Shaping the Future
‘JCL Samples for Beginners’
Mainframe Simplification Initiative

Linda Jorgensen, User Experience
Amy Lander, Technical Writing
Geoff Smith, Project lead

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Today’s agenda

✓ Brief history
  • Learn how we got here
✓ Demo
  • See how the tool looks and works
✓ Feedback
  • Give us your feedback
    - it is mission critical!
How we got started. . .

- **What is the Mainframe Simplification effort?**
  - A major design initiative to improve the total user experience of z/OS
    - Includes information, education, user interfaces, and tools to make it easier to learn a new task on z/OS and to simplify managing z/OS.

- **The z/OS basic skills information center is a key component of this initiative**
  - Intended to provide on-the-job training for staff new to z/OS
  - Based on the IBM Redbooks, Introduction to the New Mainframe ("z/OS Basics" and "Networking Basics")
  - Includes articles, short courses, and...the reusable JCL collection!
The challenge

New and existing users of z/OS are frustrated by the complexity of job control language (JCL), which is a set of statements that z/OS professionals use to define work to be done by the operating system.

In our work with customers we have heard... eliminating JCL or reducing its complexity is a recurrent, high-priority request.

Our response

To create an educational tool that teaches JCL as novice z/OS users accomplish real work.

JCL Samples for Beginners will be a free-of-charge, Web-based tool.
Our speed team: Summer 2008

Christopher Baran
SUNY Potsdam / BA in Computer and Information Sciences

Tammy Greene
University of Michigan / MS in HCI and Incentive-Centered Design

Chelsea Shorte
University of Virginia / BS in Computer Engineering

Mentors from the z/OS Basic Skills Information Center project:

Geoff Smith
UT strategist and project lead

Linda Jorgensen
UCD/UX lead

Amy Lander
Information developer
Key features of the design

The JCL Samples for Beginners:

✓ Provides JCL samples for common tasks that system programmers or application developers are expected to do in their first months on the job

✓ Uses “interview” style, using everyday language, to help users modify the JCL samples

✓ Equates z/OS-specific terms with Windows / UNIX equivalents, when possible

✓ Teaches by showing JCL as it is generated in response to user input

✓ Enables users to submit jobs directly to z/OS, and to store generated JCL

✓ Provides links to additional information related to the task
Key implementation & delivery features

Required software on user’s workstation:
- Internet browser

Required software on z/OS:
- PHP for z/OS feature
- Apache or IBM HTTP server

Runs on z/OS!

The flow:
1. User completes questions that are presented through browser
2. App server responds to request with JCL syntax
3. User submits JCL to z/OS through FTP
Our approach: Lean and Agile

What is **Agile** Software Development?

Agile is the use of *continuous stakeholder feedback* to produce high quality consumable code through use cases (or user stories) and a series of short, time-boxed iterations (or sprints).

We used Agile methodologies to:

- Develop a **product vision** and **user stories** to keep the focus on the users’ perspective
- Conduct daily **scrum meetings** to ensure communication / progress
- Review **sprint** progress
  - We held planning sessions and reviews for each sprint, as well as Web conferences to review results with our clients.
Our approach: Collaboration with clients

- Our core stakeholders team consists of:
  - 5 customers from 5 companies
  - 3 IBM z/OS novices (less than 5 years experience)
- This collaboration is critical to ensure that the iterative process works well
- Results in a tool that meets users’ needs and expectations

Thank you!
Speed team 2008: Client meetings and results

- We held 8 meetings with stakeholders from June - August, 2008
  Results:
  - Outlined the development and deployment strategy
  - Brainstormed initial prototype ideas, features and functionality
  - Confirmed the direction for the prototype design
  - Produced a feature wish list
  - Finalized the design of the tool

- Additional communication via email
  - Design updates and related feedback

- Resumed our post-Speed Team sprints in September
  - Held Sprint Review 4 in November
    - Focused on design and security issues

Good job!
How collaboration influenced our UI design…

- JCL search and selection
- JCL/Form frame placement
- Toolbar placement
- JCL sample categories
Where are we today?

- The interns returned to their studies in August
- Members of the z/OS basic skills information center team have stepped in to fill the gaps
  - Ron Van Buskirk and Toshiba Burns-Johnson are completing our code
  - Chris Hastings is writing the Help material and Jim Guilianelli is editing our content
  - We’ve recruited technical experts to help with security issues, and to identify common errors/fixes for each JCL sample
- We have continued using the Agile process. . . that means “a usable deliverable” at the end of each sprint (iteration)
- We’re now working on sprint 10
What have we accomplished?

Let’s take a look. . .
How can you help?

- We need your feedback TODAY… Questions to start the discussion:
  - What type of JCL education does your company for new people?
  - Would you use the JCL Samples tool if it was installed at your company?

- We’re also looking for a few more stakeholders (this person must attend sprint reviews)
  - Give your contact info to Geoff
Thank you and stay in touch. . .

Linda Jorgensen, z/OS Basic Skills Information Center usability lead: ljorgen@us.ibm.com
Geoff Smith, z/OS Basic Skills Information Center project manager: gksmith@us.ibm.com
Amy Lander, z/OS Basic Skills Information Center developer: lander@us.ibm.com

And don’t forget the Contact z/OS button on the z/OS basic skills information center’s left navigation bar:

http://publib.boulder.ibm.com/infocenter/zos/basics/index.jsp
Current build: Welcome page

JCL Samples for Beginners is an interactive, educational tool that:

- Teaches you z/OS job control language (JCL) as it is generated in response to your input
- Provides JCL templates for system programming or application development tasks that you might be expected to do in your first months on the job
- Uses everyday, natural language to help you modify the JCL templates
- Enables you to submit jobs directly to z/OS
- Equates z/OS-specific terms with Windows or UNIX equivalents, when possible
- Provides links to additional information related to each task
Current build: JCL Courses
Current build: Settings page
Current build: Modify Sample page

Modify Sample - Create a data set

Jobname JOB
//Jobname EXEC DSN=IEEBR14
//Jobname DD DSN=permdata
// DISP=(NEW,CATLG,DELETE)
// UNIT=SYSALLDA,
// EXECDD=ccmformat,
// JCLCC=90,
// SPACE=(spaceunit='spaceprn',spaceext='spacedir'),spacedir)

Question | Response
---|---
What label do you want to use for the job? | *Job name:  
What settings do you want to used for this job? | *Job settings:  
What label do you want to use for this job step? | *Step name:  
What label do you want to use for this data definition? | *DDname:  
What is the name of this data set? | *Data set name:  
What is the status of this data set? | *Status:  

Job name
The variable jobname appears in the name field of the JOB statement. The JOB statement marks the beginning of a job and tells z/OS how to process the job. A job represents a unit of work for the operating system to complete. A job consists of one or more job steps, which identify the program to be run and any files or input/output devices that are required for processing. On a basic level, writing JCL to define a job with job steps is similar to writing a UNIX/Windows script that combines several commands or other operations into one processing unit.
Replace jobname with a unique name to identify this job. A common convention is to use your z/OS user ID followed by a number, for example: USER0031
The name field begins in column 3 and can extend through column 10 in any JOB, EXEC, or DD statement. Because a unique label in the name field is useful for identifying, referring to, and diagnosing problems with specific JCL statements, the JCL Samples tool requires you to provide a value even though z/OS does not require name-field values.
Current build: Submit modified JCL sample to z/OS
Current build: Submitted job results
Prototype UI: Log-in and landing pages
Prototype UI: Tool and z/OS system settings
Prototype UI:
Main page