QA Contents

Description:--

QA Develop test plans, test cases, test scripts and test reports on multiple projects of varying size. Perform testing on various software, telecom and reporting systems. Validate that user expectations are achieved during the testing process. Review user requirements documents to ensure that requirements are testable.

Manual Testing Process Implementation:--

Duration: 5hrs

1. **Software Engineering Concepts:**
    - 1.1. Introduction
        - 1.1.1. Importance of Software Systems
        - 1.1.2. Common Problems in software development and software bugs
        - 1.1.3. Testing Objectives
        - 1.1.4. SDLC
        - 1.1.5. Software life cycle stages
        - 1.1.6. Testing stage in SDLC
        - 1.1.7. Software Development models
            - 1.1.7.1. Waterfall Model
            - 1.1.7.2. Prototype Model
            - 1.1.7.3. Spiral Model
            - 1.1.7.4. Fish Model
            - 1.1.7.5. V-Model
            - 1.1.7.6. Agile Model

2. **Testing Techniques**
    - 2.1. Black Box Testing
        - 2.1.1. ECP
        - 2.1.2. BVA
        - 2.1.3. Error guessing

2.2. White Box Testing
2.3. Gray Box Testing Technique
2.4. ADHOC Testing

3. Software Testing Life Cycle Implementation

3.1. Test Requirements Gathering and Analysis
3.2. Test Strategy preparation
3.3. System Test plan preparation
3.4. Test Scenarios Identification
3.5. Test Case Design
3.6. Software Environments
3.7. Test Execution
3.8. Defect Reporting and Tracking
3.9. Test Closure Activity

4. User Acceptance Testing

Quick Test Professional (QTP)

Duration:- 10-12hrs

1. Introduction

1.1. Introduction to Automation Testing
1.2. Need of Automation Testing
1.3. Framework to learn any automated tool
1.4. Types of Automated Tools

Basics of QTP

1.5. Anatomy of QTP
1.6. Record and Run Settings
1.7. Recording Modes
1.8. Types of Objects

2. QTP Life Cycle

2.1. Test Plan
2.2. Generating the basic test
2.3. Enhancing the test

3. VB Script Language Overview
4. Loops and Conditional Statements
5. Inserting the check points
6. Working with Web Checkpoints
7. Synchronizing And Transactions

8. Data Driven Testing
- 8.1. Parameterization
- 8.2. Different ways of parameterization
- 8.3. Inserting Output Values

9. Inserting the programmatic statements

10. Developing the script statements manually

11. Test Execution

12. Result Analysis

13. Reporting

14. Actions
- 14.1. Normal Actions
- 14.2. Reusable Actions
- 14.3. External Actions
- 14.4. Creating new Actions
- 14.5. Splitting Actions
- 14.6. Renaming Actions
- 14.7. Working with Data Table Action Sheets
- 14.8. Working with Input and Output Parameters

15. Functions
- 15.1. Need of Functions
- 15.2. Creating User Defined Function
- 15.3. Working with Functions

16. Libraries
- 16.1. Introduction
- 16.2. Creating Library Files
- 16.3. Associating Library Files

17. Additional Concepts
- 17.1. File System Object
- 17.2. Environment Variables

18. Virtual Object Configuration

19. Working with Test Objects and Object Repositories
- 19.1. Working with Shared Object Repositories
- 19.2. Object Identification

20. Recovery Scenario Manager

21. Descriptive Programming

22. Regular Expressions

23. Data base connections

24. Frame Work Implementation
25. Working with Quality Center

Quality Center

Duration:-- 5hrs

1. **Overview of Test Management**
2. **Architecture of Quality Center**
3. **Site Administrator**
    - 3.1. Create Project
    - 3.2. Create Users
    - 3.3. Assign Users To Project

4.1 Customization
4.2. Managing Requirements
4.3. Creating Test Plans
4.4. Exporting Requirements, Test cases and Defects from Excel to QC
4.5. Developing Manual and Automation Tests
4.6. Coverage Analysis
4.7 . Create Test Sets
4.8. Running Tests
4.9. Record Results
4.10. Defect Reporting and Tracking
4.11. Working with QTP to QC
4.12. Difference between QC and TD tools

SELENIUM CONTENTS

Introduction

- What is automation testing
- When to go for Automation
- Different Automation Tools (vendor & open source tools)
- Advantages of Automation
- Criteria for Automation
- Difference between Manual Testing & Automation Testing Process

Introduction to Selenium

- What is selenium Tool
- Use of selenium tool in automation
- Features of Selenium tool
- Differences between Selenium and other Tools

Selenium Components

Configuring Eclipse IDE for Java & Selenium

- How to Create new java project
- How to create a new java class
- Running java class
- Viewing the results of java program

Learning Java

- Introduction to Java programming
- Data Types in Java
- Primitive Data types and Reference Data Types
- Declaring Variables
- Writing java program and running

Conditional Statements

- If condition
- If else condition
- If else if condition (nested if)
- Switch case statement
- Examples for all the above conditions

Loop Statements

- While loop
- Do while
- For loop
- For each loop
- Examples for all the above loops

ArrayList:--

- How to declare array
- How to store values in array
- Reading values in array

Object Oriented Programming

- What is class
- What are fields and methods
- How to create object for the class
- How to access fields and methods in the class
- Constructors
- What is abstract, final class

Polymorphism

- What is polymorphism
- Method overloading
- Constructor overloading
- Passing arguments to methods
- Calling methods in the class
- Return values from method

Inheritance

- Why to do Inheritance
- How to reuse the fields and methods of parent class
- Overriding fields and methods of parent class
- Single Inheritance
- Using super keyword

Interfaces

- What is Interface
- Difference between class and interface
- When to use Interfaces

Package

- What is package
- How to create a package
- How to import package into a different class

Collections

- Use of collections
- Advantage of collection using Array
- How to add, remove, and insert value / elements into collections
- Using the collections like List, Set,
- ArrayList

Configuring other Browsers

- Configure IE browser
- Configure Chrome browser
- Running scripts on different browsers

Web Driver

- Introduction to Web Driver
- Configure Eclipse IDE (Adding selenium Libraries)
- Using FirefoxDriver API
- Working with Different Elements and programming
- Edit boxes
- Checkbox, