



VisualAge Pacbase 2.5

**JOURNAL STATISTICS UTILITY
REFERENCE MANUAL**

DDACT000251A

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1. ACTI: JOURNAL STATISTICS UTILITY

1.1. ACTI: INTRODUCTION

INTRODUCTION

The System manages all the information pertaining to applications being developed and maintained.

Each manipulation of this information is recorded in the Journal, which contains all update transactions on the database.

The Journal Statistics Utility allows the Database Manager to extract pertinent data from the Journal. This data is transformed into statistics which can be formatted as lists, charts, or graphs.

The Journal Statistics Utility allows the user to request information on the Journal's archived transactions according to the following criteria:

- library code,
- user code,
- entity type,
- entity code,
- line code,
- input type,
- update date,
- update session.

These criteria are used to specify the REQUEST AREA.

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The output of the Journal Statistics Utility can be presented in one of the following formats:

- statistical report,
- curve-type graph,
- transaction list.

These formats constitute the OUTPUT REPORT TYPE.

This output will be printed according to the selected PAGE LAYOUT.

When a statistical report or a curve-type graph is requested, the user defines the DATA SORTING MODE, as well as the ACTIVITY CALCULATION MODE.

A REQUEST is therefore made up of the following:

- Request Area,
- Output Report Type,
- Page Layout,

and, in the case of a statistical report or a curve-type graph:

- Data Sorting Mode,
- Activity Calculation Mode.

Each characteristic is defined by one or more PARAMETERS (for example, a beginning date, a point on a statistical curve, a page skip for each user code).

1.2. ACTI: COMMAND LANGUAGE

COMMAND LANGUAGE

COMMAND LANGUAGE

A Journal Statistics Request consists of five different types of lines, identified by the following KEYWORDS:

- OUTPUT : Output Report Type,
- PAGE : Page Layout (page breaks),
- AREA : Request Area,
- LINE : Statistical Report Lines,
- COLUMN : Statistical Report Columns,
- ABSCISSA : Curve-type graph Abcissas,
- ORDINATE : Curve-type graph Ordinates.

The meaning of the keywords, the parameters which define them, as well as their compatibility are explained in paragraph 'KEYWORDS DEFINITION AND VALUES'.

The OUTPUT line is required; the PAGE and AREA lines are optional. The LINE, COLUMN, ABSCISSA, and ORDINATE lines are either required or prohibited, depending on the requested output report type.

Only the first three characters of a keyword are used to identify a line type.

On the printed report, each request line is explicitly stated on the first page and an explicit error message is generated in case of a rejected line.

Request lines must be entered in the following order:

OUTPUT PAGE AREA LINE COLUMN ABSCISSA ORDINATE

Any error in this sequence will be considered as the beginning of another request.

The user may enter up to 10 requests at the same time.

The purpose of the ':' character is to mark the end of the keyword.

The rest of the line contains the parameters of each characteristic.

PARAMETERS

Parameters are used to define page layouts, lines and abscissas. These are called 'Presentation Criteria'.

Parameters followed by '=' and a value are called 'Selection Criteria'.

Parameters which define calculations are called 'Calculations'.

The coding, meaning and compatibility of the parameters are described in paragraph 'PARAMETERS: DEFINITION AND COMMENTS'.

SEPARATORS

The data entered on request lines are separated and grouped together using the following characters:

:	End of keyword,
=	Link between a parameter and its value,
()	Set of parameters for calculations,
,	Parameter or calculation separator,
/	Calculation combination,
*	Generic selection,
Blank	End of line (subsequent data is entered for documentary purposes).

KEYWORDS MEANING AND FILLING MODES

OUT(put) OUTPUT REPORT TYPE

This type of line is required at the beginning of each request.

The parameters used to define the output report type are:

- STA for statistics
- GRA for graph
- LIS for list

PAG(es) PAGE LAYOUT

This type of line is used to indicate at which level a page skip is to be inserted. The PAGE LAYOUT line is optional.

Headings are printed for each level, as well as totals for the statistical reports.

The page layout is defined by a series of parameters (three maximum separated by the ',' character) identifying data from the Journal, and called 'presentation criteria'.

Example: A page skip may be requested for each user and for each library.

ARE(a) REQUEST AREA

This type of line is used to define the transactions to be taken into account.

