatable field, it is possible to copy lines from one instance to another instance of the same entity by overtyping the key. In so doing, lines can also be modified at the same time.

Displayed lines can only be copied one page at a time. After an update, you remain on the same screen, except if you have specified a choice.

For Programs and On-Line screens, it is possible to copy Structured Code (-B, -W, -P) lines from a Program (P entity) to a Screen (O entity) and vice-versa.

### Validation Processing and Error Messages

Two types of validations are executed:

- Intrinsic validations, which verify that the contents of a line are valid;
- Correspondence validations, which verify that the creation or deletion of a line does not conflict with the existence or absence of other lines when an explicit Action Code is used.

In particular, for each instance, the System checks for the existence of the instance in the current Library, and sends a warning if it already exists in a parallel Library.

Validation rules are enumerated in the detailed descriptions of each screen.

Validations and updates are processed line-by-line and stop at the first erroneous line. An error message and an 'E' or 'W' is displayed in the ACTION CODE field if the screen is a LIST type screen.

Modified lines which precede the erroneous line are taken into account, and there is a 'blank' in their ACTION CODE fields.

The 'E' ACTION CODE, which is generated by the system after the screen is received, inhibits the updating of the erroneous line. The system will process all the other lines as if they had an implicit ACTION CODE; therefore they can be modified.

Once the erroneous line is corrected, the 'E' in the ACTION CODE field must be deleted or replaced by an explicit ACTION CODE.

#### 'WARNING TYPE' ERROR MESSAGE

When a 'warning type' error message is displayed, the letter 'W' appears in the ACTION CODE field. You may ignore the warning by pressing the ENTER key.

'W'-type error messages are specific to the List of Elements for Update (LUE) screen and to the Structured Code operators.

### **Priorities Among Update Actions**

When working with the different update screens, you can perform different actions: update, request on-line help, exit from the transaction...

The System processes these various possibilities according to the priority assigned to each one. The following hierarchy applies in descending order of priority (the (END) indicates that processing ends with this command):

- Exits from the system (clearing the screen, exit) (END),
- Update (explicit or implicit),
- Text editing request (duplication or insertion of lines) (END),
- Help request (END),
- Processing screen 'recalls' (R1 to R9) (END),
- Explicit choice (via PFkeys or entry in the CHOICE field).

EXAMPLE:

On a LIST type screen, if you modify a line, request help and line duplication all at the same time, the processing sequence will be as follows (if the CHOICE field has been entered):

- Update of the modified fields,
- Display of updated screen with duplicated lines, re- maining requests are still displayed,
- Duplicated lines are updated,
- Processing of documentation request,
- After consultation of help, return to initial screen via 'END' in the CHOICE field,
- If you modified the line on which you requested help, this modification will NOT be taken into account.

---

## Consultation of Session Discrepancies

One particular consultation mode allows for the direct display of differences between two sessions (MASTER/SLAVE) of a Database for a given instance.

It also enables you to align a SLAVE session with the MASTER session by updating the SLAVE session according to the differences detected in the MASTER session.

This facility is available on all LIST type updatable screens for all entities, except the Report Layout (R...L) and the Meta Entity Call of Elements (F.....CE) screens.

### IMPLEMENTATION

The SLAVE session is the session in which you are working (i.e., the logon session or the session obtained via CHOICE: NHnnnnv).

On the desired instance screen in the SLAVE session, the CHOICE:

CH: .D nnnnv ('nnnnv' = the MASTER session)

simply displays the differences between the two sessions.

With CHOICE:

CH: .M nnnnv ('nnnnv'= the MASTER session)

you can modify the SLAVE session based on the differences detected in the MASTER session.

It is possible to consult all entities, on all list-type update screens, with two restrictions (see notes below).

### RESULTS

The resulting screen displays the lines which have been created, modified, or deleted in the MASTER session. (The screen display is identical for either '.D' or '.M'). Each line contains the corresponding ACTION CODE ('C', 'M', 'D') for subsequent update of the SLAVE session via the CHOICE '.M nnnnv'.

The display is identical for the two possible choices, '.M' or '.D', but updates are ignored if the choice is '.D'.

Differences are detected within lines corresponding to the secondary CHOICE of the entity. For example, '-W' and '-P' lines of a program will have to be processed separately by this on-line facility.

The OPERATION CODE is forced to 'U1', except on the 'O.....L' (screen labels descriptions) screen with 'C2' in the OPERATION CODE field. In this case, it is forced to 'U2'.

When the last difference is displayed, the System displays the following message:

"END OF DIFFERENCES ON THE CRITERION..."

After the transmit, the System displays the Definition Screen.

When no difference is detected, it displays a blank screen.

## NOTES

Options .M and .D are operational on screens called by the following choices:

Programs : P.....B, -CP, -CD, -SC, -W, -P, -8, -9, -GO  
Screens : O.....B, -CP, -CS, -CE, -W, -P, -GE, -GG, -GO  
Data El. : E.....D, -GE  
Segments : S....SS, -CE, -GE, -GG, -GO  
DBD Blocks : B.....DH, -DC, -DR, -DT, -GG, -GO  
Texts : T.....D  
(Y-type lines are ignored)  
Volumes : V.....D  
Reports : R.....D, -L, -CE  
PIAs : I.....D  
All '-GC' Comments lines.

---

## **Instance Lock**

On the Definition of the locked instance, the LOCK field in the bottom right-hand corner of the screen displays the lock type (see paragraph 'Lock Type' below), the code of the user who locked it and the code of the Library in which it is locked.

Instances can be locked via the LL screen, title 'LIST OF LOCKED ENTITIES'. This screen displays the list of the instances locked by only one user. It is accessed via the following CHOICE:

CH: LLuuuuuuuuLttt

where uuuuuuuu = user code and ttt = entity type

Both codes are optional. If you do not enter them, the LL screen displays the instances that you locked. You can only update the LL screen which corresponds to your user code, except if you are the Database Administrator. The user code of the LL screen is displayed in the top right corner of the screen, in the USER field.

**Note:** In the case where the MODIFICATION OF EXTRACTED LINES is authorized in a Library, the update lock is effective in dependent Libraries even if the instance is redefined in these Libraries.

**Note:** In the case where the MODIFICATION OF EXTRACTED LINES is authorized in a Library, the update lock is effective in dependent Libraries even if the instance is redefined in these Libraries.

The code of the user who created the lock is displayed on the locked instance Definition, in the 'Lock' field.



```

-----
!                      APPLICATION DEVELOPMENT              SG000008.LILI.CIV.1583  !
!LIST OF LOCKED ENTITIES                                USER : SG000008         !
!1 2 3                      4                      5                      !
!A TY CODE                    NAME                  NEW OWNER          LIBR !
! 0  SGCLNT                  CLIENT SCREEN        1536               !
! S  SG10                    CLIENT FILE            1536               !
! $1A FRGR1A D1             CLIENT FILE UPDATE   1583               !
! T  TEXSG2                 COMMENTS              1451               !
! T  TEXSG3                 INVENTORY            1451               !
!                              !
!                              !
!                              !
!                              !
!                              !
!                              !
!                              !
!                              !
!                              !
!                              !
!                              !
!                              !
!*** END ***
!CH: LLsg000008
-----

```

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	1		ACTION CODE
		C	Creation of the line
		M	Modification of the line
		D	Deletion of the line
		A	Deletion of the line
		T	Transfer of the line
		B	Beginning of multiple deletion
		G	Multiple transfer
		?	Request for HELP documentation
		E or -	Inhibit implicit update
		X	Implicit update without upper/lowercase processing
2	3		ENTITY TYPE
			Type of locked entity.
		M	Method.
		T	Text.
		E	Data Element.

NUMLEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
	D	Data Structure.
	S	Segment.
	I	Parameterized Input Aid.
	B	Database Block.
	O	Screen, C/S Screen, Business Component, Folder (View), Monitor.
	R	Report.
	P	Program.
	U	User Manual.
	V	Volume.
	\$tt	User Entity.
	Q	User Relation.
	F	Meta Entity.
3	30	CODE ENTITE
		The user enters the code of the locked entity in this field.
4	36	ENTITY NAME/COMMENTS
		Default value: Name of the locked entity.
		Otherwise, this field can be used to enter the reason why the entity is being locked.
5	8	NEW OWNER
		This field is reserved for users with a level '4' authorization and the user who 'owns' the entity.
		These users can override the displayed User Code with another User Code. In this case, the overridden line will disappear from the screen; it will appear on the 'LL' screen of the User Code entered.

---

## Chapter 6. Text Editing Facilities

---

### Introduction

While working on-line, you may encounter some editing problems such as the following:

- Program maintenance very often implies insertion of many lines of Structured Code in a specific place within a program,
- The line numbering sequence initially adopted may not allow additional input of new data without having to renumber existing lines,
- When a new code is given to a Data Element, the old code must be overridden with the new one wherever it is used,
- When entering text lines, you may unintentionally omit a word(s). After proofreading, the word(s) will have to added.

All of these problems can be solved with a series of relatively simple manipulations, which could be time-consuming depending on the problem at hand.

In order to easily solve this type of problem, the System offers some 'global' on-line editing facilities which generally fall into two categories:

- The first involves character string processing (for example, search for global or step-by-step substitution). The automatic renumbering of all or part of an entity description and character insertion can also fall into this category. These text editing facilities generally involve a direct update of the database (except for searches) via a global command in the CHOICE field.
- The second category involves insertion of new lines starting from a given line number, either by duplication of existing lines or addition of blank pre-formatted lines, and the line transfer and delete operation. These text editing facilities generally involve an initial transmission with a command in the ACTION CODE field to obtain the screen to be updated.

---

### Search / Replacement of character Strings

You can use the commands for the search / replacement of character strings on:

```
Text      : T.....D
Program   : P.....B, -CP, -P, -SC, -W, -9
Screen    : O.....B, -CP, -P, -SC, -W
```

On all the screens where text editing facilities can be used, the length of the CHOICE field is increased in order to allow input of often lengthy editing commands.

### CHARACTER STRING SEARCH

In order to perform a character string search, the following command should be entered in the CHOICE field:

- '.S',
- followed by a delimiter character (this can be a 'blank'),
- the character string to be searched,
- a closing delimiter (identical to the initial one).

EXAMPLE: CH: .S STRING

(In this example, the 'blank' is the delimiter)

After ENTER is pressed, the character string on which the search is being executed appears on the first line of the screen returned by the system, if it is found. In this case, the command in the CHOICE field is not erased, and you simply have to press ENTER key again to continue the search.

If the character string is not found, a message is displayed on the same initial screen:

"CHARACTER STRING NOT FOUND".

Modifications can be made on the screen when the search command is being used, and they will be taken into account (refer to chapter 'On-Line Updating', subchapter 'Update Actions', paragraph 'Priority in the Update Actions').

It is possible to execute a search using beginning/ending keys. For more detailed information, see paragraph "USING LIMITS".

When beginning/ending keys are not specified, the search begins on the line following the top line of the screen and ends:

- For Text, with the last description line,
- For Programs ('P') and Screens ('O'):
  - On the Work Areas (-W) screen: with the last group of lines which have the same CODE FOR PLACEMENT,
  - On the Procedural Code (-P) screen: with the last line of the function,
- For the Program Pure COBOL Source Code (-9) screen: with the last '-9' line,

- For the Program Source Code (-SC) screen: with the last line of the function.

### REPLACING A CHARACTER STRING

Two types of replacement are possible:

.Step-by-step replacement,

.Global replacement.

### STEP-BY-STEP REPLACEMENT

In order to perform a step-by-step replacement, the following command should be entered in the CHOICE field:

- '.C1',
- followed by a delimiter (any character),
- the character string to be replaced,
- followed by another delimiter (use same character as above),
- the new character string,
- followed by a closing delimiter (same character).

EXAMPLE: CH: .C1/aaaaaaaaa/bbbbbbbbbb/

(In this case, the slash ('/') is the delimiter).

After the ENTER key is pressed, the system displays the first occurrence of the character string to be replaced on the first line of the screen, and at the bottom of the screen the display is as follows:

- '>' as an implicit ACTION CODE followed by the modified line.
- The following message is also displayed:  
"PRESS 'ENTER' TO CONFIRM SUBSTITUTION"  
You can ENTER, change the line before ENTERing, or reject the substitution (with an 'E' in the ACTION CODE, or with a PFkey (standard: PF7 or CH: .7).

After ENTER is pressed:

- The substitution is performed,
- The next occurrence of the character string to be replaced is displayed at the bottom of the screen (if it exists),
- The CHOICE field is not erased: simply press the ENTER key to continue the substitution operation. When the screen is returned, the updated line does not appear, the display shows the next character string to be replaced.

If the character string is not found, the following message is displayed:

"CHARACTER STRING NOT FOUND".

A step-by-step replacement operation can be performed using beginning/ending keys. For more information, see paragraph "USING LIMITS".

When beginning/ending keys are not specified, a step-by-step replacement starts on line 2 of the display (the first line is reserved to display the preceding replacement) and ends:

- For Text, with the last description line,
- For Programs ('P') and Screens ('O'):
  - On the Work Areas (-W) screen, with the last '-W' line (replacement is possible only on text found in the WORK AREA DESCRIPTION field of the screen).
  - On the Procedural Code (-P) screen, with the last '-P' line,
  - On the Macro-structure calls (-CP) screen, with the last '-CP' line,
  - On the Program Beginning Insertion (-B) screen, with the last '-B' line,
- For the Program Pure COBOL Source Code (-9) screen, with the last '-9' line.
- For the Program Source Code (-SC) screen, with the last '-SC' line.

**NOTE:** No substitution is performed on Text Description lines of type "I" or "J".

### GLOBAL REPLACEMENT

In order to perform a global replacement, you should enter in the CHOICE field:

.'.C2',

.followed by a delimiter (any character),

.the character string to be replaced,

.followed by another delimiter (use same character as above),

.the new character string,

.a closing delimiter (same character).

EXAMPLE: CH: .C2/cccccc/dddddd/

After pressing ENTER, all substitutions are performed and the system displays a message specifying the number of substitutions and the number of lines affected:

'n SUBSTITUTIONS ON n LINES'

When beginning/ending keys are not specified, a global replacement starts on the top line and ends:

- For Texts ('T'): with the last line of the paragraph;
- For Programs ('P') and Screens ('O'):
  - On the Work Areas screen ('-W'): with the last group of lines which have the same CODE FOR COBOL PLACEMENT (Replacement is possible only on text found in the WORK AREA DESCRIPTION field of the screen).
  - On the Procedural Code (-P) screen: with the sub-function to which the current line belongs.
  - On the Macro-structure calls (-CP) screen, with the paragraph mark,
  - On the Program Beginning Insertion (-B) screen, with the last '-B' line,
- For the Program Pure COBOL Source Code (-9) screen: with the last '-9' line,
- For the Program Source Code (-SC) screen, with the sub- function to which the current line belongs.

**NOTE:** With a .C3 choice, a global replacement may be performed on all -W, -P, -B, -CP, -9 and -SC.

### REPLACEMENT OF A STRING BY A LONGER STRING

When the new character string is longer than the character string to be replaced and the replacement cannot be executed without truncating the line, the system displays the following message:

'WARNING: TRUNCATED LINE'

In the case of a global replacement, the system displays the first line on which the replacement would cause a truncation; the global replacement becomes a step-by-step replacement and the following message is displayed:

'WARNING: TRUNCATED LINE 0 SUB. ON 0 LINES'

In this case, the global replacement procedure becomes a step-by-step replacement.

