

## **Week 1:**

### **Manual Testing**

- Software development Life cycle (SDLC)
- Software QA and Software testing.
- Capability Maturity Model.
- Manual and Automation testing.
  1. Manual testing process (Pros and Cons)
  2. Automation testing process (Pros and Cons)
  3. Manual Testing vs. Automation Testing
- Major steps involved in testing process (QA life cycle).
- Entrance and exit criteria in QA.
- Documentation in QA process.
- Business Requirement Document (BRD) and System Requirement Specification (SRS)
- Creating Test Cases, Test Plans and Test Scripts.
- Testing scenarios.
- Traceability Matrix.
- Prioritize the testing process.
- Web Application Testing, GUI Testing and Backend testing.
- Test Management and Reporting.
- Defects and Defect Tracking system.

### **Types of Testing**

- Most commonly followed
  - Unit testing
  - Smoke test
  - Black box testing
  - Integration testing
  - Regression testing
  - Performance testing
  - UAT
- Other Testing types
  - Adhoc testing
  - White box test
  - Security testing
  - Compatibility testing
  - Boundary testing
  - Stress and Load testing
  - Alpha and Beta Testing

**Materials provided:**

Sample FRS, Test plan, Test case, Tractability report , Presentations and FAQ's of testing

**Assignment 1:**

- Create a Sample Test plan (Outline) for a web application.
- Write test cases for one of the web applications in Excel (try to involve as many scenarios as you can)

**Week 2:****Defect Tracking Tools - Quality Center / Test Director**

- Bug Life cycle
- Severity of the bug
- Defect tracking Process
- Various Defect Tracking Tools.
- Test Director and Quality Center
  - Adding Test Requirements
  - Create Test Cases
  - Executing the test cases manually
  - Parameterize the test cases
  - Creating a Test case Template
  - Creating a Test set
  - Executing a Test set
  - Run Tests and Analyze Results
  - Report and Trace Defects
  - Document Generator
- IBM lotus notes demo

**Materials provided:**

Sample defect reports, Presentations and FAQ's of TD , QC

**Assignment 2:**

- Add the test plan created in assignment 1 in to TD.
- Move the Test cases created in Excel in to TD.

- Log the defects in TD after executing the Test cases. (Try to provide description, severity level and status)

### **Week 3: (continues in to 4)**

#### **Quick Test Professional**

- Introduction to QuickTest
- Test Planning
- Record and Playback
- How QuickTest identifies objects
- Object types (Test Object, Run time Object)
- Object Repository
  1. Shared Object Repository
  2. Local Object Repository
- Object Spy
- Data Table
  1. Local Data table
  2. Global Data table
- Synchronizing Tests
- Break Points
- Types of Actions
- Creating Tests with Multiple Actions
- Data Driven Tests
- Working with the Data Table

#### **Assignment 3:**

- Create a Test script for the web application (Single action script).
- Parameterize the script for multiple iterations.
- Involve the Import and export statements to take data from Excel or any external source file.
- Learn the Object repository concepts and try to play around Object repository Manager.

#### **Advanced QTP**

- Checkpoints
- VB Scripting Basic Statements
- Report Event
- Output and Correlation
- Alternatives to Standard Recording

- Recovery Manager and Scenarios
- Saving QuickTest Tests into Test Director
- Using the Expert View (Preview)
- User-Defined Functions
- Test automation frame work -Introduction and types

#### **Assignment 4:**

- Create a Multi Action Data driven Test script for the web application (Try to involve Insert in to call action, copy of an action statements).
- Involve all checkpoints in the script.
- Use Conditional VB Statements and Report statements to write the script.

#### **Materials provided:**

Presentations and FAQ's of QTP , sample scripts and test automation frame work sample

#### **Week 4:**

#### **Load runner and win runner**

##### **Load runner**

- Record with the Virtual User Generator (VUgen)
  - Invoke the client application from VuGen
  - Load Runner transaction measuring statements
  - Add checkpoints
  - Check playback results
  - Parameters
  - Verify execution
  - Correlation
    1. Manual correlation
    2. Automated correlation
- Load Runner Scenarios (Controller)
- Define and connect to load generators
  - Define Vusers and scripts
  - Add and configure performance monitors
  - Modify options and run-time settings for specific purposes
  - Analyzing Scenario Execution (Analyzer)

**Materials provided:**

Presentations and FAQ's of LR

**Assignment 5:**

- Creating load mix
- Create a vugen script and then add them to controller.
- Create a scenario in the controller.

**Win runner demo and FAQ's**