The REQUEST AREA line is optional.

The Request Area is defined by parameters (separated by the ',' character) followed by the '=' character and the selected value.

Example: The request applies to only some users and for a given period of time.

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LIN(es) DATA SORTING MODE
or
ABS(cissa)

This type of line is used to define either the lines of a statistical report or the X-axis of a curve-type graph.

It is required for both statistical reports and curve-type graphs. However, it is not permitted for transaction lists.

There may be several lines of this type for statistical report.

The Data Sorting Mode may be defined by Presentation Criteria, as well as Selection Criteria. Parameters and values are separated by the ',' character.

Example: Data is sorted by entity type for a statistical report, or by week for a curve-type graph.

COL(umns) ACTIVITY CALCULATION MODE
or
ORD(inate)

This type of line defines the columns of a statistical report or the ordinates of a curve-type graph (maximum of seven columns or curves).

It is required for both statistical reports and curve-type graphs. However, it is not permitted for transaction lists.

Each column or curve is determined by a calculation, followed by bracketed Selection Criteria. Columns or curves, parameters and values, are all separated by the ',' character.

A printing character (&CHAR='X') must be specified for each curve.

A statistical report column may be defined by the relationship between two calculations; these calculations are separated by the '/' character.

Example: A first column or a first curve may be a calculation of the transactions entered on-line, while a second one may show the ratio between the input transactions and the real transactions.

PARAMETERS: DEFINITION AND COMMENTS

&LIB LIBRARY CODE

This parameter is used as a Presentation and Selection Criterion to define the Page Layout, the Request Area, the Data Sorting Mode, and the Activity Calculation Mode.

A generic selection may be requested by simply replacing every appropriate character by the '*' character.

&USER USER CODE

This parameter is used as a Presentation and Selection Criterion to define the Page Layout, the Request Area, the Data Sorting Mode, and the Activity Calculation Mode.

A generic selection may be requested by simply replacing every appropriate character by the '*' character.

&ENTG ENTITY TYPE

This parameter is used as a Presentation and Selection Criterion to define the Page Layout, the Request Area, the Data Sorting Mode, and the Activity Calculation Mode.

&ENTD LINE CODE / ENTITY TYPE

This parameter is used as a Presentation and Selection Criterion to define the Data Sorting Mode.

Values are selected according to the entity type entered in the preceding parameter.

&LICO LINE CODE

This parameter is used as a Presentation and Selection Criterion to define the Page Layout, the Request Area, the Data Sorting Mode, and Activity Calculation Mode.

Values are selected according to the batch line codes.

&ENT ENTITY CODE

This parameter is used as a Presentation and Selection Criterion to define the Page Layout, the Request Area, the Data Sorting Mode, and the Activity Calculation Mode.

A generic selection may be requested by simply replacing every appropriate character by the '*' character.

Values are selected according to the entity type and code.

&INPT INPUT TYPE

This parameter is used as a Presentation and Selection Criterion to define the Page Layout, the Request Area, the Data Sorting Mode, and the Activity Calculation Mode.

The value 'B' corresponds to batch input mode; any other value corresponds to on-line input mode.

&D1 STARTING DATE

This parameter is used as a Selection Criterion to define the Request Area, the Data Sorting Mode, and the Activity Calculation Mode.

This parameter has to be followed by a date (MMDDCCYY). If this parameter is missing, the starting date coincides with the beginning of the Journal.

&D2 END DATE

This parameter is used as a Selection Criterion to define the Request Area, the Data Sorting Mode, and the Activity Calculation Mode.

This parameter has to be followed by a MMDDCCYY date format.

If this parameter is missing, the end date coincides with the end of the Journal.

&S1 STARTING SESSION

This parameter is used as a Selection Criterion to define the Request Area, the Data Sorting Mode, and the Activity Calculation Mode.

This parameter has to be followed by a four-character session number. If this parameter is missing, the starting session coincides with the beginning of the Journal.

&S2 FINAL SESSION

This parameter is used as a Selection Criterion to define the Request Area, the Data Sorting Mode, and the Activity Calculation mode.

This parameter has to be followed by a four-character session number. If this parameter is missing, the final session coincides with the end of the Journal.

&DAY DAY-BY-DAY PRESENTATION

Used as a Presentation Criterion to define the page layout and the data sorting mode.

