

Software Testing: Manual

Course Overview

- This is 100% hands-on course.
- Hands on practice sessions and guidance by Industry experts.
- Content customization and collaboration platform matching the diverse training needs.
- Placement assistance with placement team.
- Certification Oriented Training

Target Participants

- Freshers, Working people, Students, IT Professionals

Learning Formats

- Online interactive and video based training.

Our Trainer (s)

This course is delivered by **Expert Trainer having real time experience.** Having 10+ years hands on working experience.

Week 1: 06/19/2021 Instructor Salam

Introduction of Software Testing

- What is Software?
- What is Software Testing?
- What is a Quality of Software?
- Importance of Software Testing?
- Why Software has bugs?
- Testing Roles in Company
- Testing Team Responsibilities
- What is Functionality?
- What is Defect, Error, and Bug?

Software Development Process

- What is SDLC?
- Phases of SDLC
- SDLC work flow – detailed explanation

Testing Techniques

- Static Testing
- Dynamic Testing

Week 2 06/27/2021

Instructor: Salam

Testing Methods

- Black Box Testing
- White Box Testing
- Grey Box Testing

Levels of Testing

Unit Testing

- What is Unit Testing?
- Examples of Unit Testing
- Who will perform Unit Testing in Companies?

Integration Testing

- What is Integration Testing?
- Integration Testing Types?
- Examples of Integration Testing?
- Who will perform Integration Testing in Companies?

System Testing

- What is System Testing?
- Examples of System Testing
- Who will perform system testing in Companies?
- Types of System Testing

User Acceptance Testing

- What is UAT?
- Types of UAT (Alpha & Beta Testing)

Week 3:

Instructor: Salam

Types of Testing

- Smoke testing
- Sanity testing
- Usability Testing
- User Interface Testing
- Functionality Testing
- Re-Testing
- Regression Testing
- Data Base Testing
- Compatibility Testing
- Security Testing
- Ad-hoc Testing
- Exploratory Testing
- Installation Testing
- Recovery Testing
- Server Log File Testing
- Performance Testing
- Load Testing
- Stress Testing
- Volume Testing

- Endurance Testing



Week 4:

Software Development Models

- Waterfall Model
- Increment Model
- Prototype Model
- Spiral model
- Rapid Model
- V-Model
- Agile Model

Others: FAQ's

Week 5:

Software Engineering

- What is a Software engineering?
- Major factors of software engineering

QA Process and benefits of Process

- What is reusability?
- What is Process?
- Significance and Advantages

Project Management Process

- Initiation
- Planning
- Execution
- Monitoring
- Controlling
- Closing

Week 6:

Change Management Process

Customer Satisfaction Survey

Verification and Validation

Verification methods

- inspection
- Walkthrough
- Buddy check
- Validation Methods.

Week 7:

Testing Roles and Responsibilities

- ASE
- Software Engineer
- Software Engineer
- Team Lead
- Project Lead
- Test Manager



Week 8:

Project Testing (BANK/INSURANCE Project)

Project Management Plan

- Scope Management
- Schedule Management
- Financial Management
- Quality Management
- Resource Management
- Communications Management
- Project Change Management
- Risk Management
- Procurement Management

Requirements

- Business requirement Specification -BRS
- System requirement Specification -SRS
- Functional Requirement Specification –FRS

System Requirement Specification

- Introduction
 - Project Overview
 - Project Objective
- Existing System
 - Constraints & Limitations
- Proposed system
 - System overview
 - Need for the proposed system
 - Automation
- Requirements
 - Project Requirements
 - Project System
- User Management

Introduction about Project [BANKING/INSURANCE]

- Insurance /Banking Domain Knowledge
- Project Detailed Explanation
- Project Requirements explanation

Week 9:

Software Testing Life Cycle

- Test Initiation
- Test Planning
- Test Design
- Test Execution
- Defect Reporting
- Closing

Test Initiation phase

- What is Test Initiation?
- Understanding project requirements with live show
- Understanding UI Spec, FR Spec Documents

Test Planning Phase

- What Tester will do in Test Design Phase?
- What is Use Case?
- What is a Scenario?
- Preparing Scenarios for project
- What is a Test Case?
- Preparing Test case Template for project
- Types of Test cases
- Test Case design techniques
 - BVA
 - ECP
 - Decision Table
 - State Transition Diagrams
 - Error Guessing
- Designing test cases for project
- Test Case Status
- Test Cases Review
- Preparing RTM

Projects & Technologies

- Difference between Project & Product?
- What is a Project?
- What is a Product?
- Type of Projects?
 - Desktop application
 - Web Applications
 - System Products

Software Environment:

- Environment is a combination of three layers
- Presentation layer
- Business layer
- DB layer

Week 10:

Test Case Execution

- When do we start test case execution?
- What is a Build?
- What is Version?
- Build Release Note
 - Who prepares the Release Notes?
 - When to prepare the Release Notes?
 - Significance of Release Notes
- Version Controlling and managing
- Builds from Development to Testing
- Build & Deployment Process
- Who will deploy the application?
- How to access the application
- Test case execution

Defect Reporting and Tracking

- What is a defect?
- Defect Status
- Defect Severity
- Defect Priority
- Types of Defects
- Defect Life Cycle
- Creating defects in QC
- Defect Density
- Result Analysis

Defect Reporting Through Bug Tracking Tools (Bugzilla/Jira/QC)

- Defect Management
- Creating user roles and permissions for each role
- Creating users for each role
- Defects reporting
- Defects tracking
- Defects Retesting
- Various reports generation
- Defects closing

Week 11: Instructor

Agile Scrum Framework [Real Time Overview]

- Agile principles
- Agile Scrum Overview
- Scrum roles
 - Product Owner roles
 - Scrum master role
 - Team role
- Scrum Meetings
 - Sprint Planning meeting
 - Daily Scrum meeting
 - Scrum review meeting
 - Scrum retrospective meeting
 - Release planning meeting
- Scrum Components
 - Product Back log
 - Sprint Back log

- Other components



Others

- Status Reports
 - Daily status report
 - Daily defect report
 - Weekly status report
- Retesting report
- Reports from QC
- Project Workflow (End – To – End)
- Exit Criteria for Testing
- CV Preparation Tips
- Interview Tips & Mock Interviews



Software Testing: SELENIUM

Week 12:

Introduction

- What is Automation Testing?
- When to start automation?
- When not to go for automation?
- What are the advantages of automation testing?
- What is Selenium
- What are the advantages of selenium?
- Difference between Selenium and QTP?

