

**Soft-Train**



*At Soft-Train  
Technology Works*

# Developing Secure Web Applications (4 Days) ST45003

**COURSE GOAL:** Develop Secure Web Applications

**PREREQUISITES:** Basic Web Page Design and Development.

**LEARNING OBJECTIVES:**

Upon completion of this course, the student will be able to:

- Gain a better understanding of Web Sites and Web Applications.
- A better understanding of TCP/IP Applications over Telnet.
- Principals of Web Applications and design.

**KEY TOPICS:**

**I. Introduction**

- A. The Web Perspective
- B. The Origins of the Web
- C. From Web Pages to Web Sites
- D. From Web Sites Web Applications
- E. How to Build Web Applications in One Easy Lesson
- F. Web Page Design Resources
- G. Web Site Design Resources
- H. Web Application Design Resources
- I. Principles of Web Application Design
- J. What is covered in the Book Bibliography

**II. Before the Web: TCP/IP**

- A. Historical Perspective
- B. TCP/IP Layers
- C. The client/server paradigm
- D. TCP/IP Application Services
- E. Telnet
- F. Electronic Mail
- G. Message forums
- H. Live Messaging
- I. File Servers
- J. And Then Came the Web....
- K. Questions and Exercises Bibliography

**III. Birth of the World Wide**

**Web:HTTP**

- A. Historical Perspective
- B. Building Blocks of the Web
- C. The Uniform Resourced Locator
- D. Fundamentals of HTTP
- E. Better Information Thorough Headers
- F. Evolution
- G. Summary

**H.** Questions and Exercises  
Bibliography

#### **IV. Web Servers**

**A.** Questions and Exercises  
Bibliography  
**B.** Advanced Mechanisms for  
Dynamic Content Delivery  
**C.** Advanced Features  
**D.** Server Configuration  
**E.** Server Security  
**F.** Summary  
**G.** Questions and Exercises  
Bibliography

#### **V. Web Browsers**

**A.** Architectural Considerations  
**B.** Processing Flow  
**C.** Process HTTP Requests and  
Responses  
**D.** Complex HTTP Interactions  
**E.** Review of Browser Architecture  
**F.** Summary  
**G.** Questions and Exercises  
Bibliography

#### **VI. HTML, and its Roots**

**A.** Standard Generalized Markup  
Language  
**B.** HTML evolution  
**C.** HTML  
**D.** JavaScript  
**E.** DHTML  
**F.** Summary  
**G.** Questions and Exercises  
Bibliography

#### **VII. HTML, Languages and Applications**

**A.** Core XML  
**B.** XHTML  
**C.** WML  
**D.** XSL  
**E.** Summary  
**F.** Questions and Exercises  
Bibliography

#### **VIII. Dynamic Web Applications**

**A.** Historical Perspective  
**B.** Application Architecture  
**C.** Database Processing Issues  
**D.** Summary  
**E.** Questions and Exercises  
Bibliography

#### **IX. Approaches to Web Application Development**

**A.** Programmatic Approaches  
**B.** Template Approaches  
**C.** Hybrid Approaches  
**D.** Separation of Content from  
Presentation  
**E.** Frameworks: MVC  
Approaches  
**F.** Frameworks: XML-Based  
Approaches  
**G.** Summary  
**H.** Questions and Exercises  
Bibliography

#### **X. Application Primer: Virtual Realty Listing Services**

**A.** Application Requirements  
**B.** Application development  
Environment  
**C.** Anatomy of a Struts  
Application  
**D.** The Structure of the VRLS  
Application  
**E.** Design Decisions  
**F.** Enhancements  
**G.** Summary  
**H.** Questions and Exercises  
Bibliography

## **XI. Emerging Technologies**

**A.** Web Services

**B.** Resources Description  
Frameworks

**C.** Composite  
Capability/Preference Profiles

**D.** Semantic Web

**E.** XML Query Language

**F.** The Future of Web  
Application Frameworks

**G.** Summary

**H.** Questions and Exercises  
Bibliography