To define an X-axis, this parameter must be followed by the '=' character and the number of characters corresponding to the curve step (its default value is one character).

&WEEK WEEK-BY-WEEK PRESENTATION

Used as a presentation criterion to define the page layout and the data sorting mode.

To define an X-axis, this parameter must be followed by the '=' character and the number of characters corresponding to the curve step (its default value is one character).

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&MON MONTH-BY-MONTH PRESENTATION

Used as a presentation criterion to define the page layout and the data sorting mode.

To define an X-axis, this parameter must be followed by the '=' character and the number of characters corresponding to the curve step (its default value is one character).

&YEAR YEAR-BY-YEAR PRESENTATION

Used as a presentation criterion to define the page layout and the data sorting mode.

To define an X-axis, this parameter must be followed by the '=' character and the number of characters corresponding to the curve step (its default value is one character).

&SESS PRESENTATION BY SESSION

Used as a presentation criterion to define the page layout and the data sorting mode.

The user cannot use it to select sessions (the '=' character is therefore unnecessary).

&CHAR PRINTING CURVE CHARACTER

May only be used to define the activity calculation mode relative to the curve-type graphs.

It must follow (within parentheses) the calculation defining a curve.

&INTR NUMBER OF INPUT TRANSACTIONS

May only be used to define the activity calculation mode. Each Journal transaction is an input transaction.

&RETR NUMBER OF REAL TRANSACTIONS

May only be used to define the activity calculation mode.

A Journal transaction is effective, provided it is not modified by another transaction and it is not itself a deletion transaction. This concept is linked to the presentation criteria, i.e. a transaction which is modified once a day is effective every day with a day-by-day presentation; it is effective only once with another presentation.

PARAMETER	AREa	PAGe	OUTput			
			STA		GRA	
			LIN	COL	ABS	ORD
&LIB	YES	YES	YES		YES	
&USER	YES	YES	YES		YES	
&ENTG	YES	YES	YES		YES	
&ENTD		YES	YES			
&LICO	YES	YES	YES		YES	
&ENT	YES	YES	YES		YES	
&INPT	YES	YES	YES		YES	
&D1=						
MMDDCCYY	YES		YES		YES	
&D2=						
MMDDCCYY	YES		YES		YES	
&S1=SESS	YES		YES		YES	
&S2=SESS	YES		YES		YES	
&DAY	YES	YES	YES		=	
&WEEK	YES	YES	YES		=	
&MON	YES	YES	YES		=	
&YEAR	YES	YES	YES		=	
&SESS		YES	YES			
&CHAR					!CALCULATION!	
&INTR					!CALCULATION!	
&RETR					!CALCULATION!	

= : the parameter must be followed by the separator character '=' and the curve step;

CALCULATION : only used in the Activity Calculation Mode.

The following paragraphs present some of the restrictions concerning the way requests for Journal statistics may be formulated.

GRAPHS

Page layout:

Only one parameter corresponding to a period of time may be selected (&DAY, &WEEK, &MON, &YEAR).

Data sorting mode:

Only the parameters corresponding to a Presentation period (&DAY, &WEEK, &MON, &YEAR) or to a Selection period (&D1, &D2) may be selected.

Curves:

The '*' character is used to represent the intersection point of different curves. It is therefore not desirable to use this character as a printing character for a curve. Although the user may describe up to seven curves on the same graph, it might be difficult to read the graph because of the numerous intersection points.

STATISTICAL REPORTS

Page layout:

Parameters used at this level cannot be used again to define the Data Sorting Mode.

Data sorting mode:

A selection by date following several criteria only applies to the criterion entered just before the selection. It is not possible to indicate more than one interval of the same type for a selection.

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TRANSACTION LISTS

Page layout:

In the absence of page layout criteria, the transactions are presented by:

- library,
- input date,
- session number,
- user code.

The following paragraphs list the error messages going with the translation of the request in current language.

ERROR MESSAGES: COMMENTS

UNIDENTIFIED LINE

The keyword identifying the line is invalid.

ABSENCE OF OUTPUT IDENTIFICATION

The line identifying the requested report is missing.

TOO MANY REQUESTS, THE FIRST TEN ARE PROCESSED

LINES-COLUMNS INVALID WITH LISTS

Lines, columns, abscissas and ordinates must not appear on a list request.