Selenium IDE

- What is Selenium IDE
- Installing IDE
- Record and playback
- Converting selenium script into other languages
- Batch testing in IDE

Week 13:

JAVA

- Introduction to Java
- Installing JDK
- Configuring Eclipse IDE
- Creating Java Project
- Sample Java Program
- Classes and Objects
- Downloading Selenium server jar

- Configuring Selenium into the Java Project
- Conditional Statements in Java
- Loops in Java
- Arrays in Java
- Array List in Java
- Methods in Java
- Utility Functions in Java



- Local and Global variables in Java
- Static and Instance Variables in Java
- Hash Set in Java
- Method Overloading in Java
- Constructors in Java.
- Inheritance in Java
- Interfaces in Java.
- Packages in Java.

Week 14:

Web Driver Introduction

- Browser Launching Automation
- Working on Firefox, Chrome, IE

Add on and Methods

- Firebug and Fire path
- Chropath
- Login functionality test
- Locators in WebDriver
- Methods in WebDriver

Profiles

- Firefox Profiles
- Making Web Driver launch a customized instance of Firefox
- Basic HTML notations

Week 15:

Automating Links

- Links Testing
- Clicking on a link and validating
- Capturing all links in a page
- Capturing links from a section of the page
- Capturing links from a section of the page and validating them.
- Links Testing
- Visible links and Hidden links

- Validating all the links based on href property
- Checking for broken links



Week 16:

Automating Dropdowns

- Dropdown Testing
- Selection an option from the dropdown
- Select class to automate dropdown
- Capturing all element in a dropdown
- Checking if all options in dropdown are working correctly
- Validating multiple dropdowns

Xpaths

- Types of Xpaths
- Relative and Absolute
- Creation of relative Xpaths
- Creation of Absolute Xpaths
- Customizing Xpaths
- Handling Dynamic Xpaths
- Xpath Axes

Using CSS Selectors

- CSS Selectors
- Creation of CSS Selectors
- Comparison between Xpath and CSS Selectors
- Relative and Absolute CSS
- Handling Dynamic CSS Selectors

TestNG

- Introduction to TestNG
- Configuring TestNG into Eclipse.
- Annotations in TestNG.
- Prioritizing test cases.
- Ignoring Test cases.
- Advantages of TestNG.
- Using testing.xml

Tab and Popup Automation

- Automating Tabs
- Automating multiple windows
- Handling popup
- Handling Alerts

Synchronization

- Introduction to Synchronization
- Thread.sleep()
- Implicit wait
- Explicit Wait

Ajax Testing

- What are Ajax Components
- Handling Ajax Autosuggestions

Miscellaneous

- Radio Buttons Testing
- Checkboxes Testing
- Automating input fields

Actions Class

- Advanced user interactions
- Mouse Hovering
- Right Clicking
- Double Clicking
- Chain Actions
- Drag and drop and element
- Automating Slider bar

Week 17:

Automating WebTable

- Introduction to WebTable Testing
- Handling static WebTable
- Handling dynamic WebTable
- Automating Datepicker(calendar)

Excel Read/Write

- Apache POI
- Configuring POI into the project
- Interacting with Excel
- Read operations on excel
- Write operations on excel
- Dropdown Testing and storing the results in Excel
- WebTable testing and storing the results in excel
- Creating Data Driven Framework
- Creating Test data excel files
- Using the test data to test the web application

Frameworks

- Creating a Data Engine to control the automation test suite
- Keyword Driven Testing
- Creation of Properties File
- Object Repository
- Creating Actions Keywords Excel file
- Reflections in Java to handle keywords

Automating Window Components

- Auto IT
- Handling Window Components
- Installing AutoIT
- Notepad Automation
- Integrating Auto IT and Selenium
- File download using AutoIT
- File upload using AutoIT

Week 18:

Version Controlling

- GIT
- Version Controlling
- Installing Git
- GIT bash and GIT HUB
- Creating a Git local repository
- Creating Git Hub account
- Uploading into Git hub(push)
- Downloading from Git Hub(pull)

Maven

- Introduction to Maven
- Maven local and Global repositories
- Creating a maven artifact from command prompt
- Configuring maven project into Eclipse
- Creating a Maven local repository
- Adding Jars into Maven local repository
- Stages in Maven.
- Configuring Maven from Eclipse plug-in
- Maven as a build tool

Grid II

- Selenium Grid
- What is Grid
- Configuring Hub and Nodes
- Serial and parallel testing
- Cross browser Testing
- Cross platform Testing
- Customizing the nodes
- Using JSON to configure Hub and Nodes
- End to End Testing in Grid

Integration

- Different tools for implementing CI
- Jenkins
- Continuous Integration
- Downloading Jenkins
- Dashboard of Jenkins
- Scheduling the automation build
- Sending automated mails when the build executes
- Integrating Jenkins with Git.
- Parallel testing of selenium programs on multiple browsers and OS using Jenkins

