



ISO 9001 : 2015 Certified

Software Testing

MANUAL TESTING

Introduction to Testing

1. Brief History of Testing
2. Testing Opportunities
3. Testing Principles

Software Quality

Software Testing Definition

1. Verification
2. Validation
3. Quality Assurance
4. Quality Control
5. Static Testing
6. Dynamic Testing
7. Software Quality Assurance
8. Differences Between Verification and Validation
9. Differences Between QA and QC
10. Differences Between Static Testing and Dynamic Testing
11. Software Development Life Cycle(SDLC)
12. Software Testing Life Cycle(STLC)

Different Life Cycle Models

Waterfall Model

1. V – Model
2. Agile Methodology
3. Spiral Model
4. Waterfall Model
5. Prototype Model

Software Testing Techniques

1. Static Testing
2. White Box Testing
3. Black Box Testing
4. Grey box Testing OR Database Testing[WBT+BBT]

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Dynamic Testing Level

1. Unit/Module/Component Testing
2. Integration Testing
3. System Testing
4. User Acceptance Testing

Black box testing Techniques

1. Equivalence Class / Equivalence Partition {EC/EP}
- 2) Boundary Value Analysis {BVA}
- 3) Decision Table Testing {DTT}
- 4) State Transition Testing {STT}
- 5) Use Case Testing

White Box testing Techniques

1. Statement Coverage
2. Branch Coverage
3. Path or Branch Coverage

Test Design

1. Test Methodology
2. Test Scenarios
3. Test Cases
4. Test Case Template
5. Types of Test Cases
6. Difference Between Test Scenario and Test Case
7. Creating Test Cases for Sample Application

Different Testing Definitions

1. Build Acceptance Testing
2. Smoke Testing
3. Sanity Testing
4. Regression Testing
5. Re-Testing
6. Ad-Hoc Testing
7. Monkey Testing
8. Gorilla Testing
9. Alpha Testing
10. Beta Testing

Bug Reporting and Tracking

1. Error, Defect, Bug, Failure
2. Bug Reporting Approach
3. Bug Reporting Steps
4. Real Time Scenarios for Severity and Priority
5. Bug Life Cycle

Test Management

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1. Test Policy
2. Test Strategy
3. Test Methodology
4. Test Plan
5. Test Case
6. Test Data
7. Traceability Matrix
8. Test Scenario

Test Responsibility Matrix

Testing Metrics

1. Test Management Metrics
2. Quality Assessment Metrics
3. Process Capability Metrics

Reviews

4. Management Reviews
5. Technical Review
6. Code Review
7. Formal Reviews
8. Informal Reviews

Testing Standards

1. ISO
2. CMMI
3. Six Sigma

Introduction to Automation Testing

1. Drawbacks of Manual Testing
2. Benefits of Automation Testing
3. Drawbacks of Automation Testing
4. Factors to go for Automation Testing
5. Factors to Choose Automation Tool

Types of Automation Tools

1. Functional Automation Testing
2. Performance Automation Testing
3. GUI Automation Testing

Introduction to QTP

History of QTP

Benefits of QTP Over Other Automation Tools

Key Elements in QTP

1. Keyword View
2. Expert View
3. Data Table
4. Active Screen
5. Debug Viewer

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6. Information
7. Missing Resources
8. Function Library
9. Test Flow
10. Available Keywords
11. Resources
12. ToDo Pane

Automation Process in QTP

Planning the Test

1. With Respect to Application
2. With Respect to Automation

Recording the Test

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Enhancing the Test

Debugging the Test

Running the Test

Analyzing the Results and Reporting Defects

Recording Types/Modes

1. Normal Recording
2. Analog Recording
3. Low Level Recording
4. Differences Between Recording Modes

Object Identification

1. Introduction to Objects and Classes
2. Introduction to Properties and Methods
3. Object Identification Mechanizm
4. Object Repository
5. Options Available for Object Repository
6. Test Objects
7. Run-Time Objects
8. Differences Between TO and RO Properties
9. Object Spy

Configuration for Object Identification

1. Mandatory Properties
2. Assistive Properties
3. Ordinal Identifier
4. Index
5. Location
6. Creation Time
7. **XPath [New in QTP 11]**
8. **CSS [New in QTP 11]**

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9. Visual Identification [**New in QTP 11**]

Repository Types

1. Local Object Repository
2. Shared Object Repository
3. Differences Between Object Repositories
4. Advantages of Shared OR over Local OR
5. Object Repository Manager
6. Associate Object Repositories
7. Object Repository Comparison Tool
8. Object Repository Merge Tool

Smart Identification Mechanism

1. Base Filter Properties
2. Optional Filter Properties
3. Differences Between Identification Methods
4. Custom Class
5. Standard Class
6. Differences Between Custom Class and Standard Class

Check Points

1. Standard Check Point
2. Image Check Point
3. Bitmap Check Point
4. Differences Between Image and Bitmap Check Points
5. Text Check Point
6. Text Area Check Point
7. Differences Between Text and Text Area Check Points
8. Database Check Point
9. Accessibility Check Point
10. XML File Check Point
11. XML Page Check Point
12. Page Check Point
13. Table Check Point
14. User Defined Check Points
15. Ways of Creating Check Points
16. Modifying Check Points

Output Values

1. Standard Output Value
2. Text Output Value
3. Text Area Output Value
4. Database Output Value
5. XML Output Value

Differences Between Check Points and Output Values

Synchronization Points

1. Wait
2. Insert Synchronization Point
3. Object Exits

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4. Object Property
5. Pop-Up Exist
6. Page Exists/Loads
7. .Sync
8. Default Synchronization for Windows and Web Applications
9. Through Scripting
10. Through Check Points

Actions

1. Types of Actions
2. Non-Reusable Actions
3. Reusable Actions
4. Internal Action
5. External Actions
6. Action Properties

Parameterization

1. Parameterization Types
2. Through Data Table
3. Environment Variables

Built-In

1. User Defined Internal
2. User Defined External

Predefined

1. Through Test/Action
2. Steps/Check Points
3. Flat Files [XLS Files]
4. Random Number Generator

Virtual Objects

1. Purpose
2. Creating Virtual Objects
3. Limitations of Virtual Objects

Regular Expressions

1. Purpose
2. Using in Repositories
3. Using in Check Points
4. Using In Descriptive Level Programming
5. Regular Expression Evaluator

Debugging

1. Insert/Remove Break Points
2. Step In, Step Out and Step Over
3. Debug Viewer Pane

Watch Expressions

Variables

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Command

Run Modes

1. Update Run Mode
2. Maintenance Run Mode
3. Normal Mode
4. Fast Mode
5. Debug

Recovery Scenario

1. Purpose
2. Types of Recovery Scenarios

Pop-Up

Object State

Test Run Error

Application Crash

1. Associate Recovery Scenarios
2. Through Scripting

Java Basics

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