

TESTING TOOLS SYLLABUS

Manual Testing

1. Importance of Software Testing
2. Introduction to Software Testing
3. Software Development Life Cycle Models
 - a) Waterfall Model
 - b) Prototype Model
 - c) Incremental Model
 - d) Spiral Model
 - e) V – Model
 - f) Agile Model
4. Introduction to Agile Scrum Methodology
 - a) Agile Manifesto
 - b) Introduction to Agile Scrum Process
 - c) Responsibilities of Product Owner, Scrum Master and Scrum Team
 - d) Ceremonies in Scrum
 - e) Sprint Task Board
 - f) Sprint BurnDown Chart
5. Software Testing Phases
 - a) Document Testing
 - b) Unit Testing
 - c) Integration Testing
 - d) System Testing
 - e) User Acceptance Testing
6. Software Testing Techniques
 - a) Static Testing Techniques
 - b) White Box Testing Techniques
 - c) Black Box Testing Techniques
 - d) Grey Box Testing Techniques
 - e) Yellow Box Testing Techniques
7. Software Testing Life Cycle
 - a) Requirements Analysis
 - b) Test Strategy Preparation
 - c) Test Plan Preparation
 - d) Test Scenarios Preparation
 - e) Test Cases Preparation
 - f) Test Data Preparation
 - g) Test Execution
 - h) Test Closure

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Automation Testing Using Selenium

1. Basics of Core Java

- a) Introduction to Java
- b) Differences Between JDK, JRE and JVM
- c) Hello World Program
- d) Variables
- e) Data Types
- f) Arrays and Strings
- g) Classes and Objects
- h) Constructors, this and super keywords
- i) Conditional Statements
- j) Loops
- k) Inheritance
- l) Access Modifiers
- m) static and final keywords
- n) Abstract Classes and Interfaces
- o) Method Overloading
- p) Method Overriding
- q) Exception Handling
- r) Property Files
- s) List, Set and Map

2. Selenium Basic Concepts

- a) Introduction to Selenium WebDriver
- b) WebDriver Architecture
- c) Locating Web Elements
- d) Browser Commands
- e) Working with Different Browsers
- f) Working with Different Web Elements
- g) Handling popups
- h) Handling Multiple Frames
- i) Handling Multiple Windows
- j) XPath Writing
- k) Difference Between Absolute and Relative XPath
- l) XPath Axes
- m) XPath Methods

3. Advanced Selenium Concepts

- a) Handling Web Tables
- b) Calendar Selection
- c) Capturing Screenshots
- d) Keyboard and Mouse Automation
- e) Javascript executor
- f) Cookie handling
- g) Profiles
- h) Wait Types

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4. Sikuli

- a) Introduction
- b) Sikuli Installation
- c) Sikuli integration with selenium
- d) File upload example

5. Reporting Tools

- a) Introduction to Extent Reports
- b) Test case writing with extent reports
- c) Attaching Screenshots to reports

6. DB Testing

- a) MySQL Introduction
- b) Basic SQL Queries
- c) SQL Joins
- d) JDBC
- e) Writing test cases to work with DB

7. WebDriver Listeners

8. Maven

- a) Introduction
- b) Maven setup and Installation
- c) Creating and Importing Maven projects
- d) Maven Repositories
- e) POM explanation
- f) Maven Build Life cycle
- g) Goals and plugins
- h) Profiles

9. GitHub

- a) Introduction
- b) Downloading (cloning) a project from GitHub
- c) commit, push and pull features of GitHub

10. TestNG Framework

- a) Introduction
- b) TestNG annotations
- c) Prioritizing tests
- d) TestNg Suite
- e) Grouping tests
- f) Dependent tests
- g) Reporters and asserts
- h) Parameters
- i) Data Providers
- j) Browser compatibility and parallel Execution

11. Page Object Model

12. Page Factory

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13. Data Driven Framework

- a) Creating Excel Class using JXL
- b) Data Provider Explanation
- c) writing test cases using data provider annotation

14. Keyword Driven Framework

15. Hybrid Framework

16. Selenium Grid

- a) Introduction
- b) Hub and Node configuration
- c) Desired Capabilities
- d) Running Test cases on selenium grid

17. Jenkins

- a) Introduction
- b) Setup and installation
- c) Configuration of Jenkins
- d) Creating users in Jenkins
- e) plugin management
- f) Building a Maven project
- g) Scheduling builds

18. Behaviour Driven Development Using Cucumber

- a) Introduction to BDD
- b) Features and Advantages
- c) Downloading Jar files and eclipse plugin
- d) Gherkin Keywords
- e) Writing Business Scenarios
- f) Running tests using Feature files