## USING LIMITS

It is possible to execute a search (for a replacement operation) starting from a specific line identified by its key (beginning key) and/or ending with a specific line (ending key).

The beginning key is coded with a 'B' and the ending key is coded with an 'E'.

**EXAMPLE:** To perform a search on the character string 'TEST' within the '-P' lines of a Program, beginning with Function 05 and continuing through Sub-function 'DD' of Function 40, the command in the CHOICE field is coded as follows:

**EXAMPLE:** To perform a search on the character string 'TEST' within the '-P' lines of a Program, beginning with Function 05 and continuing through Sub-function 'DD' of Function 40, the command in the CHOICE field is coded as follows:

```
CH: .S TEST BP05 EP40DD
```

---

## Renumbering / Inserting Lines

### Line Renumbering

#### AUTOMATIC RENUMBERING

The automatic renumbering facility is available on the following entity screens:

.Text (-D),

.Program (-P, -W, -SC and -9 lines),

.Segment (-CE),

.On-Line Screen (-CE, -W, -P).

To perform an automatic renumbering operation enter the following command in the CHOICE field:

.'.R',

.followed by a renumbering interval (optional)

(default interval = 20).



EXAMPLE: CH: .R nn

Renumbering will start from the line following the top line on the screen, continuing up to and including the lowest level of an entity description, i.e., a sub-function for a Program or On-Line Screen, the first two characters for '-W' lines, a paragraph for Text, the last '-CE' line for a Segment or On-Line Screen.

To perform the renumbering operation using beginning/ending keys, enter the following command in the CHOICE field:

.'.R',

.followed by a 'blank' as a delimiter character,

.a beginning key (optional),

.followed by another delimiter (a 'blank'),

.an ending key (optional),

.a renumbering interval (optional).

EXAMPLE: CH: .R Bkey Ekey nn

After renumbering the system displays the following message:

"n LINES RESEQUENCED".

In case of an error in the renumbering sequence because the maximum number of lines is exceeded, or an overlap with Macro-Structure lines or lines from another Library, the following message is displayed:

"IMPOSSIBLE RESEQUENCE: TOO LARGE INCREMENT"

Renumbering is performed on 100 lines at a time.

### EXAMPLES

Renumbering of paragraph GG in a given text:

```
.r ====> renumbering of the whole paragraph (default =  
          renumbering interval of '20')
```

```
.r 5 ====> renumbering of the whole paragraph with a re-  
          numbering interval of '5'
```

```
.r Bdgg100 Edgg200 10
====> renumbering paragraph GG beginning with line
       100 and ending with line 200 with a renumber-
       ing interval of '10'.
```

## RENUMBERING OF THE 'O.....CE' AND 'S...CE' SCREENS

Segment or On-line Screen Call of Elements lines can also be renumbered. The beginning/ending limits do not take into account Element calls, but only the line number.

### EXAMPLE

CH: .R B100 E200

This command will renumber the Segment or On-line Screen Call of Elements lines beginning with line 100 and ending with line 200, with a renumbering interval of '20' by default.

General Documentation (-GC) lines of Data Element call lines will also be renumbered.

## **Line Insertion**

After the ENTER key is pressed, these commands call a pre-formatted screen which is entered for update.

Modifications to entity description screens other than through the above-mentioned commands are processed as standard implicit/explicit update transactions (refer to paragraph "Priorities in update actions", chapter "Screen updating").

### LINE INSERTION

To insert line, you must enter:

- An 'I' (INSERT) in the ACTION CODE field of the line after which line insertion will begin.
- The number of lines to be inserted in the LINE NUMBER field. For lines without a line number, you indicate the number of lines to be inserted in the first field following the ACTION CODE.

After ENTER is pressed, the system displays a screen containing as many 'blank' lines as the number of lines requested.

Each inserted line contains a '>' in the ACTION CODE field followed by a line number. The maximum numbering interval is '20'; this interval is

calculated automatically by the system according to the initial numbering interval. This interval can be modified (see paragraph "MODIFICATION OF THE INTERVAL" in this subchapter).

If there isn't enough space to insert the number of lines requested, only the lines corresponding to the available numbers in that interval will be created.

Only the inserted lines which contain user input will be created after ENTER is pressed; all "empty" inserted lines will disappear from the screen display.

### LINE DUPLICATION

Line repetition/duplication is executed as follows:

- An 'R' (REPEAT) is entered in the ACTION CODE field,
- The number of times the line is to be repeated is entered in the LINE NUMBER field. For lines without a line number, the number of times the line is to be repeated is indicated in the first field following the ACTION CODE.

After ENTER is pressed, the system displays a screen containing the number of 'repeated' lines requested.

Each repeated line contains a '>' in the ACTION CODE field followed by a line number. The maximum numbering interval is '20'; this interval is calculated automatically by the system according to the initial numbering interval. This interval can be modified (see paragraph "MODIFICATION OF THE INTERVAL" in this subchapter).

Each repeated line is identical to the initial line.

If the available interval is insufficient, VA Pac assigns the line number of the initial line to all the repeated lines. You must manually modify these line numbers.

Only the repeated lines which contain user input will be created after ENTER is pressed; all "empty" repeated lines will disappear from the screen display.

### THE LINE SPLIT

The line split is used to 'split' a line in two at the point where the cursor is positioned.

This facility is only operational on hardware where cursor positioning can be established.

The line split operation is executed as follows:

- An 'S' ('Split') is entered in the ACTION CODE field,
- The cursor is positioned where the line split is to occur.

After ENTER is pressed, the system returns a screen with the initial line split at the cursor position, and a new line, with a '>' in the ACTION CODE field, which contains the rest of the split line. The line number increment is automatically calculated by the system according to the initial numbering interval.

If the available interval is insufficient, the System assigns the line number of the initial line to the new line. You must modify the line number manually.

### MODIFICATION OF THE INTERVAL

Modifying the numbering interval involves the special ACTION CODES 'R', 'I' and 'S'.

These ACTION CODES generate automatic line numbering incrementation. The default numbering interval is '20'.

This default can be modified as follows:

- By entering a 'J' in the ACTION CODE field of any line on the screen (other than the I, R, or S line),
- And coding the numbering interval in the LINE NUMBER field on the same line.

---

## Line Transfer

You can transfer line(s) on all full-page updatable screens with one command.

This facility is executed as follows:

- Enter a 'T' in the ACTION CODE field of the line to be transferred,
- Enter a 'G' in the ACTION CODE field of the first line if a group of lines is to be transferred,
- And enter an 'L' on the last line to be transferred.

### NOTES

- The ACTION CODES "G" and "B" cannot be used in the first title line of a text.
- Complete identifiers are taken into account. For example, '-P' lines can be copied from Function FF, Sub-function SF to Function GG, Sub-function TT.
- The "B" ACTION CODE, used for multiple deletes, can also end the line transfer and delete. The 'B' line is not transferred, but deleted.

- If an "L" is not entered in the ACTION CODE field, the last line transferred is the last line of the screen, provided that all lines have a new identifier.

Update via the LINE TRANSFER AND DELETE facility follows the rules of implicit update: lines are modified or created depending on whether or not the line containing a new identifier already exists.

If there are lines between the "G" and "L" lines that should not be transferred, you must inhibit their transfer by entering an "E" in the ACTION CODE field of each such line.

It is also possible to create or modify lines by entering the "C" and "M" ACTION CODES respectively.

**REMINDER:** Lines are DELETED if their identifier is not modified.

**REMINDER:** Lines are DELETED if their identifier is not modified.

#### NOTES

- The EXPLICIT UPDATE mode (CH: .NU) does not inhibit the LINE TRANSFER AND DELETE facility; the lines between two ACTION CODES are transferred although the ACTION CODE field of each line is 'blank'.
- Only the displayed part of Report Layout lines (CH: R...L) is transferred; the part not displayed is deleted. The initial lines are completely deleted.

---

## Line Deletion

When you delete a line, it is instantly deleted in the Database.

This facility is executed as follows:

- Enter a 'D' in the ACTION CODE field of the line to be deleted,
- Enter a 'B' in the ACTION CODE field of the first line if a group of lines is to be deleted,
- And enter an 'L' on the last line to be deleted.

#### NOTES

- The ACTION CODES 'D' and 'B' cannot be used in the first title line of a text.
- The EXPLICIT UPDATE mode (CH: .NU) does not inhibit the DELETE facility ; the lines between two ACTION CODES are deleted although the ACTION CODE field of each line is 'blank'.



---

## Chapter 7. Documentary Facilities

---

### Text Entity

The Text entity is used to document applications, throughout their whole life-cycle.

For example, if we use the MERISE terminology :

- During the Analysis and Design Phases, it is used to describe processes, procedures, operations, tasks...

You can reference a Data Element code on each Text Description line, thus creating a link between them. Such Data Element does not have to be defined in the Repository, which enables you to reference -- while in the design phase -- properties to be created later on.

- During the Development Phase, it is used to document Screens, Programs, Reports...

Also, Texts (or sections) may be assigned to occurrences of all entity types. A cross-reference is created, which facilitates the maintenance of both the occurrence and its assigned Text.

Texts can be:

- Called in Volumes to make documentation available to maintenance teams and end-users.
- Assigned to instances.
- Used to create online help for generated online applications (OLSD function and Pacbench C/S TUI client).

The Text entity is also documented in the VisualAge Pacbase WorkStation User Interface Guide (formerly VisualAge Pacbase WorkStation Reference Manual).

You can assign a Data Element code on each Text line ; this creates a cross-reference between both. The Data Element does not necessarily exist in the Repository ; this enables you, for example, to reference elements to be defined later.

The Text entity includes:

- A Definition screen (required), for entry of general characteristics, such as name, type, keywords.
- A Description screen, grouping text by 'paragraphs' or 'sections', where you enter the text contents.

References to occurrences of all entity types may be entered in Text Description lines.

- A Comments screen used to enter any kind of technical information about the text (e.g. author's name, date, targeted readership, etc.).

## Definition

The Text Definition screen is called by the letter T. Each Text is defined by a 6-character TEXT CODE and a TEXT NAME (required) and is constituted of sections.

A TYPE OF TEXT can be used to define the nature of a given Text. For example, TYPE OF TEXT can be 'PR' for a Text describing a procedure, 'SC' to describe a screen, etc.

**EXAMPLE:** In the following screen image, the label 'COMMENTS' appears at the top. This label is called by the value 'CM' in the TYPE OF TEXT field.

**EXAMPLE:** In the following screen image, the label 'COMMENTS' appears at the top. This label is called by the value 'CM' in the TYPE OF TEXT field.

It is possible to get a list of the Texts of the same type (for instance, to list all Texts of type 'PR', use Choice LTTpr).

The Text type is also displayed at the top of each section Description (-D..) screen.

In the same manner, a type is assigned to sections of a Text in order to specify their nature.

For example, a procedure can be broken down into operations (type 'OP').

**NOTE:** Labels and associated codes of Text and paragraph types are managed by the VA Pac Administrator.

**NOTE:** Labels and associated codes of Text and paragraph types are managed by the VA Pac Administrator.

Paragraphs are identified by a 2-character code.

Sections are called in Volumes, not Texts. In other words, to call a Text in a Volume, you need enter the Text code AND the relevant section code(s).



**NOTE:** The word 'section' mentioned above stands for the old 'paragraph'. This new word allows a clear discrimination between the Va Pac paragraph of the Text entity and the paragraphs as understood in classical word processing.

**NOTE:** The word 'section' mentioned above stands for the old 'paragraph'. This new word allows a clear discrimination between the Va Pac paragraph of the Text entity and the paragraphs as understood in classical word processing.

```

-----
!          PURCHASING MANAGEMENT SYSTEM          SG000008.LILI.CIV.1583 !
!
!
! COMMENTS      BA1ABA
!
!
! NAME.....: 2 SYSTEM INTRODUCTION
! TYPE.....: 3 CM
!
! PARAGRAPH TYPE.....: 4 PA PARAGRAPH
!
!
!
! EXPLICIT KEYWORDS...: 5
!
!
! SESSION NUMBER.....: 0059          LIBRARY.....: CIV   LOCK.....:
!
!
! O: C1 CH: Tbababa          ACTION:
-----

```

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	6		TEXT CODE (REQUIRED)
			One character, at least, must not be BLANK. Alphabetic or numeric characters only are recommended for this field.
2	36		TEXT NAME (REQUIRED IN CREAT)
			This name should be as explicit as possible. Words used here become implicit keywords (subject to the limitations specified in the 'Character Mode User Interface' Manual).
3	2		TYPE OF TEXT
			The TYPE OF TEXT field is used for documentation purposes only, and allows the user to:
			.obtain the list of texts sorted by type (CHOICE: LTT),
			.have explicit titles including the labels corresponding to the chosen type of text, on screens and reports which contain the text.
			The coding of types and labels depends on an external parameter handled by the Database Administrator.
		T	Default value.
4	2		PARAGRAPH (OR SECTION) TYPE

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			The Paragraph (or Section) Type has a documentary value only.
			Its associated label is displayed on the Text Description (-D..) screen.
			Types and their labels are managed by the VA Pac Database Administrator.
		U	Text (default value).
5	55		Explicit keywords
			This field allows you to enter additional (explicit) keywords. By default, keywords are generated from the instance's name (implicit keywords).
			Keywords must be separated by at least one space. Keywords have a maximum length of 13 characters which must be alphanumeric. However, '=' and '*' are reserved for special usage and are therefore ignored in keywords.
			Keywords are not case-sensitive: uppercase and lower-case letters are equivalent.
			NOTE: Characters bearing an accent and special characters can be declared as equivalent to an internal value in order to optimize the search of instances by keywords.
			You do that in the Administrator workbench, Users browser, Special Characters tab of the Parameters Specific Authorizations.
			A maximum of ten explicit keywords can be assigned to one entity.
			For more details, refer to the 'Character Mode User Interface' guide, chapter 'Search for Instances', subchapter 'Searching by Keywords'.

## Description

The description lines (-D) of a Text are used to create the body of the text in the form of Sections. They also allow:

- Assignment to an instance of any other entity (Program, Screen, Data Structures...) for documentation,
- Activity calculation, when using the PACMODEL function (for details, refer to the PACMODEL Reference Manual),
- Cross-referencing Data Elements or Properties,
- Cross-referencing other Texts or sections of Text,

- Description of entries and selection criteria used to build a volume index (see the PERSONALIZED DOCUMENTATION MANAGER Manual).

### GENERAL CHARACTERISTICS

A text is subdivided into sections referenced by a 2-character SECTION CODE. Text lines are numbered within each section. A title line is mandatory (see field TYPE OF TEXT LINE).

The text summary is given by the list of section titles (Choice -LT).

Line and page skips are indicated in the TYPE OF TEXT LINE, and will be effective when the text is printed in a manual or volume, or in a simulation for a volume.

However, the spacing of the titles and the paragraph indentations may be included in the writing of the text, either by leaving the necessary blanks for a User Manual or by using symbolic parameters for a Volume (See the PERSONALIZED DOCUMENTATION MANAGER Manual).

### ASSIGNED TEXTS

Text lines may be used to document other entities: a section or a part of section is assigned to an instance of another entity by delimitating it by two special lines (TYPE OF TEXT LINE 'I' for beginning, 'J' for end). These lines are also used to indicate the entity type and instance(s) (8 maximum) to be documented.

The 'I'-type line can be inserted anywhere within the selected text section, but the assignment will start from the beginning of the section.

Text assignment will end at the end of the text, or when the System encounters a 'J'-type line.

