

Duration: 5 days

Course Number: ISI-CICS-02

Description

This course is designed for CICS application developers planning to implement CICS Web Support (CWS) and the 3270 Web Bridging function supplied with CICS Transaction Server for OS/390 (CICS TS 1.3). Students learn how to develop effective, efficient, and secure Web-based CICS applications. Upon successful completion of the class, students will be able to:

- Invoke CICS from the Web and build HTML based menu systems.
- Explore the two techniques for writing CICS Web applications - Using a converter vs. writing a Web-aware CICS application program.
- Use various HTTP request and response headers, including Multipurpose Internet Mail Extensions (MIME).
- Use CICS document APIs, Web APIs, and TCP/IP APIs to design and code a CICS application.
- Use the CICS Business Transaction Services (CBTS) APIs to manage Web-based applications.
- Understand and use the security features provided with CWS.
- Develop an awareness of CWS performance issues.
- Develop problem determination strategies and learn debugging techniques.
- Use JavaScript to create client help panels and preprocess form data to control cursor location and field focus.
- Customize the 3270 Web Bridge using DFHMDX and DFHWBOUT macros.

A series of written and COBOL lab exercises will be used to reinforce the classroom education.

Audience

CICS technical professionals who need practical experience designing, accessing, and coding CWS applications, including CICS technical managers, programmers, and systems analysts.

Prerequisites

- Basic CICS application programming skills and experience coding CICS 3270 transactions.
- Some knowledge of TCP/IP would also be helpful.

Course Agenda

CICS Web Support and Business Logic Interface

- Business Logic Interface
- CICS Web Support
- Calling the BLI
- Invoking a CICS Program
- Invoking a CICS Transaction
- Building a CICS Web Test Environment

Writing Web Applications

- TCP/IP API
- HTTP Request and Response
- Web API Commands
- Symbol Lists
- Document API Commands
- DOCTEMPLATE Definitions
- EXITPGM
- Build an HTML Form Using Document API Commands

CWS Analyzer

- Functions
- CECI Usage
- Program flow

CWS Converters

- Functions
 - Calling a decoder
 - DECODE
 - ENCODE
- Sample Converter Program

Course Agenda (continued)

CWS Tools

- Web Unescaping Program
- Parser
- State Management Programs
- Web Error Programs
- Environment Variables Program
- URL Case Sensitivity
- Dealing with Conversion Problems

CWS Template Manager Functions

- Invoking the Template Manager
- Start (initialize) a Page
- Add Symbols to a Symbol Table
- Read a Template
- Add a Template to the Page
- Replace Variables With Values From a Symbol List
- End a Page
- Build a Page, Consisting of All the Above Functions

HTTP

- What is HTTP?
- What are HTTP Resources?
- HTTP Transaction Structure
 - Initial Request Line
 - Initial Response Line (Status Line)
 - Header Lines
 - Message Body
- Sample HTTP Exchange
- Additional HTTP Methods
 - HEAD
 - POST
- HTTP Proxies

Course Agenda (continued)

JavaScript Basics

- HTML Overview
- Java Script Object Model
- Creating and Using Java Script Objects
- Java Script Events
- Java Script Objects
- Java Script Methods

Enhancing User Interfaces Using JavaScript

- Write JavaScript Code to Create Client Help Panels
- Embed JavaScript Code to Edit Form Data
- Control Cursor Location and Field Focus Using JavaScript

Using CICS Bridging Function to Run an Existing 3270 Transaction

- Creating HTML Templates from BMS Definitions
- Customizing the Generation of Templates
- Template Customizing Facilities