Introduction to CGIs on z/OS - Course Objectives

On successful completion of this class, the student, with the aid of the appropriate reference materials, should be able to:

1. Define what a CGI is

2. Describe the context a CGI runs in

3. Describe how a CGI is invoked from a web page

4. Describe the differences between GET and POST CGI processing

5. Describe what the necessary environment variables are and how to access them

6. Describe how to emit responses to the server from a CGI

7. Specify how to emit non-EBCDIC data from a CGI

8. Suggest how to approach debugging and testing

9. Submit batch jobs from a CGI

10. Plan for / design a CGI interface to use cookies to keep track of the process of a dialog

11. Describe the processing concerns and issues facing the design of a CGI that accesses DB2 data.

Introduction to CGIs on z/OS - Topical Outline

Introduction
    The Web - Basic Concepts Review
    CGI Overview
    HTTP Servers on z/OS

HTML 5 - Selected Topics
    Review from "Introduction to z/OS UNIX"
    Additional tags: <H1> - <H6>, <BR>, <DIV>
    Useful attributes
    Events and event handlers
    Introduction to JavaScript

Forms and INPUT Controls
    Introduction to Forms and Controls
    The FORM Element
    The INPUT Element
    Successful controls
    Submit processing
    Accessing Programs Without Forms

Building a Response
    Responses
    Response Headers
    Writing to **stdout**
    Sample CGIs: C, COBOL, Assembler, PL/I, REXX, Shell Script

GET Processing
    The GET environment
    Parsing the QUERY_STRING

POST Processing
    The POST environment
    Determine the size of data (CONTENT_LENGTH)
    Determine the boundary string (CONTENT_TYPE)
    Determining the server being used (SERVER_SOFTWARE)
    Accessing the Input Data
    Analyzing the Data

Error Handling, Testing, and Debugging CGIs
    Error Handling
    Testing
    Debugging

Other Topics
    Emitting non-EBCDIC Output
    DB2 Access
    The RRSAF interface
    Submitting batch jobs
    nph Processing
    Creating the Illusion of a Conversation (Cookies)

The Design of Web-based Dialogs - A Perspective
    The server, pages, links, scripts, forms, CGIs
    State Tools, user ids
    Sample programs
    Conclusion