Text lines assigned to a given entity may be consulted on the Entity Assigned Text screen, which is obtained by using the following CHOICE field:

CH: -AT

With 'C1' in the OPERATION CODE field (O: C1), the lines of text are displayed with the cross-referenced data elements.

With 'C2' (O: C2) the source of each text line is displayed.

### CALLING TEXT

A text or a section may be called in the Error Messages - Help screen (-GE) of Screens or Data Structures to create a built-in HELP function.

For more details about on-line help, refer to the OLSD Manual and to the 'Pacbench C/S: Business Logic and TUI Clients', Chapter 'Error Messages - Help Function'.

### CROSS-REFERENCES TO DATA ELEMENTS

A Text which describes an application often refers to individual Data Elements. A cross-reference between a Text line and a Data Element is created by entering the Data Element code in the DATA ELEMENT CODE REFERENCED field (labeled ELEM.).

**NOTE::** Data Element cannot be cross-referenced to D-, F-, I-, J-, and Y-type lines.

**NOTE::** Data Element cannot be cross-referenced to D-, F-, I-, J-, and Y-type lines.

Since there is no existence validation on this ELEM. field's contents, codes of Data Element occurrences NOT defined in the Specifications Dictionary can be entered. If so, the List of Undefined Data Elements (LFE) will display them.

### CROSS-REFERENCES TO DATA ELEMENTS IN VA PAC WORKSTATION-UPLOADED TEXT OCCURRENCES:

References to Data Element occurrences present in VA Pac WorkStation-uploaded Text occurrences have a specific presentation: Codes of the cross-referenced Data Element occurrences are not displayed in the ELEM. field but in the TEXT CONTENTS field, preceded by the '\$.E=' characters.

The complete references (\$.E=occcod) are not printed when called in a Volume nor are they displayed in Text Simulation.

The ELEM. field may still be used, knowing that after a download, and all the more so after a subsequent upload from the VA Pac WorkStation, its values are transferred to the TEXT CONTENTS field preceded by '\$.E='.

### PREREQUISITES

A Text Definition screen must be created before any text description lines may be entered.

A section title on the Text Description (-D) screen must be created before any other section description line.

## OPERATION FIELD

Three operation codes are possible on the Text Description screen:

- C1:** Default value. All fields on the screen can be accessed, and the 'ELEM' field on the right side of each line links a Data element to the Text line.
- C2:** The 'ELEM' field is replaced by the 'LIBR' field, which displays, for each line, the session in which the line was last modified or the code for the Library in which it was defined. The 'LIBR' field is for display only.
- C3:** Same display as C2, but after a request to insert, repeat or split a line (action codes 'I', 'R' or 'S'), only the 'DESCRIPTION' field can be input for lines with '>' in the action field.

In this case, be sure that there is not twice the same line number because only the last one will be kept.

```

-----
!          PURCHASING MANAGEMENT SYSTEM          SG000008.LILI.CIV.1583 !
! COMMENTARY 1  BADBAD Company Background          PARAGRAPH 2 BB !
! 3 4 5 6                                         7 !
! A LIN : T TEXT CONTENTS                          ELEM. !
! 000 : L Company Background                       !
! 005 : I PPGM1 OSCR01 SSG01 SSG02 EELEM01.      .      . !
! 010 : * Aztech Laboratories, Inc. is a $25 million per year AZTCOM !
! 020 : research and engineering firm specializing in biomedical !
! 030 : engineering. The firm does a considerable amount of work !
! 040 : under contract to various federal agencies, such as the !
! 050 : National Institute of Health (NIH), and the Departments of !
! 060 : Defense (DOD) and Health and Human Services (HHS). !
! 070 : 2 The company spends several millions of dollars each year HHSORG !
! 080 : purchasing equipment for use by its scientists and !
! 090 : engineers. It has always been felt by management that !
! 100 : there has been a laxity in purchasing management procedures !
! 110 : which has resulted in a substantial waste of resources by !
! 120 : paying too much for equipment, not buying in quantity and !
! 130 : Y TEXT01 AZTECH FIGURES                    !
! 135 : J OSCR01 S EELEM01. . . . . !
! 140 : Y TEXTSGPP PURCHASING POLICY              !
!
! O: C1 CH: TbadbadDbb
-----

```

NUMLEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	6	TEXT CODE (REQUIRED)
		One character, at least, must not be BLANK. Alphabetic or numeric characters only are recommended for this field.
2	2	SECTION CODE
	blank	Default value prior to the creation of a section.
		Alphabetic or numeric characters only are recommended for this field.
3	1	ACTION CODE (REQUIRED)
	C	Creation of the line
	M	Modification of the line
	D	Deletion of the line
	A	Deletion of the line
	T	Transfer of the line
	B	Beginning of multiple deletion
	G	Multiple transfer
	?	Request for HELP documentation
	E or -	Inhibit implicit update

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		X	Implicit update without upper/lowercase processing
4	3		Line number
			PURE NUMERIC FIELD
			It is advisable to begin with line number '100' and then number in intervals of 20. This facilitates subsequent line insertions, as necessary.
5	1		TYPE OF TEXT LINE
			SECTION TITLE
			A section must always contain a title. In batch, this title must be at the beginning of the section.
		L	Section title. It will NOT appear in an end-user documentation (User Manuals and Volumes).
		K	Same as type 'L' except that this title will appear in the end-user documentation (User Manuals and Volumes).
		-	Same as type 'K' but the title will be underlined with the '-' (dash) character when a Volume is printed.
		_	Same as type 'K' but the title will be underlined with the '_' (underscore) character when a Volume is printed.
		=	Same as type 'K' but the title will be underlined with the '=' character when a Volume is printed.
		+	Same as type 'K' but the title will be underlined with the '+' character when a Volume is printed.
			TEXT DESCRIPTION LINE
		blank	Default option.
			LINE/PAGE SKIP
			Taken into account when the text is printed in a User Manual or a Volume, or in Text simulation.
		1	New line.
		1-9	Skip of 1-8 lines before the given line is printed.
		*	PAGE skip before the given line is printed.
			TEXT ASSIGNMENT



NUMLEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
	I	This code is used to assign a text to instances of other entities called in the TEXT DESCRIPTION LINE field. The assignment starts at the beginning of the section which contains the I-type line and terminates at the end of the text or after a J-type line. The assignment for one instances, all instances of a given entity or of all entities can be terminated.
		To facilitate data entry, key in an 'T' in this field and press ENTER. A dotted line will appear in the TEXT CONTENTS field to indicate where each entity type/ Instance code combination is to be entered.
	J	Explicit end of assignment.
		If there is no data in the TEXT CONTENTS field, the assignment of text to all entities is terminated.
		Using the same technique and format as with type 'T' above, the user may selectively end the text assignment by entity type/instance code, or by entity type.
		If no 'J' line is entered, the assignment goes to the end of the text.
	Y	This code is used to create a link between this section of text and another text or section, i.e. 'refer to..'. The System displays the title of this text or section.
		For the referenced text:
		Choice -XT gives the list of texts referring to the whole text, Choice -LT gives the list of sections, each followed by the sections referring to it.
		With the PACMODEL function:
	F D	Heading line allowing Activity Calculation. Detail line allowing Activity Calculation.
		NOTE: The L, I, J, Y, F and D Type lines are not printed in User Manuals or Volumes.
6	60	TEXT CONTENTS
		The content of this field depends on the input entered in the TYPE OF TEXT LINE field.
		With TYPE OF TEXT LINE = 'blank', '1' to '9' or '*', enter text.
		With TYPE OF TEXT LINE = 'L', 'K', '-', '_', '=', '+', enter paragraph titles.

NUMLEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		With TYPE OF TEXT LINE = 'I' or 'J', enter the entity type/instance code combination to which text is being assigned. The following ENTITY TYPE codes are valid:
		. 'B' Database Block . 'D' Data Structure . 'E' Data Element . 'F' Meta Entity . 'I' Parameterized Input Aid . 'M' Model Entity . 'O' Screen . 'P' Program . 'Q' User Relation . 'R' Report . 'S' Segment . 'T' Text . 'V' Volume . '\$' User Entity
		The 'I'- or 'J'-type lines may contain up to 8 instances of the set entity type/instance code:
		ENTITY TYPE: 1 character, INSTANCE CODE: 6 characters (8 characters for a User Entity).
		With TYPE OF TEXT LINE = 'Y', enter the TEXT CODE
		followed by the PARAGRAPH CODE in columns 1 to 8 of this field.
		If all sections should be selected, the 7th and 8th characters are '*'. To refer to a section whose code is blank, simply enter '&&' after the TEXT CODE.
		USE WITH PERSONALIZED DOCUMENTATION MANAGER
		Refer to the PERSONALIZED DOCUMENTATION MANAGER Manual.
7	6	Data element code referenced
		Establishes a cross-reference between text sections and data elements. One data element may be indicated on each line. The data elements need not have been previously defined in the Specifications Dictionary.
		These cross-references may be viewed via the CHOICE CH: E.....XT.
		If the Text occurrence has been uploaded from the WorkStation, this field is empty. Instead the TEXT CONTENTS field includes the Data Element code, preceded by the '\$.E=' characters.
		The System produces:
		- the list of Data Elements used, whether they are defined in the Dictionary or not.
		- the list of uses of a Data Element in Texts.

## TP Access Mode

### LISTS

CHOICE -----	SCREEN -----	UPD ---
LCTaaaaaa	List of Texts by code (starting with Text 'aaaaaa').	NO
LNTaaaaaa	List of Texts by name (starting with Text named 'aaaaaa').	NO
LTTaaTbbbbbb	List of Texts by type (starting with type 'aa' and with Text 'bbbbbb').	NO

DESCRIPTION OF TEXT 'aaaaaa'

-----

CHOICE -----	SCREEN -----	UPD ---
Taaaaaa	Definition of Text 'aaaaaa'.	YES
TaaaaaaCR	Instances linked to Text 'aaaaaa' via User Relations.	YES
TaaaaaaGCbbb	Comments on Text 'aaaaaa' (starting with line number 'bbb').	YES
TaaaaaaATbbbbbbcc		NO
	Text assigned to Text 'aaaaaa' (starting with Text 'bbbbbb', paragraph 'cc').	
TaaaaaaX	X-references to Text 'aaaaaa'.	NO
TaaaaaaXGbbb	X-references of Text 'aaaaaa' to Comments lines (starting with line 'bbb').	NO
TaaaaaaXVbbbbbb		NO
	X-references of Text 'aaaaaa' to Documents (starting with Document 'bbbbbb').	
TaaaaaaXTbbbbbbcc		NO
	X-references of Text 'aaaaaa' to Texts (starting with Text 'bbbbbb' and paragraph 'cc').	
TaaaaaaLTbb	List of paragraph titles of the Text 'aaaaaa' (starting with paragraph 'bb').	NO
TaaaaaaXQbbbbbb	List of occurrences linked to Text 'aaaaaa' through User Relations (starting with Relation 'bbbbbb').	NO
TaaaaaaDbbcc	Description of Text 'aaaaaa' (starting with paragraph 'bb' and line number 'ccc').	YES

PRINT PREVIEW

TaaaaaaSIMbbbDcc	Print Preview of Text 'aaaaaa' using Report Layout 'bbb', starting with Paragraph/Section 'cc'. (To use the Standard Layout, enter '&&&' for the Layout code).	NO
------------------	---	----

**NOTE:** After the first choice of type 'Taaaaaa', 'Taaaaaa' can be replaced with '-'.  
'-'.

All notations between parentheses are optional.

```

-----
!           PURCHASING MANAGEMENT SYSTEM           SG000008.LILI.CIV.1583 !
! ELEMENT ASSIGNED TEXT           ELEM01           !
! ! ! ! !
! ----- TEXT CMT1 ----- D.ELEM !
! BB 000 L Company Background !
! BB 005 I PPGM1 OSCR01 SSG01 SSG02 EELEM01. . . !
! BB 010 * Aztech Laboratories, Inc. is a $25 million per year AZTCOM !
! BB 020 research and engineering firm specializing in biomedical !
! BB 030 engineering. The firm does a considerable amount of work !
! BB 040 under contract to various federal agencies, such as the !
! BB 050 National Institute of Health (NIH), and the Departments !
! BB 060 of Defense (DOD) and Health and Human Services (HHS). !
! BB 070 2 The company spends several millions of dollars each year HHSORG !
! BB 080 purchasing equipment for use by its scientists and !
! BB 090 engineers. It has always been felt by management that !
! BB 100 there has been a laxity in purchasing management proce- !
! BB 110 dures which has resulted in a substantial waste of re- !
! BB 120 sources by paying too much for equipment, not buying in !
! BB 230 quantity and the purchase of redundant equipment. !
! ! ! ! !
! ! ! ! !
! *** END *** !
! O: C1 CH: Eelem01AT !
-----

```



```

-----
!                PURCHASING MANAGEMENT SYSTEM      SG000008.LILI.CIV.1583 !
! TREATMENT      TEXTSG PURCHASING POLICY          SUMMARY          !
!                                                       !
! TASK                                                  LIBR.          !
! BB INTRODUCTION                                    !                 !
! DE PLANNING                                        !                 !
! FF BUDGET PLANNING                                !                 !
! GG BUYER TRAINING                                 !                 !
! PP FORECASTS                                       !                 !
!     -> BADBAD BB Company Background                0688          !
! QR DEPARTMENT ORGANIZATIONAL STRUCTURE            !                 !
!                                                       !
!                                                       !
!                                                       !
!                                                       !
!                                                       !
!                                                       !
!                                                       !
!                                                       !
!                                                       !
!                                                       !
! *** END ***                                         !
! O: C1 CH: TtextsgLT                                !
-----

```

```

-----
!                PURCHASING MANAGEMENT SYSTEM                SG000008.LILI.CIV.1583 !
! LIST OF TEXTS BY TYPE                                     !
! ! ! ! !
! TYPE                TEXT                NAME                LIBR. !
! CM COMMENTARY      BABABA              System Introduction  0059 !
!                   BADBAD              Company Background  0059 !
!                   BAFBAF              System Objectives   0059 !
!                   BAHBAH              System Overview     0059 !
! DD DATA           GADGAD              Vendor and Product Data 0059 !
!                   GAFGAF              Purchase Order Data   0059 !
! OP OPERATION       DADDAD              Purchase Order Receipt 0059 !
!                   DAFDAF              Shipment Receipt     0059 !
!                   DAHDAH              Purchase Order Update 0059 !
!                   FADFAD              Vendor Master List Maintenance 0059 !
!                   FAFFAF              Product Catalogue Maintenance 0059 !
!                   FAHFAG              Vendor Performance Analysis 0059 !
! PC PROCESS         DADADA              Purchase Order Management 0059 !
!                   FAFAGA              Vendor Information Management 0059 !
! T TREATMENT        GAGAGA              Physical Data Structure Specificatns 0059 !
!                   XOAXOA              On-line systems devel.guide appendix *CEN !
!                   XOEXOE              Journal extraction   *CEN !
!                   XOSXOS              On-line systems devel.guide examples *CEN !
! ! ! ! !
! O: C1 CH: LTT                                         !
-----

```



```

-----
!          PURCHASING MANAGEMENT SYSTEM          SG000008.LILI.CIV.1583 !
! LIST OF TEXTS BY CODE                          !
! !                                               !
! TEXT      NAME                                TYPE                LIBR. !
! BABABA    System Introduction                 CM COMMENTARY      0059 !
! BADBAD    Company Background                 CM                  0059 !
! BAFBAF    System Objectives                  CM                  0059 !
! BAHBAH    System Overview                    CM                  0059 !
! DADADA    Purchase Order Management          PC PROCESS          0059 !
! DADDAD    Purchase Order Receipt            OP OPERATION        0059 !
! DAFDAF    Shipment Receipt                   OP                  0059 !
! DAHDAH    Purchase Order Update              OP                  0059 !
! FADFAD    Vendor Master List Maintenance    OP                  0059 !
! FAFafa    Vendor Information Management      PC PROCESS          0059 !
! FAFFAF    Product Catalogue Maintenance    OP OPERATION        0059 !
! FAHFah    Vendor Performance Analysis       OP                  0059 !
! GADGAD    Vendor and Product Data           DD DATA            0059 !
! GAFGAF    Purchase Order Data               DD                  0059 !
! GAGAGA    Physical Data Structure Specificatns T TREATMENT        0059 !
! XOAXOA    On-line systems devel.guide appendix T                  *CEN !
! XOEXOE    Journal extraction                T                  *CEN !
! XOSXOS    On-line systems devel.guide examples T                  *CEN !
! !                                               !
! 0: C1 CH: LCT                                !
-----

```

## Print Commands

### LISTS

**LCT:** List of all texts, sequenced by their codes.

**LCT:** List of all texts, sequenced by their codes.

**C1 OPTION:** Without explicit keywords,

**C2 OPTION:** With explicit keywords.

**LKT:** List of all texts by keywords.

After typing LKT, a selection field (SEL:) enables the user to choose implicit ('L') or explicit ('M') keywords, or both (' '). Keywords are entered on a continuation line.

