

## Introduction to Manual Testing:

- Verification vs validation
- Types of Applications
- Probabilities of getting an error in an application
- SDLC – Software Development Life Cycle
- Waterfall
- Prototype
- Spiral
- Incremental (Agile methodology and Scrum Framework)
- V-Model
- Advantages and Disadvantages of each software development life cycle
- Principles of Testing
- STLC –Software Testing Life Cycle
- Difference between Test case, Use case and Scenario's.
- How to prepare test plan and strategy
- How to Prepare test case template?
- Difference between Error, bug, defect and failure
- Test Case Design Technique
- Boundary value Analysis
- Equivalence Partitioning
- Decision Table
- State Transition Diagram
- Use Case Testing
- Bug Life cycle
- How to Prepare Bug template?
- Bug Tracking tool
- Types of Testing
- Difference between static and Dynamic testing
- Difference between Functional and Non-functional testing
- Black box testing and its types
- White box testing and its types

- System Integration Testing vs User Acceptance Testing
- Entry Criteria and Exit Criteria
- Test Environment and Test data preparation
- Flow graph notations
- Statement coverage
- Branch Coverage
- path coverage
- Cyclometric Complexity
- Integration testing
- Big Bang Integration
- Incremental Approach – Top Down, Bottom up and Hybrid
- Requirement traceability matrix

## Introduction of selenium

- Selenium components
- How differs from other automation tools
- Advantages of selenium
- Overview of Testing framework
- Overview of Eclipse

## Selenium Architecture:

- Selenium RC Architecture
- Web driver Architecture
- Web driver Vs Selenium RC
- Brief explanation about advantages of web driver

## Locator Techniques:

- Introduction about locator concept
- Brief explanation of different locator techniques
- Xpath techniques explanation with different kind of real time scenarios.

## Selenium IDE :

- Download and Installation
- Record and playback techniques
- Modifying the script using IDE
- Convert the IDE script into RC script
- Validate the locator value using IDE

## Selenium setup:

- Explanation of step by step instructions for setup
- Integration of eclipse and Testing

## Selenium RC:

- Start the selenium Selenium server
- Basics of Annotations in Testng
- Write the basic script of Selenium RC
- How to execute the scripts ( different ways) and look the results
- Brief explanation of commands in selenium RC

## WebDriver:

- Webdriver setup
- Detailed discussion about webdriver commands
- Handling different browsers
- Create our own methods in webdriver

- More programming techniques in webdriver
- Using RC commands from webdriver project
- Migration of selenium1 code to selenium2
- Project structure organization

## Testing:

- Brief about Testing framework and Testng
- Annotation concept and different types
- Testng Configuration
- Suite execution from command prompt without eclipse
- Parallel script execution
- Grouping the testcases
- Parameter configurations
- Suite creation methodology
- Report generation
- Assertions
- Verifications
- Listeners in Testng
- Create customized report using Testng & Java

## AutoIT:

- Need of AutoIT tool
- Basics of AutoIT tool and create simple script
- Converting AU3 file to exe file
- Calling AutoIT script from selenium project

## Selenium Grid:

- Introduction of selenium Grid
- Installation and setup of Hub and node
- Script changes for Selenium grid execution
- Simple script execution using grid
- Parallel execution using grid

## Automation Test Frame Work

### How to develop Test automation frame work in live environment

- What is a frame work
- Types of frame work
- Data driven frame work
- Modular driven frame work
- Keyword driven frame work
- User Defined Keyword driven framework with implementation
- Execute test scripts from the framework

## Continuous Integration Testing using Jenkins

- About Jenkins
- History of Jenkins
- Splitting of Projects
- What is Continues Integration
- Installing Jenkins
- Creating a simple job

- Integrating Jenkins to the Project

## The Fundamentals of Restful Services in Java

- What is Jersey?
- RESTful Architecture
- Using HTTP GET Demo
- Test Created New REST Service USING HTTP GET
- JSON Output for HTTP GET
- Using HTTP POST Demo
- Test Service USING HTTP POST
- JSON Output for HTTP POST
- Using HTTP PUT Demo
- Test Service USING HTTP PUT
- PUT vs POST
- JSON Output for HTTP PUT
- Using HTTP DELETE Demo
- Test Service USING HTTP DELETE
- JSON Output for HTTP DELETE

## Interview Questions & Placements