

Software Programming: Best Practices

Course length: 1 day

Course Description

Course Objective: You will describe best practices for software programming.

Target Student: This course is intended for application developers or programmers, with at least 2 years' experience, that want to learn the recommended practices for developing quality software programs.

Prerequisites: Students must have advanced knowledge of Java, C++, or C#. They must also be familiar with object-oriented programming concepts. Some experience working in a team environment on a large software development project is preferred, but is not essential.

Course Objectives

Upon successful completion of this course, students will be able to:

- Examine ways to enhance code readability.
- Optimize variables, expressions, and arrays.
- Examine best practices for the implementation of control flow and functions.
- Examine ways to maintain code quality.
- Describe various best practices for OOP.
- Analyze various software programming techniques.

Course Content

Lesson 1: Enhancing Code Readability

Topic 1A: Examine Code Layout Techniques

Topic 1B: Use Proper Naming Conventions

Lesson 2: Optimizing Expressions, Variables, and Arrays

Topic 2A: Examine Ways to Optimize Expressions

Topic 2B: Examine Best Practices for Using Data Types

Topic 2C: Optimize Variables and Arrays

Lesson 3: Examining Best Practices for Control Flow and Function Implementation

Topic 3A: Analyze Best Practices for Managing Control Flow

Topic 3B: Analyze Best Practices for Implementing Functions

Lesson 4: Maintaining Code Quality

Topic 4A: Examine Refactoring Techniques

Topic 4B: Describe Techniques for Improving Code Quality

Topic 4C: Examine Software Quality Attributes

Lesson 5: Examining Best Practices for OOP

Topic 5A: Examine Best Practices for Using a Class

Topic 5B: Examine Best Practices for Implementing OOP Concepts



Lesson 6: Analyzing Software Programming Techniques

Topic 6A: Examine Programming Techniques

Topic 6B: Examine Defensive Programming

Topic 6C: Examine Extreme Programming

