

Software Testing Professional (Manual and Automation)

Manual Testing

Software Development Life Cycle

- Waterfall Model
- Spiral Model
- Prototype Model
- V Model
- Hybrid Model

Software Testing

1. White Box Testing

- o Path Testing
- o Loop Testing
- o Condition Testing
- o White box Testing from Memory Point of View
- o White box Testing from Performance Point of View

2. Grey Box Testing

3. Black Box Testing

- Functionality Testing/Component Testing
- Integration Testing
- System Testing
- **Acceptance Testing**
 - o Alpha Testing
 - o Beta Testing
- **Smoke Testing/Sanity Testing/Dry Run**
- Add-hoc Testing
- Exploratory Testing
- Compatibility Testing
- Performance Testing
 - o Load Testing
 - o Stress Testing
 - o Volume Testing
 - o Soak Testing
- Reliability Testing
- Usability Testing
- Accessibility Testing
- Globalization Testing
 - o Internationalization testing
 - o Localization testing
- **Regression Testing**

4. TEST CASE

- Introduction to Test Case

- Test Case Design Techniques
 - o Specification Based
 - o Experienced Based
- Test Case Format
- Functional Test Case
- Integration Test Case
- System Test Case
- Procedure to Write and Execute Test Case
- Test case Review Process

5. Software Test Life Cycle

- Traceability Matrix
- Test Execution Reports

6. Test Management Tool

- Jira
- Klaros
- Qase

7. Test Plan

- Sections of Test Plan
- Test Metrics

8. Defect Tracking

- Introduction to Defects
- Defect Life Cycle
- Status of Defects
- Severity of a defect
- Priority of a defect
- Defect Report/Incident Report
- Defect Tracking Tool:
 - o JIRA
 - o MANTIS
 - o QC

9. Static Testing

10. Dynamic Testing

11. Quality Assurance and Quality Control

12. Projects

- Web Application
- Mobile Application
- Compatibility Testing Project

Software Development Model

- Agile Methodology
 - o Agile Scrum
 - o Agile Kanban
 - o Agile Xtreme Programming
- DevOps
 - o Relationship between Agile and DevOps
 - o Relationship between Agile and DevOps
 - o CI/CD Pipeline

Git

- git Overview
- git Installation
- git Account Setup
- git integration with IDE
- git Create
- git Clone
- git commit
- git Push
- git Update

Core Java

Section 1

- **Introduction to programming**
- Introduction to java
- JDK installation
- Keywords, Identifiers, variables
- Operators
- Method/Functions
- Flow Control Statements
- Arrays
- Strings
- Interactive programs in java using Scanner

Section 2

Object Oriented Programming System

- Classes and Objects
- Object creation
- Reference variable
- Global and local variables
- Constructors
- Inheritance
- Method Overloading
- Method Overriding

- Abstract classes
- Interfaces
- Polymorphism
- Abstraction
- Java packages
- Access Specifies

Selenium

- **Automation Testing**
 - o What is Automation Testing?
 - o When we Switch to Automation Testing?
 - o Why Automation testing? /Advantages and Disadvantages
 - o Automation Testing Tools
- **Selenium**
 - o What is Selenium
 - o Why Selenium? / Advantages
 - o What are its versions?
 - o What all OS, Browsers, and Programming Languages it Support?
- Java-Selenium Architecture
- WebDriver Architecture
- Basic Selenium Program to Open and close Browser
- Runtime Polymorphism Program in Selenium
- WebDriver abstract methods
- Locators
- Xpath, its Types and cases
 - o Handling Multiple Elements
 - o Handling Synchronization issue by using implicitly Wait and Explicitly Wait
 - o Handling Dropdown (static and dynamic)
 - o Handling Keyboard and Mouse Actions
 - o Taking Screenshot
 - o Performing Scroll down Action
 - o WebElement Interface Methods
 - o Handling Popups
 - o Handling Frames
 - o Handling New Windows/New Tabs
- **AUTOMATION FRAMEWORK**
 - ***Data-Driven***
 - Keyword-Driven
 - Method-Driven
 - o POM (Page Object Model)

- **TestNG**
 - o Fetching TestNG Report
 - o Batch Execution
 - o TestNG Flags and Annotations
 - o Assertion
 - o Grouping Execution
 - o Data Parameterization
 - o Data driven through Data Provider
 - o Parallel Execution

API Testing

1. Instruction to Webservice

- Types of Webservice
- Participants of Webservice
- Types of Webservice
- Introduction to REST Full web Service
- Introduction to SOAP web Service

4. POST-MAN

- Why PostMan
- CRUD Operation
- POSTMAN Parameter
- POSTMAN Console
- POSTMAN Parameter
- POSTMAN Assertion
- POSTMAN Batch Execution

5. NewMAN

- Export JSON Project
- Execute test suite in command line

Jenkins

- What is Jenkins
- How to install Jenkins
- Create your first job in Jenkins
- Create pipeline.
- How to Integrate smoke, System and Regression test in CI/CD pipeline.
- Project Integration with Jenkins.

Performance Testing

- What is JMeter.
- Build a Basic Test plan and Workbench.

- User defined variables.
- Increase the Load.
- Using CSV data set Config.
- JMeter Listeners.
- JMeter Controller.
- JMeter Regular Expression.

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