**C1 OPTION:** Same as LCT.

**LTT:** List of texts sequenced by type. You may specify a specific text type, in order to list texts of just that type.

**C1 OPTION:** Same as LCT.

## DESCRIPTIONS

**DCT:** Definition, description and comments for the text entered in the ENTITY CODE field, plus its summary (list of sections, with possible references to other texts/sections) and all cross-references with other entities.

**DCT:** Definition, description and comments for the text entered in the ENTITY CODE field, plus its summary (list of sections, with possible references to other texts/sections) and all cross-references with other entities.

C1 OPTION: Only option.

**NOTE:** To obtain the complete description of ALL texts, replace the Text code by an asterisk (\*).

**DTT:** Like DCT, however you may obtain the description of all texts of a specific type. The type is entered in the TYPE field on the Generation and Print Commands (GP) screen.

C1 OPTION: Only option.

---

## Comments

### Entering Comments

The 'Comments' screen (-GC) enables you to write and edit text in relation to one selected instance. This screen is available on all entities.

Each comments line is made up of a 60-character field containing text and a 'Type of Line' field for particular purposes (comment, call of a P.I.A, indication of an alias).

### CALLING A P.I.A.

The use of the Parameterized Input Aid entity (P.I.A.) may facilitate and standardize data entry on this screen.

An Input Aid is a group of parameterized lines. Each line contains a fixed label and a variable part which will be filled in the calling instance.

You call a P.I.A. by entering the value 'I' in the 'Type of Line' field and the P.I.A. code in the 'Description' field. VA Pac responds by displaying the P.I.A. lines.

**NOTE:** The 'C2' option (O: C2) enables you to tab to the variable part of the P.I.A. line.

**NOTE:** The 'C2' option (O: C2) enables you to tab to the variable part of the P.I.A. line.

Additional lines cannot be inserted between called lines.

For more information see the 'Character Mode User Interface' guide, chapter 'Documentary Facilities', subchapter 'Parameterized Input Aids'.

### PREREQUISITES

The instance must be defined prior to being documented.

The called P.I.As must also exist.

### LINES COPY

You may overwrite the instance code with another instance code (belonging to the same entity). This will not affect the original lines, but it will replicate them for the other instance.

**NOTE:** If the original lines include the lines of a called P.I.A., they will also be duplicated, except for user input on the variable parts of the P.I.A. lines.

**NOTE:** If the original lines include the lines of a called P.I.A., they will also be duplicated, except for user input on the variable parts of the P.I.A. lines.

```

-----
!          PURCHASING MANAGEMENT SYSTEM          SG000008.LILI.CIV.1583 !
! ELEMENT  COMMENTS          CRDTAM CREDIT NOTE AMOUNT          !
! 1 2      3 4              5                                     !
! A LIN : T DESCRIPTION                                           LIB !
! 010 : ***** ADMENT !
!      : INFORMATION          INTERNAL STANDARDIZATION          ADMENT !
!      : Manager              : MRS. DEBORAH WINGLET..... ADMENT !
!      : Internal type        : Conceptual                      $TC ADMENT !
!      : Status                : Transition                      $ET ADMENT !
!      : Addressee No. 1      : MR. MIKE HAMMERSWORTH..... ADMENT !
!      : Addressee No. 2      : MR. PATRICK KELLY..... ADMENT !
!      : Addressee No. 3      : ..... ADMENT !
!      : Date                  : 881003 ADMENT !
!      : ***** ADMENT !
! 020 : As of now, this element's description does not include the 1581 !
! 040 : minimum and maximum values allowed by the Travel Expenses 1581 !
! 060 : Section. This element will have to be updated before the 1581 !
! 080 : survey of the Preliminary Study Report on the INTERNAL 1581 !
! 100 : ACCOUNTING application. 1581 !
!      : !
!      : !
!      : !
! *** END *** !
! O: C1 CH: EcrdtamGC !
-----

```

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	1		ACTION CODE (REQUIRED)
		C	Creation of the line
		M	Modification of the line
		D	Deletion of the line
		A	Deletion of the line
		T	Transfer of the line
		B	Beginning of multiple deletion
		G	Multiple transfer
		?	Request for HELP documentation
		E or -	Inhibit implicit update
		X	Implicit update without upper/lowercase processing
2	3		Line number
			PURE NUMERIC FIELD
			It is advisable to begin with line number '100' and then number in intervals of 20. This facilitates subsequent line insertions, as necessary.

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
3	1		Line Type - Standard Documentation
		blank	Standard documentation line.
		I	Call of a P.I.A. You can only call a P.I.A. with a 'C' type. The comment lines from the called P.I.A. have a 'Line generation option' set to 'blank' or 'G' in the P.I.A. Description. The call line is then replaced by the called P.I.A.
		A	Alias for the Segment code.
4	60		DESCRIPTION - FIRST PART
			If no P.I.A. is called, you can use the whole field.
			On a blank-type line, you enter a free comment.
			In order to select only certain lines of the comments of an instance, use print option -EG and indicate the \$OFF command at the left end of each line to be ignored. To re-activate the -EG option on a line, indicate a \$ON command, left-justified, after the last line to be ignored.
			On an A-type line, enter the COBOL Segment name. (see chapter 'Generation of Copy Book', subchapter 'Description of VA Pac PIA 'Data'', value 'A*' in the 'Data Structure Code in Gener. Descr.' field.)
5	40		DESCRIPTION / SECOND PART
			This field is specific to a P.I.A. call.
			With value 'C2' in the OPERATION CODE field, the cursor automatically tabs to the first position of this field.
			This field is initialized with underscores (default value) or with the value specified in the INITIAL VALUE field for a Standard PIA description line (Type = 'blank').
			If symbolic parameters have been defined on the P.I.A. Description (-D), they may be entered in this field. They will be replaced by their corresponding value, and will remain displayed on the right of the screen.

### Automatic Branching to the Comments

Some descriptions call other instances whose call lines may be commented via Comments lines, in particular the descriptions of:

.Segments (-CE),

.Database blocks (-DH, -DC, -DR, -DT),

.Model objects or relationships (-CM, -CE).

When description lines are commented, an asterisk (\*) appears in the DOC field on the relevant description screen.

To consult the comments, enter an explicit CHOICE (for example: S FF36 CE200G) or:

.set the cursor on the desired line,

.and press a PFkey (standard: PF11).

With either method, the same screen is obtained.

In addition, on simple list-type screens such as List of Data Elements or List of Programs, the same method is used to branch to the Comments of an instance on which the cursor is positioned.

#### EXAMPLE

From the 'LCP' screen, the user can access the Comments of a specific Program ('PGM050' for example) by positioning the cursor on the relevant line and pressing the appropriate PFkey. The screen obtained is the same as with the explicit CHOICE ('P PGM050 G').

---

## Parameterized Input Aids

### Introduction

The purpose of the Parameterized Input Aid (P.I.A.) entity is to pre-format the Comments screen (-GC), Generation Elements screen (-GG) and Generation Options screen (-GO) of an instance, in order to standardize them.

The P.I.A. is defined and described once, then called in one of these screens as needed.

A description line of a P.I.A. contains:

- A Fixed part, which contains the LABEL of the input field,
- A Variable part, which is the input field. The contents of this field will be specified when the P.I.A. is called.

**NOTE::** Input in the variable part of a P.I.A. can be parameterized. See the "DESCRIPTION SCREEN" Subchapter for complete information on parameterization.

The basic types of P.I.A. are :

- The Documentary P.I.A., which is used to standardize the Comments, Generation Elements and Generation Options of instances.
- The P.I.A. which is used to indicate elements for the generation of Database Blocks, Screens or Programs.
- The P.I.A. which is used to indicate options for the generation of Database Blocks, Screens or Programs.
- Reserved P.I.A.s, such as 'DATA' used for generating copy books, and 'VALORI' used in the PACMODEL activity calculation.

### GENERAL CHARACTERISTICS

The Parameterized Input Aid (P.I.A.) entity includes the following:

- A Definition screen (required), for entry of the general characteristics (name, type, keywords),
- A Description screen, to describe the fixed and variable parts of a P.I.A.,
- A Comments screen, where notes (for example author, purpose of the P.I.A., etc..) may be entered.

### CALL OF A P.I.A.

You can call a P.I.A. on the Comments lines (-GC), Generation Options lines (-GO) or Generation Elements lines (-GG) of entities or of Segment or Database Block description lines.

The P.I.A. then enables you to:

- Standardize the documentation of entities,
- Add physical complements required to generate Database descriptions (-CEnnnGG, -DCnnnGG, -DHnnnGG or -DRnnnGG),
- Indicate elements and options for the generation of Database Blocks, Screens and Programs.
- List the instances which call the PIA, with the value of a particular variable part. (ex: list of the instances with their authors).

### **Definition**

A P.I.A. is defined by a code, a name and a type on a screen called by the letter I.

### COMMENTS SCREEN

A P.I.A. may be documented via its Comments (-GC) screen.

```

-----
!           PURCHASING MANAGEMENT SYSTEM           SG000008.LILI.CIV.1583 !
!
! INPUT AID DEFINITION.....: 1 AUTHOR             !
! NAME.....: 2 AUTHOR DOCUMENTATION              !
!
! TYPE.....: 3 C COMMENTS                          !
!
! EXPLICIT KEYWORDS...: 4                          !
!
!
!
!
! SESSION NUMBER.....: 0059      LIBRARY.....: CIV   LOCK.....:
!
! O: C1 CH: Iauthor                      ACTION:
-----

```

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	6		Code of parameterized input aid (REQUIRED)
			'DATA' and 'VALORI' are reserved codes.
		DATA	The 'DATA' P.I.A. is used to generate COPY books from Data Structure descriptions. For more information, see chapter "Generation of Copy Book", subchapter "Description of P.I.A. Data".
		VALORI	It is used for the activity calculation of the PACMODEL function.
		PAC...	It is prohibited to define a P.I.A. code beginning with 'PAC'.
2	36		Parameterized input aid name (REQUIRED IN CREAT)
			This name should be as explicit as possible. Words used here become implicit keywords (subject to limitations specified in Chapter 'KEYWORDS', Subchapter 'HOW TO BUILD THE THESAURUS', in this Manual).
3	1		TYPE
			Indicating the type is required.
		C	Comments Such a PIA type can be called in the Comments screen of an instance (-GC) only.



NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		G	Generation Elements Such a PIA type can be called in the Generation Elements screen of an instance (-GG) only.
		O	Generation Options Such a PIA type can be called in the Generation Options screen of an instance (-GO) only.
4	55		EXPLICIT KEYWORDS
			This field allows you to enter additional (explicit) keywords. By default, keywords are generated from the instance's name (implicit keywords).
			Keywords must be separated by at least one space. Keywords have a maximum length of 13 characters which must be alphanumeric. However, '=' and '*' are reserved for special usage and are therefore ignored in keywords.
			Keywords are not case-sensitive: uppercase and lower-case letters are equivalent.
			NOTE: Characters bearing an accent and special characters can be declared as equivalent to an internal value in order to optimize the search of instances by keywords.
			You do that in the Administrator workbench, Users browser, Special Characters tab of the Parameters Specific Authorizations.
			A maximum of ten explicit keywords can be assigned to one entity.
			For more details, refer to the 'Character Mode User Interface' guide, chapter 'Search for Instances', subchapter 'Searching by Keywords'.

## Description

The -D screen is used to describe the contents of the lines which make up a P.I.A.

### GENERAL CHARACTERISTICS

Each P.I.A. Description line is made up of three fields:

- The TYPE OF P.I.A. LINE, which indicates:
  - A Standard P.I.A. line (Type = 'blank'),
  - A Comment line (Type = 'C'),
  - A Symbolic Value line used to define a parameter to be used in the variable part (Type = 'T').
- The LABEL, which is the fixed part of a P.I.A. line,
- The INITIAL VALUE, which is the variable part of a P.I.A. line.

On a P.I.A. Comment line, both the LABEL and INITIAL VALUE fields may contain documentary text.

Comment lines cannot be modified on the documentation of the entity calling the P.I.A.

The P.I.A. line may be taken into account in a generation process (LINE GENERATION OPTION = 'G').

At generation time, the fixed part and the variable part of P.I.A. lines are concatenated.

#### PARAMETERIZATION OF THE VARIABLE PART OF A P.I.A. LINE

Symbolic parameters are defined on 'T'-type description lines. A symbolic parameter is coded '\$nn' left-justified in the LABEL field.

The corresponding value is indicated in the INITIAL VALUE field.

**EXAMPLE:** A symbolic parameter '\$H' corresponds to the value 'HOSPITAL'.  
The user simply enters the symbolic parameter '\$H' when the P.I.A. is called.

**NOTE:** The number of "T"-type lines is not limited.

**EXAMPLE:** A symbolic parameter '\$H' corresponds to the value 'HOSPITAL'.  
The user simply enters the symbolic parameter '\$H' when the P.I.A. is called.

**NOTE:** The number of "T"-type lines is not limited.

Symbolic parameters may be used on any line of the called P.I.A.