UNKNOWN KEYWORD

A keyword can only be used to specify the output report type.

INVALID OUTPUT IDENTIFICATION

UNKNOWN PARAMETER

INVALID USE OF THE PARAMETER

NO SELECTION ALLOWED FOR THIS PARAMETER

NO SELECTION ALLOWED ON THIS LINE

TOO MANY SELECTIONS - LIMITED TO THE MAXIMUM

STEP OF THE ABSCISSA NON-NUMERIC

END DATE PRECEDES STARTING DATE

FINAL SESSION PRECEDES STARTING SESSION

INVALID OR INCOMPLETE STRUCTURE OF THE REQUEST

Absence of lines or columns for a statistical report, or of abscissas or ordinates for a curve-type graph.

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ONLY ONE ABSCISSA POSSIBLE

All the curves of the same graph must have the same abscissa.

TOO MANY COLUMNS (OR CURVES), 7 ARE PROCESSED

INVALID AGGREGATE OF TRANSACTIONS

The ordinate of a curve must be defined by a single calculation.

INVALID GRAPHIC LINE

The X-axis must be defined by a parameter corresponding to a period of time.

INVALID GRAPHIC LINE WITH PAGINATION

The period used to define the X-axis must be shorter than the one used for the page layout.

ABSENCE OF THE PRINTING CHARACTER OF THE CURVE

ONE TIME PERIOD LIMITATION FOR GRAPH PRESENTATION

The combination of several time periods is impossible for the graph page layout.

INVALID DATE

TOO MANY PRESENTATION PARAMETERS

Only 3 page layout criteria are taken into account.

PARAMETER ALSO USED AS PAGINATION

The same parameter cannot be used to define both the page layout and the data sorting mode.

1.3. ACTI: EXAMPLES

EXAMPLES

This chapter contains examples of Journal Statistics requests.

These examples include:

- A curve-type graph request and its result,
- A statistical report request and its result,
- A Journal transactions list report request and its result.

NOTES

The output reports shown in these examples have been reformatted for page layout purposes.

In the following examples:

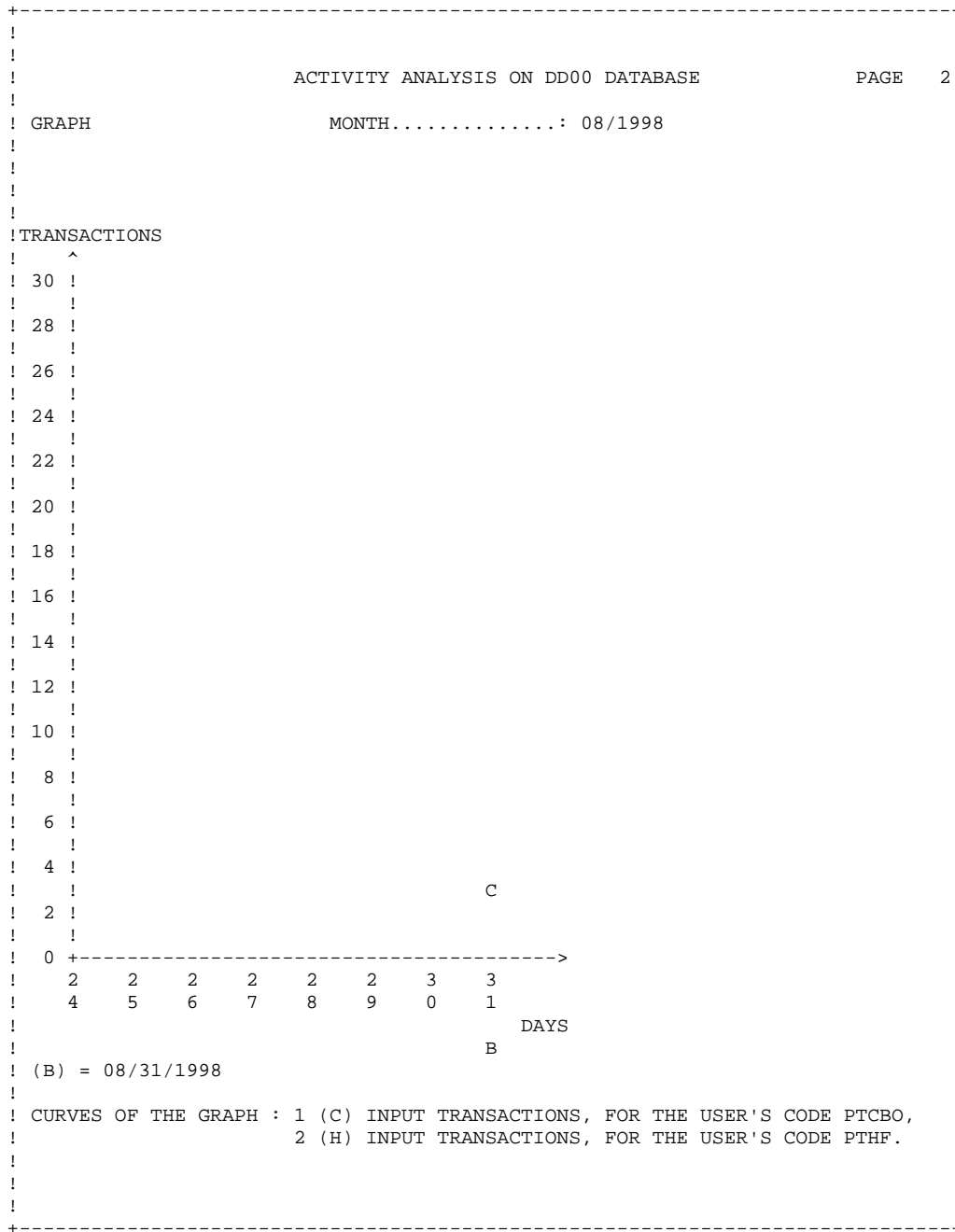
INPUT TRANSACTION = Any input transaction on the Journal.

