

# Software Testing

Software testing is the process of evaluating and verifying that a software application functions as expected. It involves identifying bugs, ensuring quality, and validating that the product meets user requirements. Testing can be manual or automated and includes techniques like unit, integration, and system testing to check functionality, performance, security, and usability before release.

## Section 1:

### Manual Testing Chapter 1: Fundamentals of Testing

- Why is testing necessary?
- What is testing?
- Economics of Testing
- Black Box Testing
- White Box Testing
- Software Testing Principles
- Fundamental Test Process

### Chapter 2: Testing throughout the software life cycle

- Software Development models
- V - Model
- Iterative Life Cycles
- Test Levels
- Component Testing
- Integration Testing
- System Testing
- Acceptance Testing
- Maintenance testing

### **Chapter 3: Static Techniques**

- Reviews and the test process
- Review Process
- Inspections and Walkthroughs
- Code Inspection

### **Chapter 4: Test Design Techniques**

- Identifying test conditions and designing test cases
- Categories of test design techniques
- Specification-based or black-box techniques
- Boundary Value Analysis
- Decision Table Testing
- Equivalence Partitioning
- State Transition Testing
- Use Case Testing
- Structure-based or white-box techniques
- Code Coverage
- Decision Coverage
- Statement Coverage
- Structural Testing
- Experience-based techniques
- Error Guessing
- Exploratory Testing
- Choosing a test technique

### **Chapter 5: Test Management**

- Test Organization
- Test Plans, Estimates, and strategies
- Test progress monitoring and control
- Configuration Management

- Risk and Testing
- Incident Management

## **Chapter 6: Other Testing Types**

- Function Testing
- Volume Testing
- Stress Testing
- Usability Testing
- Security Testing
- Performance Testing
- Configuration Testing
- Reliability Testing
- Recovery Testing

## **Chapter 7: Introducing Quality Center**

- The Quality Center Testing Process
- Starting Quality Center
- The Quality Center Window

## **Lesson 8: Specifying Releases and Cycles**

- Defining Releases and Cycles
- Viewing Releases and Cycles

## **Lesson 9: Specifying Requirements**

- Defining Requirements
- Viewing Requirements
- Modifying Requirements
- Converting Requirements

## **Lesson 10: Planning Tests**

- Developing a Test Plan Tree
- Designing Test Steps

- Copying Test Steps
- Calling Tests with Parameters
- Creating and Viewing Requirements Coverage

### **Lesson 11: Running Tests**

- Defining Test Sets
- Adding Tests to a Test Set
- Scheduling Test Runs
- Running Tests Manually
- Viewing and Analyzing Test Results

### **Lesson 12: Adding and Tracking Defects**

- How to Track Defects
- Adding New Defects
- Matching Defects
- Updating Defects
- Linking Defects to Tests
- Creating Favorite Views

## **Software testing course**

### **Section 2:**

#### **Quick Test Professional (QTP)**

#### **Chapter 1: Introduction to HP Quick Test Professional (QTP)**

- Benefits of Automated Testing
- Quick Test Window

#### **Chapter 2: Mercury Tours Site and creating your first test**

- Exploring the Mercury Tours Web Site
- Creating an Action
- Different Ways to Insert Calls to Actions

### **Chapter 3: Object Repository**

- Test Object Model
- Understanding How Quick Test Identifies Objects during the Run Session
- Learning Objects in Your Application
- Using Multiple Object Repositories

### **Chapter 4: Introducing Functions and Function Libraries**

- Creating a Function
- Associating the Function Library with Your Test

### **Chapter 5: Creating Tests**

- Deciding Which Methodology to Use - Keyword-Driven or Recording
- Preparing to Create a Test
- Dividing an Action into Two Actions

### **Chapter 6: Running and Analyzing Tests**

- Running a Test
- Analyzing Run Results

### **Chapter 7: Checkpoints**

- About Understanding Checkpoints
- Adding New Checkpoints to a Test
- Adding Existing Checkpoints to a Test

- Understanding Types of Checkpoints
- Checking Objects
- Checking Pages
- Checking Tables
- Running and Analyzing a Test with Checkpoints

## **Chapter 8: Parameterization Tests**

- Defining a Data Table Parameter
- Adding Parameter Values to a Data Table
- Modifying Steps Affected by Parameterization
- Parameterizing an Action
- Running and Analyzing a Parameterized Test

## **Chapter 9: Outputting Values**

- About Outputting Values
- Creating Output Values
- Storing Output Values
- Viewing and Editing Output Values
- Outputting Property Values
- To create standard output values while editing your test:

- Understanding Default Output Definitions
- Outputting a Value to an Action Parameter
- Outputting Text Values
- Creating Text Area Output Values
- Defining Text and Text Area Output Values
- Outputting Table Values
- Outputting Table Content
- Outputting Table Properties
- Outputting Database Values
- Outputting XML Values

## **Chapter 10: Defining and Using Recovery Scenarios**

- About Defining and Using Recovery Scenarios
- Deciding When to Use Recovery Scenarios
- Defining Recovery Scenarios
- Creating a Recovery File
- Understanding the Recovery Scenario Manager Dialog Box
- Understanding the Recovery Scenario Wizard
- Managing Recovery Scenarios

- Copying Recovery Scenarios between Recovery Scenario Files
- Associating Recovery Scenarios with Your Tests
- Adding Recovery Scenarios to Your Test
- Removing Recovery Scenarios from Your Test
- Enabling and Disabling Recovery Scenarios

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##### **Chapter 1: Introducing Quality Center**

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- Defining Releases and Cycles
- Viewing Releases and Cycles

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- Viewing Requirements
- Modifying Requirements
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