#### PREREQUISITE

The P.I.A. must have already been defined.

```

-----
!           PURCHASING MANAGEMENT SYSTEM           SG000008.LILI.CIV.1583 !
! INPUT AID DESCRIPTION.....: 1  AUTHOR AUTHOR DOCUMENTATION        !
! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! !
! 2 3   4 5           6           7   8 9           !
! A LIN : T LABEL           INITIAL VALUE           LEN G REFER. LIBR. !
! 010 :           AUTHOR TITLE:           040           0059 !
! 020 : T $PM           PROJECT MANAGER           0059 !
! 030 : T $SA           SYSTEMS ANALYST           0059 !
! 040 : T $PG           PROGRAMMER           0059 !
! 050 : T $DB           DATA BASE ADMINISTRATOR           0059 !
! 070 :           AUTHOR NAME:           040           0059 !
! 090 :           DATE: MM/DD/19YY           010           0059 !
! 100 :           000           0059 !
! : : : : : : : : : : : : : : : : : : : : : :
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! : : : : : : : : : : : : : : : : : : : : : :
! : : : : : : : : : ~~~~
! O: C1 CH: -D
-----

```

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	6		Code of parameterized input aid (REQUIRED IN CREAT)
			'DATA' and 'VALORI' are reserved codes.
		DATA	The 'DATA' P.I.A. is used to generate COPY books from Data Structure descriptions. For more information, see chapter "Generation of Copy Book", subchapter "Description of P.I.A. Data".
		VALORI	It is used for the activity calculation of the PACMODEL function.
		PAC...	It is prohibited to define a P.I.A. code beginning with 'PAC'.
2	1		ACTION CODE (REQUIRED)
		C	Creation of the line
		M	Modification of the line
		D	Deletion of the line
		A	Deletion of the line
		T	Transfer of the line
		B	Beginning of multiple deletion
		G	Multiple transfer

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		?	Request for HELP documentation
		E or -	Inhibit implicit update
		X	Implicit update without upper/lowercase processing
3	3		Line number
			PURE NUMERIC FIELD
			It is advisable to begin with line number '100' and then number in intervals of 20. This facilitates subsequent line insertions, as necessary.
4	1		Type of P.I.A. line
		blank	STANDARD P.I.A. LINE: A standard P.I.A. line is made up of a fixed part (LABEL) followed by a variable part (INITIAL VALUE).
		C	COMMENT LINE: A P.I.A. comment line is used for documentary purposes and when the P.I.A. is called on a "-GC" screen, this line is displayed and cannot be modified by the user.
		T	SYMBOLIC VALUE LINE
			This type of P.I.A. line is used to define a symbolic parameter. In the LABEL field, the user enters a symbolic parameter (its maximum length is three characters, the first character being the '\$' sign).
			In the INITIAL VALUE field, the user enters the actual value of the parameter.
			NOTE: The number of "T"-type lines is not limited, In other words, as many parameters as needed can be defined. Parameters are not specifically associated with any given P.I.A. line.
5	20		Printed label for level n
			This field contains the fixed part of a P.I.A. line as displayed when the P.I.A. is called. Its contents depend upon the TYPE OF P.I.A. LINE.
			On P.I.A. lines to be generated (value "G" in the LINE GENERATION OPTION field on the P.I.A. Description (-D) screen), each instruction must be left-justified, and, if it does not fit on a single line, its continuation must begin with at least one 'blank' character.
6	29		Initial value
			1. ON A STANDARD P.I.A. LINE (Type = 'blank'):

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			The user enters the default value displayed in the variable part when the P.I.A. is called.
		blank	If no default value is specified, the variable part of the P.I.A. line is underscored.
			2. ON A P.I.A. COMMENT LINE (Type = 'C'):
			The user enters the second part of the Comment line.
			3. ON A P.I.A. SYMBOLIC VALUE LINE (Type = 'T'):
			The user enters the actual value of the symbolic parameter previously entered in the LABEL field.
			NOTE: For P.I.A. Comment and Symbolic Value lines, the length of this field cannot exceed 29 characters.
7	3		LENGTH OF THE VARIABLE PART
			PURE NUMERIC FIELD
			In this field, the user enters the length of the variable part of the given P.I.A. line.
			When the P.I.A. is called, this field appears with this number of underscores ('_'), if no default value is defined in the INITIAL VALUE field.
			When the P.I.A. is called, if user input exceeds the length provided for in this field, it will be truncated.
			A P.I.A.'s variable part cannot exceed 40 characters.
			For the entire set of lines describing a P.I.A., the total length of all variable parts cannot exceed 450 characters.
		000	Default Value: There is no variable part for this line.
8	1		LINE GENERATION OPTION
		blank	Documentary line only, not taken into account when the occurrence calling the P.I.A. is generated.
		G	This line is taken into account when a Database Block, a Screen, or a TUI Client calling the P.I.A. is generated.
			NOTE: For the P.I.A. 'DATA', a 'blank' may be entered instead of 'G' with the same result.
		O	Line for options (DBD Function and Pacbench C/S).
9	6		Cross-reference (P.I.A. calls)
			This field may contain a cross-reference key code.

NUMLEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		It gives the possibility of getting a list of the entities calling the P.I.A with the contents of the variable part referenced by this key code (using choice XIcccccc, where ccccc is the key code).
		Example :
		the variable part 'author' is referenced by key code 'AUTH',
		choice XIAUTH gives the list of entities with their authors, such as :
		E ELEM1 Smith E ELEM2 Smith E ELEM3 Evans

## TP Access Mode

LISTS

CHOICE -----	SCREEN -----	UPD ---
LCIaaaaaa	List of P.I.A.'s by code (starting with P.I.A. 'aaaaaa').	NO
LNIAaaaaa	List of P.I.A.'s by name (starting with P.I.A. 'aaaaaa').	NO
LTIAaaaaa	List of P.I.A.'s by type (starting with P.I.A. 'aaaaaa').	NO
LXIAaaaaa	List of P.I.A.'s sorted by external references (starting with external reference 'aaaaaa').	NO

Cross-references:

XIAaaaaa	X-references of P.I.A. external references (starting with external reference 'aaaaaa').	NO
XIAaaaaaIbbbbbb	X-references of P.I.A. external references 'aaaaaa' (starting with P.I.A. 'bbbbbb').	NO

DESCRIPTION OF THE P.I.A. 'aaaaaa'

-----

CHOICE -----	SCREEN -----	UPD ---
Iaaaaaa	Definition of P.I.A. 'aaaaaa'.	YES
IaaaaaaDbbbbbbb	P.I.A. 'aaaaaa' Description (starting with line 'bbbbbb').	YES
IaaaaaaGCbbb	Comments on P.I.A. 'aaaaaa' (starting with line number 'bbb').	YES
IaaaaaaCR	Occurrences linked to P.I.A 'aaaaaa' through User Relationships.	YES

IaaaaaaATbbbbbb	Text assigned to P.I.A. 'aaaaaa' (starting with text 'bbbbbb').	NO
IaaaaaaX	X-references of P.I.A. 'aaaaaa'.	NO
IaaaaaaXQbbbbbb	List of occurrences linked to P.I.A. NO 'aaaaaa' through the User Relations (starting with Relation 'bbbbbb').	

**NOTE:** After the first choice of type 'Iaaaaaa', 'Iaaaaaa' can be replaced with '-'.  
-

All notations between parentheses are optional.

```

-----
!                PURCHASING MANAGEMENT SYSTEM                SG000008.LILI.CIV.1583 !
! LIST OF INPUT AIDS BY CODE                                     !
!                                                               !
! P.I.A. NAME                                               T TYPE                LIBR. !
! ALTPCB DL1 ALTERNATE P.C.B.                               I IMS                 *CEN !
! AUTHOR AUTHOR DOCUMENTATION                               D DOCUMENTATION      0059 !
! GSAMPC GSAM FILE DEFINE                                   I IMS                 *CEN !
! HDAM DL1 HDAM DATA BASE DEFINE                           I IMS                 *CEN !
! HDAMSE HDAM SEGMENT COMPLEMENTS                           I IMS                 *CEN !
! HIDAM DL1 HIDAM DATA BASE DEFINE                           I IMS                 *CEN !
! HIDAMS HIDAM SEGMENT COMPLEMENTS                           I IMS                 *CEN !
! HISAM DL1 HISAM DATA BASE DEFINE                           I IMS                 *CEN !
! HISAMS HISAM SEGMENT COMPLEMENTS                           I IMS                 *CEN !
! HSAM DL1 HSAM DATA BASE DEFINE                             I IMS                 *CEN !
! HSAMSE HSAM SEGMENT COMPLEMENTS                           I IMS                 *CEN !
! INDEX DL1 INDEX DATA BASE DEFINE                           I IMS                 *CEN !
! INDEXP MACRO LCHILD PRIMARY INDEX                           I IMS                 *CEN !
! INDEXS INDEX SEGMENT COMPLEMENTS                           I IMS                 *CEN !
! ISECON SECONDARY INDEX DEFINE                               I IMS                 *CEN !
! LCHILD MACRO DL1 LOGICAL CHILD                             I IMS                 *CEN !
! PCB DL1 PCB COMPLEMENT                                     I IMS                 *CEN !
! PSBGEN PSBGEN DL1 MACRO COMPLEMENT                           I IMS                 *CEN !
!                                                               !
! O: C1 CH: LCI                                             !
-----

```



```

-----
!                               PURCHASING MANAGEMENT SYSTEM          SG000008.LILI.CIV.1583 !
! LIST OF INPUT AIDS EXTERNAL REF'S                                     !
!                               !                                       !
! REFER. P.I.A.                LIN                                LIBR. !
! ACCESS HDAM DL1 HDAM DATA BASE DEFINE          100          *CEN !
!           HIDAM DL1 HIDAM DATA BASE DEFINE      100          *CEN !
!           HISAM DL1 HISAM DATA BASE DEFINE      100          *CEN !
!           HSAM DL1 HSAM DATA BASE DEFINE         100          *CEN !
!           INDEX DL1 INDEX DATA BASE DEFINE       100          *CEN !
! DDNAME HDAM DL1 HDAM DATA BASE DEFINE           160          *CEN !
!           HIDAM DL1 HIDAM DATA BASE DEFINE       160          *CEN !
!           HISAM DL1 HISAM DATA BASE DEFINE       140          *CEN !
!           HSAM DL1 HSAM DATA BASE DEFINE         140          *CEN !
!           HSAM DL1 HSAM DATA BASE DEFINE         180          *CEN !
!           INDEX DL1 INDEX DATA BASE DEFINE       140          *CEN !
! INDSEC PCB DL1 PCB COMPLEMENT                    120          *CEN !
! PASSWD HDAM DL1 HDAM DATA BASE DEFINE           140          *CEN !
!           HIDAM DL1 HIDAM DATA BASE DEFINE       140          *CEN !
! PROGTP ALTPCB DL1 ALTERNATE P.C.B.               140          *CEN !
!           ALTPCB DL1 ALTERNATE P.C.B.             160          *CEN !
! PTR HDAMSE HDAM SEGMENT COMPLEMENTS              100          *CEN !
!           HIDAMS HIDAM SEGMENT COMPLEMENTS        100          *CEN !
!                               !                                       !
! O: C1 CH: LXI                                     !
-----

```







---

## Chapter 8. Generation and/or Printing

---

### Introduction

The generation commands allow the user to generate:

- On-line programs in COBOL,
- Database blocks in the description language of the DBMS being used,
- Data structures in COBOL COPY clauses.

These sources will then be compiled and linked, using compilers and link editors, just as if they had been written directly in a source language. Also, through a generation, a file can be created to initialize an error messages file or database for an application.

The print commands allow the user to print lists or descriptions of all the entities in the database.

Both functions are allowed by a unique batch generation- print batch procedure (GPRT). The user enters generation- print commands to specify the entities he/she wishes to print/generate.

The GPRT procedure is a batch procedure which can be submitted on-line: commands are entered and jobs are submitted directly from the 'GP' generation-print screen (if the hardware permits direct submission of batch jobs on-line).

Each generation and print request is specific to a user and runs against a given library.

NOTES:

#### Verification of requests

While the System will prohibit the user from entering invalid commands, it does not reject command requests that will result in duplicate information (such as having both a request for a description of all data structures and a request for a description of one particular data structure).

The user must therefore verify that the commands entered are not redundant. Additionally, the generation and print requests must relate to entities which can be accessed in the library where a user is working. An entity must be generated in its definition library.

## Uppercase shift

If the printer in use does not process lowercase characters, the 'UPC' command allows for the automatic conversion of lowercase characters into uppercase characters when reports are printed (see subchapter "GENERATION AND PRINT COMMANDS" in this chapter).

---

## **On-line Requests**

The Generation and Print Commands screen is accessed by entering the following input in the CHOICE field:

- CH: GP

### HOW TO USE THE GP SCREEN

On the 'GP' screen, different input in the OPERATION CODE field provide different screen formats:

- C1: GPRT requests made in the connection Library and upper Libraries.
- I1: GPRT requests made in all Libraries (Inter-Library).
- C2: validated lines (GPRT requests and 'JOB' command lines) made in the connection Library and upper Libraries. Updates are not authorized on this screen.
- C4: User 'JOB' command lines. These lines are defined in inter-library in the Administration Database.

### ENTERING AND STORING GPRT COMMANDS

The different GPRT commands are entered and stored using the 'C1' screen format. Only commands validated before execution are taken into account (see the 'Validation' paragraph below).

**NOTE:** To directly access a specific line of the 'C1' screen format, enter:

GPbbbb, with

bbbb = command for Print request.

### SUBMISSION JCL

Command lines are entered and stored using the 'C4' screen format.

These Lines are specific to each user. They are written just once and can be accessed from any library. They are used to start the execution of the GPRT procedure and to transmit the validated commands.

**NOTE:** if no command lines are entered, ask your Database Administrator.

**NOTE:** if no command lines are entered, ask your Database Administrator.

These 'JCL' command lines are structured as follows:

- 'JCL' code entered in the COMMAND FOR PRINT REQUEST field,
- LINE NUMBER. They are sequenced as follows:  
All validated 'JCL' command lines whose line number is less than 600000 appear first at the beginning of the job stream; command lines whose line number is equal to or greater than 600000 appear at the end of the job stream and follow the validated Commands for Print Requests.
- the actual command line is entered in the CONTINUATION OF REQUEST field.

**NOTE:** To directly access a specific line of the 'C4' screen format, enter:

GPnnnnnn, with

nnnnnn = LINE NUMBER

VALIDATION :

The commands selected are validated before submission in the 'C1' screen by entering 'V' in the VALIDATION field (see Subchapter 'Generation-Print Requests'). They are automatically deactivated after their submission.

In the 'C4' screen, only validated 'JCL' command lines are taken into account during the execution. These lines remain validated.

If a value other than 'V' is entered , the VALIDATION field is blanked out and the job is not submitted.

The 'C2' screen format displays validated lines only, including both the commands entered in the 'C1' screen and 'JCL' command lines entered in the 'C4' screen.

Updates are not allowed in this screen.

**NOTE:** To directly access a specific line of the 'C2' screen format, enter:

**NOTE:** To directly access a specific line of the 'C2' screen format, enter:

GPbbbb, with

bbbb = command for Print request.

JOB SUBMISSION

Enter 'job' or 'sub' in the JOB SUBMISSION REQUEST field of the 'C1','C2' and 'C4' screens. Both input are valid except under IMS where 'job' allows the user to follow the execution of the job whereas 'sub' does not. For more details, see the USER INTERFACE GUIDE reference manual, Chapter GENERATION AND/OR PRINTING, Subchapter GENERATION AND PRINT COMMANDS/GP SCREEN, section I.M.S. SPECIFIC COMMANDS.

#### COPY OF 'JCL' COMMAND LINES

This functionality is only available to the Database Administrator.

The userid in the USER CODE field may be overridden with another user code so that the JCL command lines can be copied to the recipient user code.

**NOTE:** The 'C4' option of the GP screen is reserved only for GPRT submission JCL. It is not meant to manage Test JCL or the Operations JCL of generated programs.

**NOTE:** The 'C4' option of the GP screen is reserved only for GPRT submission JCL. It is not meant to manage Test JCL or the Operations JCL of generated programs.

---

## Request Structure

the structure of Generation-print requests breaks down into three parts:

- The command itself,
- The entity instance code if required,
- a presentation print option.

Sometimes parameters are necessary. Parameters can be introduced in two places:

- in pre-formatted fields, with the command code,
- on a continuation line.