REAL TRANSACTION = A transaction on the Journal which represents the actual state of the Database.

EXAMPLE: If you create 10 transactions and delete 7 of them, you have a total of 17 INPUT transactions, but only 3 REAL transactions.

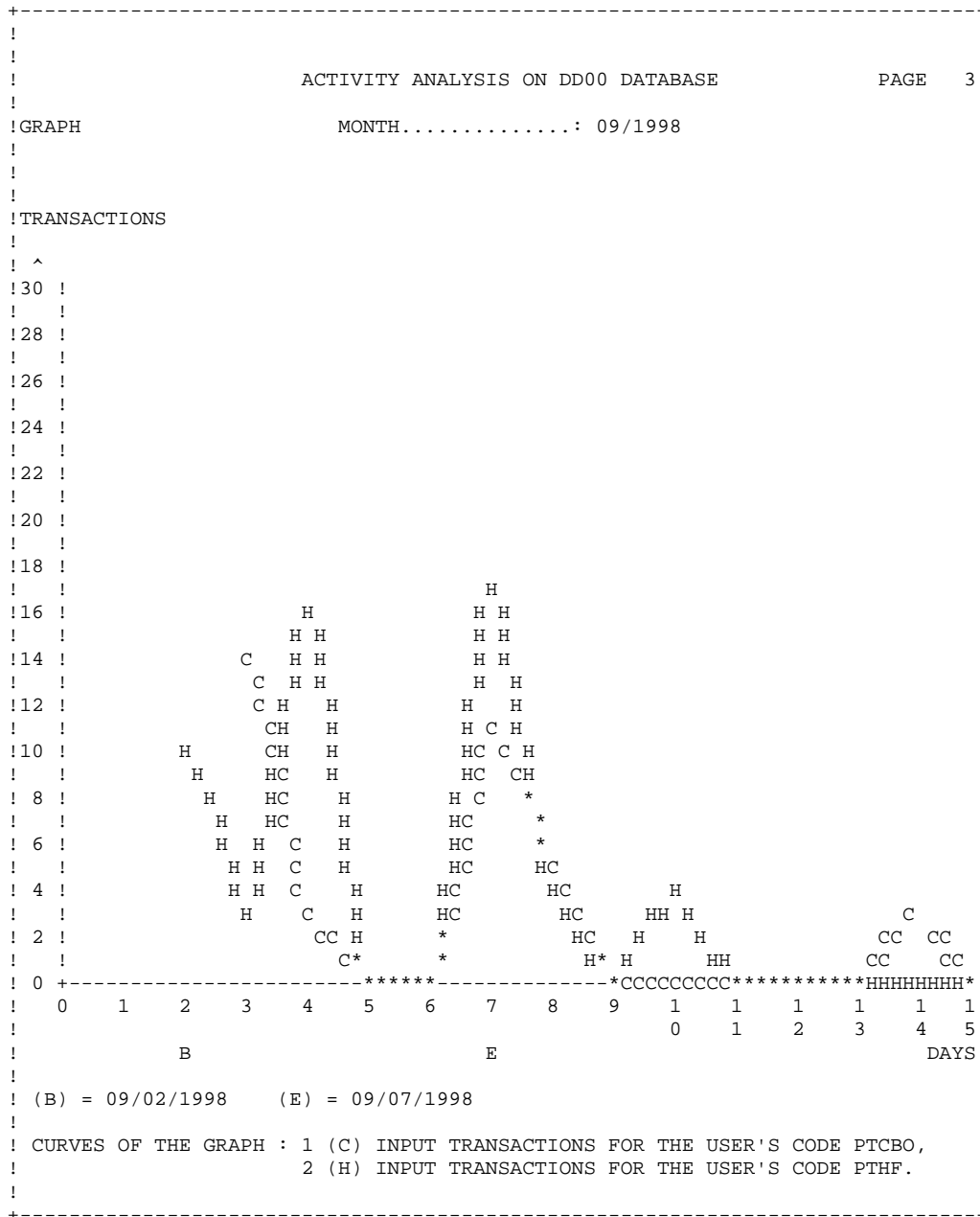
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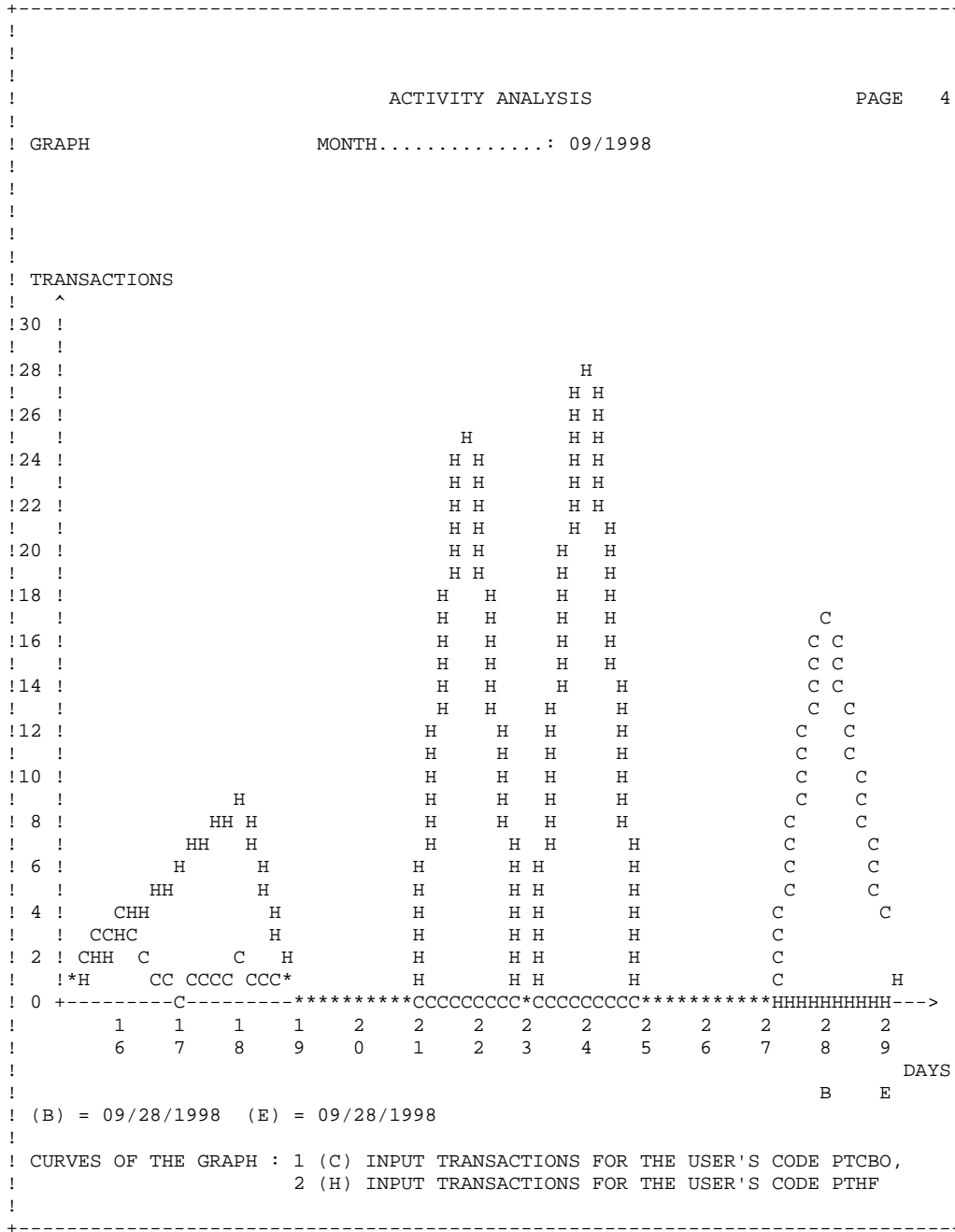
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ACTIVITY ANALYSIS PAGE 1

