



Overview

This hands-on course lays a sound foundation for successfully starting a career in Software Engineering (Computer Programming). To attain the above stated objective it equips the participants with the requisite basic knowledge in the area and provides a hands-on experience in various tools necessary for eCommerce related software development and implementation. The course also stresses on comprehensive methodologies and practical application skills to ensure a thorough understanding of eCommerce both in the business and technological sense. To ensure comprehension and skills integration, apart from the regular exercises in each module, each student will complete an eCommerce related project work that utilizes the skills acquired throughout the course.

Target Audience

Those interested in pursuing a career in eCommerce Design and Development.

Prerequisites

Some programming knowledge preferred but not required. Computer Literacy.

Objective

Upon completion of this course, participants will be able to effectively participate in a team charged with the task of designing, developing and implementing an eCommerce related software system.

Introduction to eCommerce & Business Architecture (2)

- ◆ Fundamentals of eCommerce
- ◆ Business Process and Requirements
- ◆ Web marketing Technologies
- ◆ B2B Internet marketing
- ◆ Establish Business community
- ◆ Internationalization and Localization

- ◆ 3GL, 4GL, Procedural and Object Oriented Programming Styles, SGML, HTML, XML, XSTL etc.
- ◆ Concepts and Composition of a computer program
- ◆ Steps in Program development and design
- ◆ Tools for programmers – editors, interpreters, compilers, IDE, GUIs,
- ◆ The environment of a programmer

eCommerce Technical Architecture (3)

- ◆ Hardware and Infrastructure
- ◆ Client-Server & Protocols
- ◆ Service Providers
- ◆ Internet Architecture

Object Oriented Programming (3)

- ◆ Overview of OOP
- ◆ Components of an Object Oriented Program – Class, Objects, packages, libraries
- ◆ Encapsulation, Inheritance and Polymorphism
- ◆ Reusability Elements
- ◆ Design Patterns

Programming Techniques (2)

- ◆ Introduction to Client Server Architectures

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Java Programming Language (100)

(See Java Certification Course curriculum. A simple comparison of Java and C++ languages features will be done here if time permits.)

- ◆ PL/SQL, Triggers, Stored Procedures and Packages
- ◆ Cursors and Result Sets
- ◆ JDBC API

Web Clients (1)

- ◆ Web browsers as universal clients
- ◆ Features of web browsers – HTTP as a static protocol (session less)
- ◆ Some technical aspects of web browsers
- ◆ Advantages and Limitations of web browsers

HTML Programming Language (9)

- ◆ Design Features in HTML
- ◆ Tables Layout, Lists
- ◆ Forms and Controls
- ◆ Layers & CSS
- ◆ Graphics & multimedia on the WEB
- ◆ DHTML, Advanced Topics

Java Script (5)

Functions, Methods and Events

- ◆ Developing Interactive Forms
- ◆ JavaScript Object Model
- ◆ Cookies and JavaScript
- ◆ Client-Side JavaScript
- ◆ Advanced Topics

JDBC (Java Database Connectivity) (10)

- ◆ Overview of Database Technology – Networking, hierarchical, Relational and Object models.
- ◆ 3Components of the Relational Model SQL– DDL, DML and DCL

Java Servlets and Server Pages (with emphasis on JSP) (30)

- ◆ Overview Servlets and Java Server Pages
- ◆ Basic Servlets – Servlet Access Models, Servlet Life Cycle, Servlet Interface
- ◆ Servlet Deployment
- ◆ Servlet and Threads
- ◆ Retrieving and Sending Data
- ◆ Sessions and Inter-servlet Communication
- ◆ Overview, configuration, lifecycle and advantages of JSP over servlets
- ◆ Components of a JSP – Basic tags, Directives, Actions and Built-in Objects
- ◆ Scriptlets, Declaration and Expressions
- ◆ Page, include and taglib directives
- ◆ UseBean, setProperty/getProperty, include, forward and plugin actions
- ◆ Request, response, session, application, out, config, page and pageContext objects

Overview of Other Emerging Technologies (XML and J2EE) (5)

- ◆ Introduction to XML
- ◆ Introduction to J2EE Technology

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Integrated Information Services

and Application Servers

Web Development

Total Hours:	170
Pace:	Normal
Level:	Beginner

Practicum/ Project Work

May function as an Internship

(30 hours of team based design & development work, not included in the Total Hours)

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