The GPRT command consists of a three-characters code (four- character code for some Model entities of the PACMODEL function).

Warning: the following coding is not always respected.

The first character identifies the nature:

- 'L' : List entities.
- 'D' : Description of the entities, including the Definition, Description and General Documentation.
- 'G' : Generation of source code for the entity specified (Program, Screen, Database Block, etc.).



- 'P' : Print user manual or volume. The second character must be 'C', and the third 'V'.

The second character specifies how the information is to be presented:

C - By Code.

E - To generate Error messages (used when nature = 'G').

K - By Keyword (in the 'CONTINUATION OF REQUEST' column, enter the following value in the 'SEL:' field: 'Blank' to select both implicit and explicit keywords; 'L' to select implicit keywords only; 'M' to select explicit keywords only).

N - By Name.

T - By Type.

The third character is the Entity type:

**Note:** For a Model Entity, the M type is completed to specify if it concerns Objects (O type), Relations (R type) or Functional Integrity Constraints (C type).

**Note:** For a Model Entity, the M type is completed to specify if it concerns Objects (O type), Relations (R type) or Functional Integrity Constraints (C type).

D	Data Structure
E	Data Element
F	Meta-Entity
I	Parameterized Input Aid
K	Keyword (Thesaurus)
MC	Functional Integrity Constraint
MO	Model Object
MR	Model Relation
O	On-line Screen
P	Program
Q	User-Defined Relation
R	Report
S	Segment
T	Text
V	Volume
\$	User Entity

SPECIAL COMMANDS

- FLx : Flow control card (x = entity type)
- JCL : Allows the user to set up the GPRT on-line submission JCL
- UPC : transformation of lowercase characters into uppercase characters for printers which do not support lowercase.
- PCM : Print Method User Entities.

The complete list of GPRT requests appears in Subchapter 'GENERATION AND PRINT REQUESTS / GP SCREEN'.

---

## Optional Control Cards

With most hardware, it is possible in the GPRT procedure to also submit compilation and link-edit procedures for generated entities in the job stream.

Job control cards must be used in the GPRT job stream for this purpose.

Generally, the job control cards are standardized at a site. They are entered in a User Parameter file (AP) which is managed by the Database Administrator (see Operations Manual - Part II "Batch Procedures: Administrator's Guide", chapter "Database Management Utilities", subchapter "PARM: Update of User Parameters"). A list of the available control card sets may be viewed on the "List of Control Cards" screen (CHOICE: CH: LCPC) in the Management of User Parameters.

Each set of control cards is identified by a one-character Option Code which is referenced at generation time.

There are two categories of job control cards:

- the JCL to be inserted before the generated source (control cards in front of stream/programs),
- the JCL to be inserted after the generated source (control cards in back of stream/programs).

The appropriate Option Code value can be entered:

- on the Library Definition screen in the CONTROL CARDS IN FRONT/BACK OF STREAM and the CONTROL CARDS IN FRONT/BACK OF PROGRAMS fields. These will be the defaults for all the programs in the library.
- on the Program, On-Line Screen, or Database Block Definition screens to override the defaults if necessary.
- On the flow control card 'FLx' or generation 'GCx' commands. This override applies to the current run only.

The order of precedence is as follows:

- the FLx or GCx command,
- the Program, On-Line Screen or Database Block Definition screen,
- the Library Definition screen.

### PARAMETERIZING THE CONTROL CARDS

A total of nine parameters (values 1 - 9) can be passed in the control cards. The parameter value is assigned on the continuation line of the FLx or GCx command using the format 'n=xxxxxx', where:

- 'n' represents the number of the parameter,
- 'xxxxxx' represents the value assigned to the parameter (maximum: 36 characters).

Some examples of use of these parameters would be: printing classes, execution time limits, object libraries, etc.

### NOTE

The On-Line Screen entity serves to generate both the on-line program and the screen map. The user has the possibility to suppress the generation of the screen map by coding a '\$' character as one of the control card codes (refer to the descriptions of the CARDS IN FRONT/BACK MAP below).

---

## **Generation and Print Commands / GP Screen**

```

-----
! VA Pac                APPLICATION DEVELOPMENT                P.0.*CODEUTI.BASE.1583 !
!                                                                15 !
! GENERATION AND PRINT COMMANDS                8 and 9    USER: !
!1 2 3      45 6 7  <-----> -----> !
!A COM ENTITY : OP V C CONTINUATION OF REQUEST                11 !
! LKP       : C1    LIST OF PROGRAMS RELATED BY KEYWORDS        SEL:_ !
!           :      :-----> !
! UPC       : C1    SHIFT TO UPPERCASE    MANUAL:_ DOC:_ ERROR MESS:_ !
!           :      :-----> !
! FLP       : C1    PROGRAM JOB CARD / JOB DELIM ENV: _ (CCF:_ CCB:_) !
!           :      :-----> !
! GCP PA10FL : C1    SOURCE CODE FOR SELECTED PROGRAM          (CCF:_ CCB:_) !
!           :      :-----> !
! GCP PA20PA : C1    SOURCE CODE FOR SELECTED PROGRAM          (CCF:_ CCB:_) !
!           :      :-----> !
! GCP PA30AR : C1    SOURCE CODE FOR SELECTED PROGRAM          (CCF:_ CCB:_) !
!           :      :-----> !
! FLO       : C1    SCREEN JOB CARD / JOB DELIM ENV: _ (CCF:_ CCB:_) !
! GCO D00000 : C1    SCREEN'S PGM AND MAP SOURCE CODE          (CCF:_ CCB:_) !
!           :      :-----> 12 13 14 !
! PCV VOLUME : C1    PRINT VOLUMES BY CHAP OR SUBCHAP AND CODE: _ _ _ !
!           :      :-----> !
!           :      :-----> !
!*** END *** !
2 !
+ !O: C1 CH: GP !
                JOB: 10 !
-----

```

```

-----
! VA Pac                APPLICATION DEVELOPMENT                P.0.*CODEUTI.BASE.1583 !
!                                                                0008 !
!VALID GENERATION AND PRINT COMMANDS                USER: SG000008 !
!
!A COM ENTITY : OP    C CONTINUATION OF REQUEST                : LIB  SESSI !
! JCL 000000 :        //PSTSG8 JOB (634,CGI46808),SG8,CLASS= : !
! JCL 000020 :        // EXEC ZA73GPRT,ROOT=LI,FILE=LI,OUT : !
! JCL 000030 :        // LOADTP='PST.CICS.LINKLIB',OUTL=R, : !
! JCL 000040 :        // INDUV='PST',INDSV='PST',INDSN='PS : !
! JCL 000045 :        // STEPLIB='PST.PAC73.MBR7', : !
! JCL 000050 :        // LOADBA='PST.BATCH.LINKLIB' : !
! JCL 600100 :        //PAC.PAC7SC DD DSN=PST.LILISCA,DISP=S : !
! JCL 600200 :        //PAC.PAC7SG DD DSN=PST.LILISGA,DISP=S : !
! : : : : !
! : : : : !
! : : : : !
! : : : : !
!UPDATE INHIBITED WITH THIS DISPLAY TYPE !
!O: C2 CH: GP                JOB: !
-----

```

```

-----
! VA Pac          APPLICATION DEVELOPMENT          P.0.*CODEUTI.BASE.1583  !
!JCL LINES FOR THE COMMANDS                          USER: SG000008         !
!
!A  COM  LINE   :   V C CONTINUATION OF REQUEST      !
!   JCL  000000 :   V //PSTSG8 JOB (634,CGI46808),SG8,CLASS=X,MSGCLASS=C !
!   JCL  000020 :   V // EXEC ZA73GPRT,ROOT=LI,FILE=LI,OUTL=R,OUT=C,    !
!   JCL  000030 :   V // LOADTP='PST.CICS.LINKLIB',OUTL=R,UTI='SG8',    !
!   JCL  000040 :   V // INDUV='PST',INDSV='PST',INDSN='PST',          !
!   JCL  000045 :   V // STEPLIB='PST.PAC73.MBR7',                    !
!   JCL  000050 :   V // LOADBA='PST.BATCH.LINKLIB'                    !
!   JCL  600100 :   V //PAC.PAC7SC DD DSN=PST.LILISCA,DISP=SHR        !
!   JCL  600200 :   V //PAC.PAC7SG DD DSN=PST.LILISGA,DISP=SHR        !
!
!   :
!   :
!   :
!   :
!   :
!   :
!   :
!   :
!   :
!   :
!   :
!
!*** END ***
!O: C4 CH: GP                                         JOB:
-----

```

NUMLEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	1	ACTION CODE
	C	Creation of the line
	M	Modification of the line
	D	Deletion of the line
	A	Deletion of the line
	T	Transfer of the line
	B	Beginning of multiple deletion
	G	Multiple transfer
	?	Request for HELP documentation
	E or -	Inhibit implicit update
	X	Implicit update without upper/lowercase processing
2	4	GENERATION-PRINT COMMANDS
		Note: Input of the entity code is required or optional depending on the command. The following indicators describe the various options:
		(A) Required entity code input (Batch column 9).

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			(B) Optional entity code input. If omitted, all the occurrences of the entity type are listed in the user's hierarchical view.
			(C) Entity code input not allowed. All occurrences of the entity type are listed in the user's hierarchical view.
			(D) A blank line may be requested. Type an asterisk in the CONTINUATION OF REQUEST INDICATOR (C) field and press the ENTER key. The options for each command are listed below. This corresponds to batch columns 31 to 80 incl.
			Note: Each command may require additional information. The following list identifies these input fields by code.
			(1) SEL: _ Limit the list by keyword type: enter 'M' for explicit, 'L' for implicit, or blank for both. In batch mode, enter this value in column 30. See also SELECTION OF KEYWORD TYPE.
			(2) Same as above plus a following line on which a user may enter one or several keywords. This appears as a continuation line in on-line mode and corresponds to batch columns 31 to 80.
			(3) FORMAT: _ A format may be specified: enter 'I' for internal, 'E' for input, or 'S' for output. Enter these values in column 17 in batch mode. A blank is also valid and means that the default value is desired. See also TYPE TO SELECT.
			(4) CCF:_ CCB: The code of the control card in front of program and in back of program, respectively. Enter these codes in columns 19 to 22 in batch mode. These codes must be consistent with the codes displayed on the Dialog Definition screen.
			(5) CCF:___ CCB:___ The code of the control card in front of program and in front of map, and the code of the control card in back of program and in back of map, respectively. The user can override the default control cards. These codes should be consistent with the values on the Dialog Definition screen. In batch mode, use columns 19 to 22.
			(6) TYPE: __ The user enters the selected type which should be consistent with the corresponding field on the Definition screen of that entity type. In batch mode enter the type in columns 17 and 18.

NUMLEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		(7) PRINT DOCUMENT Y CHAP/SUBCHAP AND CODE: _ _ _ Specify the chapter and/or subchapter. Enter 'C' for chapter followed by the chapter code, or 'S' for subchapter followed by the chapter and subchapter codes. In batch mode use columns 23 through 27.
		(8) ENV.: _ (CCF: _ CCB: _) For those sites that are using the PEI option, the environment may be specified. In batch mode enter the environment code in column 17 and the corresponding control cards in columns 19 through 22.
		THESAURUS
	DCK	(C) A complete Description of Keywords defined in the thesaurus which lists the SYNONYM OR DEFINITION field contents associated with each keyword.
		Note: This data being specified in Inter-Library only, this command cannot be used with the U1 option. Use the C1 or I1 option which gives the same output.
	LCK	(1) (C) A listing of all keywords defined in the thesaurus, with their synonyms. It includes the number of uses of these keywords in the Database. The information is sequenced by code.
		TEXTS
	DCT	(A) Description of selected Text.
		Note: If you enter an asterisk in the ENTITY CODE field, the Descriptions of all Text occurrences are printed, sequenced by code.
	DTT	(B) (6) Descriptions of Text occurrences sequenced by type.
	L*T	List of Texts with their paragraphs titles, sequenced by code.
	LCT	(C) List of Text occurrences sequenced by code.
	LKT	(2) List of Text occurrences whose names and/or explicit Keywords contain the Keyword(s) specified.
	LNT	List of Text occurrences sequenced by name.
	LTT	(6) List of Text occurrences sequenced by type.
		DOCUMENTS (PDM)
		Note: DOCUMENT entity = VOLUME entity in the VA Pac character-mode interface.



NUMLEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
	DCV	(B) Printing of the Description of the Document whose code is entered in the Entity field. When this code is not entered, the Descriptions of all the Documents are printed, sequenced by code.
	FLV	(C) (D) (4) This command is used to specify the job card and end-of-job delimiters: Flow control for Documents.
		Use the continuation line to define user parameters on the control cards.
	LCV	(C) List of Documents sequenced by code.
	LKV	(C) (2) List of Documents selected according to the keyword(s) entered on the continuation line.
	LVN	(C) (2) List of Documents sequenced by name.
	PCV	(B) (D) (7) Printing of the contents of the Document whose code is entered in the ENTITY CODE field. When this code is not entered, the contents of all the Documents are printed, sequenced by code. For local printing in RTF format, the Document must be generated with the C2 option. Selective Printing is documented in the 'Personalized Documentation Manager' manual, chapter 'Access Commands, subchapter 'Generation-Printing'.
		ELEMENTS AND PROPERTIES
	DCE	(B) A complete description of the defined Element(s). The information is sequenced by Element code.
		Note: to display the assigned text, use print option '2'.
	DFE	(B) A listing of the Element(s) not defined in the Specifications Dictionary, with cross-references.
	LAE	(C) List of Elements sequenced by Cobol name.
	LCE	(B) A list of defined Elements sequenced by Element code.
	LKE	(C) (2) A list of Elements and properties sequenced by keyword.
	LNE	(C) A list of Elements and properties sequenced by name.
	LXE	(C) A list of defined Elements and properties which are not used.
		DATA STRUCTURES
	DCD	(B) A complete Description of the Data Structure(s). This includes cross-references to Programs and Screens and a list of associated Reports and Segments. The information is sequenced by Data Structure code.
		Note: To get the associated text use print option '2'.

NUMLEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
	FLD	(C) (D) (4) This command is used to specify the job card and end- of-job delimiters: flow control of Data Structures.
		Use the continuation line to define user parameters on the control cards.
	GCD	(A) Generate a COBOL description (COPY book) of the Data Structure.
		For more details on generation, refer to the 'Data Dictionary' manual.
		C3 : Generation of comments which will be used by VA Pac Connector (an eBusiness tool).
	LCD	(C) A list of Data Structures sequenced by code.
	LED	(A) List the error messages defined for the Data Structure and for each Segment. This list only includes messages that have already been generated.
	LKD	(C) (2) A list of the Data Structures whose names and/or explicit keywords contain the keyword(s) specified.
	LND	(C) (2) A list of the Data Structures sequenced by name.
	LOD	(C) A list of Data Structures sequenced by external name.
	LPD	(C) A list of Data Structures sequenced by Program external name.
	LTD	(C) A list of Data Structures sequenced by type.
		SEGMENTS
	DCS	(B) (D: with input of the entity code) (3)
		Note: Enter the Data Structure code in the ENTITY CODE field, and the Segment code(s) on the continuation line(s).
		A complete Description of the Segment(s). This includes cross-references to Programs and Screens for the Data Structure and to all entities for the Segment(s) and a list of associated Reports and Segments. For Segments defined as tables (Pactables function), a list of subschemas and subsystems is printed.
		Note: To get the associated text for both the Segment and the Data Structure, use print option '2'.
	LCS	(C) List of Segments sequenced by code.
	LKS	(C) (2) List of Segments whose names and/or explicit keywords contain the keyword(s) specified.
	LNS	(C) List of Segments sequenced by name.
		INPUT AIDS

NUMLEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
	DCI	(C) A complete description of the Input Aid(s) including a list of uses of the Input Aid(s) in other entities. The information is sequenced by the PIA code.
	LCI	(C) A list of Input Aids sequenced by the PIA code.
	LKI	(C) (2) A list of the Input Aids whose names and/or explicit keywords contain the keyword(s) specified.
	LNI	(C) (2) A list of the Input Aids sequenced by name.
	LXI	(C) List of all cross-references (PIA calls) as defined on the PIA Description screen sequenced by the value of this field.
		DATABASE BLOCKS
	DTB	(B) (6) Description(s) of Database Blocks of the type specified including cross-references to other Blocks and Screens.
		Note: To get the associated text, use print option '2'
	FLB	(C) (D) (4) (8) This command is used to specify the job card and end- of-job delimiters: Flow control of the Database Block.
	FLS	(C) (D) (4) (8) Same as FLB for Relational/SQL Blocks.
		Use the continuation line to define user parameters on the control cards.
	GCB	(A) (D) (4) Generate a DDL description of the Database Block specified (including 'DB'-type Blocks for DB2).
		Use the continuation line to define the user parameters on the control cards.
	GSQ	(A) (D) (4) Generates the SQL DDL for the Relational/SQL Database Block specified. Use the continuation line to define the user parameters on the control cards.
	LCB	(C) List of Database Blocks sequenced by code.
	LEB	(C) List of Database Blocks sequenced by external name.
	LES	(C) List of SQL objects sequenced by external name.
	LKB	(C) (2) A list of the Database Blocks whose names and/or explicit keywords contain the keyword(s) specified.
	LNB	(C) (2) A list of Database Blocks sequenced by name.
	LTB	(6) A list of Database Blocks whose Block type have been defined with the specified value.
	LTS	(C) A list of SQL objects sequenced by code.

NUMLEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		* FOLDERS, FOLDER VIEWS, BUSINESS COMPONENTS, * C/S SCREENS (TUI CLIENT COMPONENTS) * SCREENS, DIALOGS.
	DCO	(A) Complete Screen Description including Dialog Complement and uses in other Screens. For Screens, information is also provided on relevant Segments, Macro-Structure Calls, Beginning Insertions Modifications, Work Areas and Structured Code.
		Note: To get the associated text, use print option '2'.
	DGC	(A) Complete Description of a C/S Screen.
	DGS	(A) Complete Description of a Business Component.
	DSO	(A) Description of the selected Screen.
	FGC	(C) (D) (4) (8) This command is used to specify the job card and end-of-job delimiters: Flow control for C/S Screens.
	FGE	(C) (D) (4) This command is used to specify the job card and end-of-job delimiters: Flow control for Pacbench C/S error messages.
		Use the continuation line to define user parameters on the control cards.
	FGS	Server Component.
	FLE	(C) (D) (4) This command is used to specify the job card and end-of-job delimiters: Flow control for Dialog error messages.
		Use the continuation line to define user parameters on the control cards.
	FLO	(C) (D) (4) (8) This command is used to specify the job card and end-of-job delimiters: Flow control for Screens.
		Use the continuation line to define user parameters on the control cards.
	FME	eBusiness Error messages.
	FMS	Server.
	FSO	(C) (D) (4) (8) This command is used to specify the job card and end-of-job delimiters: Flow control for source Screen. Use the continuation line to define user parameters on the control cards.
	GCO	(A) (D) (5) Generate a COBOL Description of the Screen specified. Use the continuation line to define user parameters on the control cards.
	GGC	(A) (D) (5) Generate a C/S Screen (TUI Client Component).

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		GGG	(A) (D) (5) Generation applicable to Business Component, Communication Monitor, Error Server, Folder.
		GEC	(A) (D) Pacbench C/S:
			C1 : Error messages defined for the Client or Server Dialog and for each component.
			C2 : Error messages generated through option 1 plus documentary help messages.
			C3 : Error messages for the Dialog only.
		GED	(A) (D)
			C1 : Error messages generated for a Data Structure and for each Segment.
			C2 : Error messages generated through option 1 plus documentary help messages.
		GEO	(A) (D) OLSD Function:
			C1 : Error messages defined for the Dialog and for each Screen.
			C2 : Error messages generated through option 1 plus documentary help messages.
			C3 : Error messages for the Dialog only.
			C4 : Creation of the file required by Pacbase Web Connection. This command is applicable to the Dialog.
			Note: If a Segment/Screen suffix is entered on the continuation line of one of the preceding commands, error messages are generated/printed only for the selected Segment/Screen.
		GEF	Generation of error messages for a C/S Folder.
		GEI	Generation of error messages for INIT/TERM component.
		GES	Generation of error messages for a C/S Component.
		GSO	Generate source code for the selected Screen.
		GVC	(A) (D) (5)
			Extract a Proxy object. Applicable to Folder View, Folder and Business Component.
		GMF	Generate a Folder.
		GMI	Generate an INIT/TERM Server.
		GMM	Generate a Communication Monitor.
		GMS	Generate a Server.

NUMLEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
	GME	Generate an Error Server.
	GUT	Generate User Command.
	LCO	(C)
		List of Screens sequenced by code.
	LEC	(A) List the error messages defined for the Client Component and for each Client Screen. This list only includes messages that have already been generated.
	LEO	(A) List the error messages defined for the Dialog and for each Screen. This list only includes messages that have already been generated.
	LKO	(C) (2) List of Screens whose names and/or explicit keywords contain the keyword(s) specified.
	LNO	(C) List of Screens sequenced by name.
	LOT	(C) List of Screens sequenced by Transaction code.
	LPO	(C) List of C/S Screens sequenced by external program name.
	LSO	(C) List of C/S Screens sequenced by external map name.
	LTO	(C) List of Screens sequenced by type.
		REPORTS
	DCR	(B) (D: when the entity code has been entered)
		Note: When requesting the Description of a single Report, enter the Report code prefix in the ENTITY CODE field and the last character of of the Report code on the continuation line.
		A complete Description of the Report(s). This include Report layouts. The information is sequenced by the Report code.
		Note: To get the associated text, use print option '2'
	LCR	(C) List of Reports sequenced by code.
	LTR	(C) List of Reports sequenced by type.
	LKR	(2) A list of the Reports whose names and/or explicit keywords contain the keyword(s) specified.
	LNR	(C) List of Reports sequenced by name.
		PROGRAMS
	DCP	(B) A complete description of Program(s). The information is sequenced by the Program code.

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			Note: To get the associated text, use print option '2'.
		DSP	(A) Description of the selected Program produced by Reverse Engineering.
		FLP	(C) (D) (4) (8) This command is used to specify the job card and end-of-job delimiters: Flow control for Programs.
			Use the continuation line to define user parameters on the control cards.
		FSP	(C) (D) (4) (8) This command is used to specify the job card and end-of-job delimiters: Flow control for 'reverse engineered' programs. Use the continuation line to define user parameters on the control cards.
		GCP	(A) (D) (4) Generate a COBOL description of the Program specified Use the continuation line to define user parameters o the control cards.
		GSP	(A) (D) (4) Generate a COBOL description of the 'reverse engineered' Program specified. Use the continuation line to define user parameters on the control cards.
		LCP	(C) List of Programs sequenced by program code. Note: To get keywords, use print option '2'.
		LEP	(C) List of Programs sequenced by external name.
		LKP	(2) A list of the Programs whose names and/or explicit keywords contain the keyword(s) specified.
		LNP	(2) List of Programs sequenced by name.
		LTP	(C) List of Programs sequenced by type.
			METHOD ENTITIES
		DCM	(A) A complete Description of the Method entity as specified.
		DCMC	(C) A complete Description of Method Functional Integrity Constraint(s).
		DCMO	(C) A complete Description of Method Object(s).
		DCMR	(C) A complete Description of Method Relation(s).
		LCMC	(C) List of Method Functional Integrity Constraints sequenced by F.I.C. code.
		LCMO	(C) List of Method Objects sequenced by Object code.
		LCMP	(C) List of properties sequenced by Property code.
		LCMR	(C) List of Method Relations with their Functional Integrity Constraints, sequenced by Relation code.

NUMLEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
	LKM	(C) (2) A list of the Method entities whose names and/or explicit keywords contain the keyword(s) specified.
		META-ENTITIES
	DCF	(B) A complete Definition and Description of the Meta-Entity entered in the ENTITY field. If no code is specified, all Meta-Entities are listed. The information is sequenced by code.
	DCQ	(B) A complete Definition and Description of the User Relations entered in the ENTITY field. If no code is specified, all User Relations are listed. The information is sequenced by code.
	DCY	(B) A complete Definition and Description of the Extended User Entity entered in the ENTITY field. If no code is specified, all Extended User Entities are listed. The information is sequenced by code.
	DC\$	(B) A complete Definition and Description of the User Entity entered in the ENTITY field. If no code is specified, all User Entities are listed. The information is sequenced by code.
	LCF	(C) List of Meta-Entities sequenced by code.
	LCQ	(C) List of User Relations sequenced by code.
	LCY	(A) List of Extended User Entities sequenced by code.
	LC\$	(A) List of User Entities sequenced by code.
	LKF	(2) (C) A list of the Meta-Entities whose names and/or explicit keywords contain the keyword(s) specified.
	LKQ	(2) (C) A list of the User Entities Relations whose names and/or explicit keywords contain the keyword(s) specified.
		Note: For all printing by keyword, you can specify the TYPE OF SELECTION (BLANK, L or M) on the print line. Keywords are indicated on the continuation line sent back.
	LKY	(2) (A) A list of the Extended User-Entities whose names and/ or explicit keywords contain the keyword(s) specified.
	LK\$	(2) (A) A list of the User Entities whose names and/ or explicit keywords contain the keyword(s) specified.
	LNF	(C) A list of the Meta-Entities sequenced by name.
	LNQ	(C) A list of the User Relations sequenced by name.
	LN\$	(A) A list of Extended User-Entities sequenced by name.
	LN\$	(A) A list of the User Entities sequenced by name.



NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			JCL INTRODUCTION
		JCL	This indicates that the COMMAND LABEL/SYSTEM RESPONSE field will contain JCL. The JCL command can only be entered in the 'C4' screen format option.
			SHIFT TO UPPER-CASE
		UPC	This command allows for the automatic transformation of lower-case letters into upper-case letters in the printed output of the GPRT procedure.
			When the UPC command is entered, the following line is displayed:
			SHIFT TO UPPERCASE MANUAL:_ DOC:_ ERROR MESS:
			The VA Pac user must specify to which type of GPRT output the UPC command will apply (even when only one GPRT command is validated).
			In order to do this, the value '1' must be entered in one of the three fields displayed above: in the MANUAL field for Volumes (V); in the DOC field for entity related commands; in the ERROR MESS field for the generation of error messages.
			Note: This also allows the selective implementation of the UPC command when the execution of several GPRT jobs is requested and the SHIFT TO UPPER-CASE must not apply to all of them, in which case the corresponding field(s) must be left blank.
			METHOD ENTITIES PAF TABLES
		PCM	Description of PAF Tables for entities specific to a method. This command is necessarily followed by a Method code. VA PAC-GIP INTERFACE
		GIP	VisualAge Pacbase-GIP Interface generation.
3	6		ENTITY CODE
			This field is displayed with the label 'ENTITY' on screen format options '1' and '2' of the GP screen.
			When required, the user enters the entity code which corresponds to the COMMAND FOR PRINT REQUEST.
			'PCM' COMMAND: You enter in this field the code of the selected Methodology:
		M	Merise
		D	YSM
		A	SSADM

NUMLEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
	O	OMT
	F	IFW
		OPERATION CODE
4	1	LIBRARY VIEW SELECTION CODE
		Used to select the libraries from which the entities are to be generated and/or printed.
		This code has the same meaning as the first character of the OPERATION CODE field on all VisualAge Pacbase screens.
	C	Default value: Selected library and higher level libraries. In case of duplicates, the lines from the lower level library are taken into account.
		NOTE: IN GENERATION THE VALUE 'C' IS AUTOMATICALLY AS- SIGNED BY THE SYSTEM.
	I	Selected library and lower and higher level libraries.
	U	Selected library only.
	A	Selected library and higher level libraries with display of duplicates.
	>	Higher level libraries only.
	<	Lower level libraries only.
	Z	Selected library and lower level libraries.
5	1	PRINT OPTION
		In this field, you specify print options: there are 4 options numbered from 1 to 4 (default option : 1); each option corresponds to presentation variants of lines to be printed, e.g. printing of additional information (with or without keywords, programs with or without associated texts, ...); the detail of each print option is given for each entity in the corresponding reference Manuals.
6	1	VALIDATION OF COMMAND REQUEST
		This field does not appear on the "C2" screen format option.
	blank	The value in the COMMAND FOR PRINT REQUEST field is not to be taken into account.
	V	The COMMAND FOR PRINT REQUEST is validated.
		NOTE: These commands must be re-validated each time a request is made.
7	1	CONTINUATION OF REQUEST INDICATOR
	BlanK	No continuation line is requested.

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			A maximum of 5 continuation lines is authorized (coded 1 to 5).
			The first continuation line is created on the command line by entering '1' in the S field and the label corresponding to this line in the CONTINUATION OF REQUEST field.
			To delete a continuation line, you just need to blank out its label. NOTE: When you blank out the label corresponding to the continuation line '2', you delete the continuation lines '3','4' and '5' if these lines existed.
			When you duplicate a command line with an entity's instance code and continuation lines, the continuation lines are duplicated for the new entity's instance.
8	50		COMMAND LABEL / SYSTEM RESPONSE
			This is the name of the generation-print command.
			With some commands, you may be requested to enter additional data (selection of keyword type, control cards Before/After program).
			If a continuation line is used, it can contain keywords or parameters for generators.
9	50		CONTINUATION LINE
			Continuation lines are used to complete some generation-print commands.
			A first line is automatically created for the commands that require continuation lines.
			EXAMPLES :
			For a request of list by keywords (ex: LKS), a line coded 1 is automatically created. You enter the keywords on that line and you can, if needed, create new lines (a maximum of 5 continuation lines can be created).
			Other example: when you want to generate the Description of a Segment (DCS command), you enter the code of the entity's instance in the ENTITY field and the suffix of the Segment in the CONTINUATION OF REQUEST field.
10	3		JOB SUBMISSION REQUEST
			Used to automatically submit the generation and/or printing job from the GP screen when the operating system and TP monitor in use allow for this. The job stream will contain only validated commands for ration and/or print requests and validated JCL lines, all libraries and sessions included.

NUMLEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
	blank	No job submission. Update the AG file.
	JOB	Job submission.
		NOTE: For IMS, system messages are displayed. See USER'S MANUAL, chapter "CHOICE: ACCESS COMMANDS", subchapter "SPECIAL CHOICES: IMS VERSION".
	SUB	Job submission.
		NOTE: For IMS, system messages are not displayed.
11	1	SELECTION OF KEYWORD TYPE
	blank	Selection on both implicit and explicit keywords.
	L	Selection on implicit keywords only.
	M	Selection on explicit keywords only.
	BLANC	Sélection sur libellé et Mots CPDKM 200103061924335
12	1	DOCUMENT SELECTIVE PRINT REQUEST
		Field displayed with PCV command only.
	blank	Print the whole Document (default value)
	C or 1	Print the selected chapter or level-1 section, respectively. Field used jointly with next field.
	S or 2	Print the selected subchapter or level-2 section (included in the level-1 section indicated in the following field), respectively. Field used jointly with next two fields.
13	2	LEVEL-1 SECTION # / CHAPTER CODE
		Field displayed with PCV command only.
		WITH VALUE "C" IN PRECEDING FIELD:
		Code of the chapter to be printed, or of the chapter that contains the subchapter to be printed.
		WITH VALUE "1" IN PRECEDING FIELD:
		Number of the level-1 section to be printed, or of the level-1 section that contains the level-2 section to be printed.
14	2	LEVEL-2 SECTION # / SUBCHAPTER CODE
		Field displayed with PCV command only.
		WITH VALUE "S": Code of the subchapter to be printed.
		WITH VALUE "2": Number of the level-2 section to be printed.
15	8	CODE OF RECIPIENT USER FOR JCL COPY

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			This field is reserved for on-line use.
			If you have a 4-level authorization, this field allows you to initialize another user's JCL lines. To do so, when the JCL lines are displayed, override your user code with that of the other user. Press the ENTER key.

---

## I.M.S. Specific Commands

Two specific CHOICES are available when the System is running under IMS:

LJOB : List of jobs.

JOBnnpp : Report of job "nnpp".

Both choices are referred to as the MAILBOX.

### LIST OF JOBS (LJOB)

The 'LJOB' CHOICE allows the user to view all Generation and Print (GPRT) procedure jobs currently submitted on-line as well as the compilation/link-edit sub-jobs submitted by the GPRT jobs themselves.

The status of each job is defined as:

- WAITING FOR EXECUTION
- EXECUTING
- ENDED

**NOTE:** A number is automatically assigned to all jobs submitted by the System.

### JOB OR SUB-JOB REPORT

The CHOICE 'JOBnnpp' allows the user to review the job or sub-job output report:

'nn' being the sequential number assigned by the system and incremented at each on-line submission of a 'GPRT' job,

'pp' being the suffix of the assigned number with value '00' for all GPRT type jobs and incremented for each subsequent sub-job.

## OUTPUT OF GPRT JOB EXECUTION

After the execution of each procedure STEP (program generation, map generation, etc.), the following data is displayed:

- The time execution ended,
- The name of the STEP,
- The return code.

## REPORT OF COMPILATION/LINK-EDIT SUB-JOBS

- A line is displayed for each program in which an error was detected. This line contains:
  - . the program library code,
  - . the external program code (PROGRAM-ID),
  - . the full name of the program.
- Errors will be displayed in the following order:
  - . IDENTIFICATION DIVISION,
  - . ENVIRONMENT DIVISION,
  - . DATA DIVISION,
  - . PROCEDURE DIVISION.

For each erroneous line, the following will be displayed:

- The function/sub-function code,
- The first COBOL line containing an error,
- All the errors affecting this line, preceded by the error code (W, C, or E).

**NOTE:** It is also possible to access this screen from the List of jobs (see CHOICE 'LJOB'): place the cursor on the line of the selected job and press 'PF10'.

## PAGING

Once a job report is accessed with CHOICE 'JOBnnpp' (display starts with line one), it is possible to consult this report from a given line. The number of this line should be entered in the designated field located at the top right corner of the screen.

In addition, it is possible to page forward and backward 'n' pages. In the same field, enter a '+' or '-' followed by the number of pages.

This paging request is not available for CHOICE ('LJOB'). (This screen works in the same way as the other screens).

### PURGING JOBS

The executed jobs or those waiting to be executed can be purged by the user. The specific job number is entered in the designated field located at the bottom right corner of the screen. A message is displayed indicating the number of cancelled transactions.

**NOTES::** It is possible to purge sub-jobs which were submitted by a 'GPRT' procedure. In order to do this, it is necessary to enter the prefix 'nn' of the 'GPRT' job, followed by the characters '\*\*\*' (or '\*\*\*\*').

**NOTES::** It is possible to purge sub-jobs which were submitted by a 'GPRT' procedure. In order to do this, it is necessary to enter the prefix 'nn' of the 'GPRT' job, followed by the characters '\*\*\*' (or '\*\*\*\*').

#### EXAMPLE:

```
GPRT  0800
OLSD  0801
BSD   0802
```

```
                PURGE (NUMBER): 08**
or PURGE (NUMBER): 8***
```

In this example, the 'GPRT' job and the two sub-jobs, 'OLSD' and 'BSD', are purged simultaneously.

Purging a job in the Database does not purge it from the output queue of the operating system (SPOOL).

### JOB MESSAGES

A message is displayed in the CHOICE field, informing the user of the status of the last job executed or in the process of execution ('STARTED' or 'ENDED'). If several jobs were submitted by the user and if he/she has not pressed the ENTER key at the time the system sends the message, these jobs will appear one at a time.

**NOTE:** The '&' character appears at the beginning of the message in order to avoid involuntary branching on the job report when the user presses the ENTER key.

**NOTE:** The '&' character appears at the beginning of the message in order to avoid involuntary branching on the job report when the user presses the ENTER key.

EXAMPLES:

CH: &JOB9999 JOBNAME STARTED

CH: &JOB9999 JOBNAME ENDED

If the user wishes to access the job review, the '&' sign must be deleted and the ENTER key pressed. If this is not the case, any other CHOICE may be entered.

Examples of the 'LJOB' and 'JOBnnpp' screens appear below.



```

-----
!               S.P.C. : IMS DB-DC IMS VARIANT                +PAC.PB73.IMS.182  !
!LIST OF JOBS                                                !
!      JOBNAME    NUMBER   TYPE      DATE      STATUS        !
!      !          !         !          !          !          !
!      PCVMARC    5700    GPRT    12/29/85    ENDED           !
!      PCVMARC    5701    DIALG   12/29/85    ENDED           !
!      PCVMARC    5800    GPRT    01/11/86    ENDED           !
!      PCVMARC    5801    DIALG   01/11/86    ENDED           !
!      PCVMARL    8700    GPRT    01/16/86    ENDED           !
!      PCVMARL    8701    BATCH   01/16/86    ENDED           !
!                                                            !
!                                                            !
!                                                            !
!                                                            !
!                                                            !
!                                                            !
!                                                            !
!                                                            !
!                                                            !
!                                                            !
!*** END ***                                                !
!O: C1 CH: LJOB                                           PURGE (NUMBER) :  !
-----

```

```

-----
!           S.P.C. : IMS DB-DC IMS VARIANT           +PAC.PB73.IMS.182  !
!   REPORT JOB5701                                     LINE : 00001  !
! *****                                             !
! * 11:47:39      START OF JOB5701      PCVMARC      *           !
! *****                                             !
! *                                                     *           !
! * 11:49:12      PROGRAM COMPILATION    JIE020      RET CODE: 0012 * !
! *                                                     *           !
! *****                                             !
! * 11:51:08      END OF JOB5701        PCVMARC      *           !
! *****                                             !
!                                                     !
! *****                                             !
! *   JIE020 JIE020      P.C. FILE FOLLOW UP      *           !
! *****                                             !
!
!----- IDENTIFICATION DIVISION
!
!E- SUPMAP SPECIFIED AND E-LEVEL DIAGNOSTIC HAS OCCURRED. PMAP CLIST LOAD DECK !
!  IGNORE
!
!
!*** END ***
!O: C1 CH: JOB5701                                     PURGE (NUMBER) :  !
-----

```

---

## Chapter 9. Journal Consultation

All updates to the Database (with the exception of generation and printing requests) are stored in the Journal file, which can be used to restore the database in case of a system failure.

It is possible to consult the Journal on-line by entering the following CHOICE:

CH: J0

This choice accesses a screen displaying the following information for each transaction:

.Rank,

.User code,

.Session number and version,

.Library code,

.Product code (DSMS),

.Change number (DSMS),

.< or > entered in column S will be used to select

transactions entered from or till a specified time,

.Time, in the 'hhmmss' format,

.Action code,

.Line code (batch form code),

.Key.

The first transaction is displayed in full at the bottom of the screen.

### SELECTING TRANSACTIONS

The screen used to select transactions from the Journal is common to all users in all the libraries in which they work.

It is possible to display a selection of transactions that correspond to criteria in the input fields at the top of the screen. One (or more) selection criteria can be entered, starting with the rank.

All of the information items listed above can be selection criteria, and several selection criteria can be entered at the same time.

The 'S' (sign) field is used in conjunction with the Time field to select transactions by time. For example:

- '<' 160000 will display all transactions entered before 4:00 pm;
- '>' will display all transactions entered after 4:00 pm.

WARNING: if you specify selection criteria located to the right of the product code, if you branch to another screen and then branch again to the Journal screen (via JP or screen recall), these criteria are no longer taken into account.

## NOTES

When a selection request is processed, the search stops after the system has read the number of transactions specified by the value entered on the input line of the REST restoration procedure.

The user is then asked to press the ENTER key to continue the search.

Among the selection possibilities offered by the Journal, the CHOICES '-Fnnnn', '-Bnnnn' and '-Annnn', which were operational in release 7.0, are no longer available in the subsequent releases.

```

-----
!                               APPLICATION DEVELOPMENT                SG000008.LILI.DEA.512 !
!
! JOURNAL FILE DISPLAY OF TRANSACTIONS                               !
!
! RANK USER  SESSI. LIB  CHANGE S  TIME  A LN  :                K E Y  !
! 3682 JP    512  DEF      212344 C T  : DHBIBL GG    703  !
! 3681 JP    512  DEF      212344 C T  : DHBIBL GG    695  !
! 3680 JP    512  DEF      212344 C T  : DHBIBL GG    687  !
! 3679 JP    512  DEF      212344 C T  : DHBIBL GG    679  !
! 3678 JP    512  DEF      212344 C T  : DHBIBL GG    671  !
! 3677 JP    512  DEF      212344 C T  : DHBIBL GG    663  !
! 3676 GP    512  DEA      203355 M T  : OSMII  GG    231  !
! 3675 GP    512  DEA      203221 M T  : OSMII  GG    167  !
! 3674 GP    512  DEA      203217 M T  : OSMII  GG    163  !
! 3673 JP    512  DEF      180901 C T  : DHBIBL GG    655  !
! 3672 JP    512  DEF      180901 C T  : DHBIBL GG    649  !
! 3671 JP    512  DEF      180901 C T  : DHBIBL GG    647  !
! 3670 JP    512  DEF      180901 C T  : DHBIBL GG    639  !
! 3669 JP    512  DEF      180901 C T  : DHBIBL GG    631  !
! 3668 JP    512  DEF      180901 C T  : DHBIBL GG    623  !
! 3667 JP    512  DEF      180901 C T  : DHBIBL GG    615  !
! I PACD40 I '  I      '      II PTU420 I '  I      '  I      !
!
! O: C1 CH: JO
-----

```



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## Chapter 10. Appendix

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### General Options

#### Processing of Numeric Fields

The System manages three types of numeric fields:

- Purely numeric fields: they can only contain numeric characters. (Example: number of occurrences of a segment, number of repetitions of a data element, line number of a comment line for an entity, etc. ).
- Parameterized numeric fields: they can contain the character '\$' and must be purely numeric once the parameter value has been replaced.
- Pseudo-numeric fields: they are primarily used as numeric fields, but the system accepts other types of characters.

The batch forms and on-line screen documentation will indicate which type of field each numeric field is.

#### PROCESSING PRINCIPLES

The system ensures processing for the three types of numeric fields as follows:

- Purely numeric fields: formatted according to normal writing rules (right-justified, elimination of non- significant zeros);
- Parameterized numeric fields:
  - If the field does not contain a '\$', the processing is identical to that of the purely numeric fields,
  - If it contains a '\$', the parameter will be replaced and that value will be validated to ensure it is numeric, but no re-formatting will be done;
- Pseudo-numeric fields:
  - If this field expresses a number, it is processed as a purely numeric field,
  - If it contains a '\$', it is processed as a parameterized numeric field,
  - In all other cases, neither validation nor re-formatting is done.

#### Processing of Lowercase Characters

The System manages input characters in the following way:

- All codes entered in lowercase are automatically transformed into uppercase,
- All entity clear names, as well as text, remain as inputted. The implicit keywords, automatically assigned by the system from the entity clear names, are transformed into uppercase, except for accented characters.

**NOTE:** An "X" entered in the ACTION CODE field will inhibit the automatic transformation of lowercase characters into uppercase characters.

### IMPORTANT NOTE

Upper/lowercase character management depends on the operating system used (i.e., whether or not it accepts lowercase). If it accepts lowercase, then it does not automatically transform lowercase into uppercase.

### PRINTED REPORTS

Upper/lowercase character management also exists for printed System reports. For information, refer to chapter "GENERATION AND/OR PRINTING", subchapter "ON-LINE REQUESTS".

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## Available Function Keys

### STANDARD FUNCTION KEYS

The Function Keys are used to facilitate input of the most frequently used CHOICES of the System.

During the installation of the System at a given site, a set of standard Function Keys is provided. It is possible to modify the initial assignment of Function Keys via the Database Restoration (REST) procedure (see the Administrator's Procedures Guide).

The Program Function Keys (HPF) menu lists the Function Key assignments.

NUMBER	STANDARD SIGNIFICANCE
PF1	Recall screen memorized in M1 (equivalent to OPERATION CODE R1)
PF2	Recall screen memorized in M2 (equivalent to OPERATION CODE R2)
PF3	Recall screen memorized in M3 (equivalent to OPERATION CODE R3)
PF4	Call screen-related HELP (*) (equivalent to ACTION CODE '?')
PF5	Return to main menu (equivalent to CHOICE 'H')
PF6	Return to initial screen (equivalent to OPERATION CODE 'FT')
PF7 PF8	Inhibits implicit updates CICS: '-TC' screen display starting from cursor position
PF9	Call of '-TC' screen from '-PG' and vice-versa OR Zoom on key description from screen 'B.....DR'
PF10	Branch to Entity Definition screen
PF11	Branch to Entity or Description Line Comment ('GC')



NUMBER	STANDARD SIGNIFICANCE
PF12	End of session with conversation saved

(\*): For access to input field HELP:

'?' should be entered in the input field before pressing the PF4 key in standard.

The HELP function cannot be called on non-input screens.

#### PRELIMINARY NOTE

The access to the various screens is facilitated by:

- . the cursor position,
- . the Use of PFkeys.

The use of these functions depends on the hardware and operating system in use at the site.

The values of the Function Keys are assigned during the System installation. These values can be modified by the Database Administrator (refer to subchapter "STANDARD FUNCTION KEYS").

In any case, the use of the standard command language is always valid.

#### HARDWARE WHICH DOES NOT SUPPORT FUNCTION KEYS

When the hardware in use at a site does not support the standard use of function keys, you can use '.nn' CHOICES to simulate 'PFnn' function key use.

**EXAMPLE::** PF7 --> CH: .7

**EXAMPLE::** PF7 --> CH: .7

PF10--> CH: .10

In addition, if cursor positioning cannot be retrieved after ENTER is pressed, cursor positioning can be simulated by entering a slash ('/') in the first input field of the desired line to branch to a selected entity, menu choice, or to call the on-line HELP documentation.

When cursor positioning can be simulated through the use of the slash ('/'), the default function key is '.10'. In order to branch to a selected entity, simply enter the '/' in the ACTION CODE field.

**NOTE:** Cursor positioning cannot be simulated on list-type screens since they do not have input fields. The Line Split is also not available on the Text Description screen, as the '/' character is processed as a regular character.

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