* 000000 00000000 000 00000000 00 000000 00000000 00 000000 000000 *
* 000000 00000000 00000 00000000 00 0000000 00000000 00 0000000 0000000 *
* 00 00 00 00 00 00 00 00 00 00 00 00 *
* 000000 00 0000000 00 00 000000 00 00 00 000000 *
* 000000 00 00000000 00 00 000000 00 00 00 000000 *
* 00 00 00 00 00 00 00 00 00 00 00 *
* 00000000 00 00 00 00 00 00 0000000 00 00 0000000 0000000 *
* 000000 00 00 00 00 00 000000 00 00 000000 000000 *

STUDY OF THE ENTITY TYPES 'ELEMENT', 'SEGMENT', 'PROGRAM'
FOR THE USER CODES PTCBO, PTHF.
SET UP BY USER CODE,
ONE LINE PER ENTITY TYPE,
COLUMNS OF THE REPORT : 1 - INPUT TRANSACTIONS,
2 - REAL TRANSACTIONS,
3 - RATE BETWEEN THE REAL TRANSACTIONS
AND THE INPUT TRANSACTIONS.

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Table with columns: I, I COLUMN 1, I COLUMN 2, I COLUMN 3, I. Rows include: LINE REQUEST NB 1, PACBASE FAMILY...: ELEMENT, PACBASE FAMILY...: SEGMENT, PACBASE FAMILY...: PROGRAM, TOTAL...: LINE REQUEST NB 1, USER...: PTHF, TOTAL...: STATISTICS. Includes a legend for report columns at the bottom.

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I TY	ENTITY	I LIB	I DATE	I SESS.	I USER	I
I S	CB00	I APR	I 07/09/1998	I 1255	I PTCBO	I
I S	CB01	I APR	I 14/09/1998	I 1261	I PTCBO	I

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Table with columns for transaction ID, description, and counts. Includes sections for 'ACTIVITY ANALYSIS' and 'TRANSACTIONS LIST'. Rows list various transaction types like CV33, AV33, C2, A2, C3CB, and M3CB with their respective counts.

I	TY	ENTITY	I	LIB	I	DATE	ISESS.	I	USER	I
I			I	I	I		I	I		I
I			I	I			I	I		I
I	S	CB00	I	TES	I	03/09/1998	I 1253	I	PTCBO	I
I			I	I			I	I		I
I			I	I			I	I		I
I			I	I			I	I		I
I			I	I			I	I		I
I	S	HF00	I	I			I	I		I
I			I	I			I	I		I
I	S	CB00	I	TES	I	04/09/1998	I 1254	I	PTCBO	I
I			I	I			I	I		I
I	S	CB00	I	TES	I	07/09/1998	I 1255	I	PTCBO	I
I			I	I			I	I		I
I			I	I			I	I		I
I			I	I			I	I		I
I			I	I			I	I		I
I	S	CB01	I	TES	I	14/09/1998	I 1261	I	PTCBO	I
I	S	CB02	I	TES	I	16/09/1998	I 1263	I	PTCBO	I
I			I	I			I	I		I
I			I	I			I	I		I
I			I	I			I	I		I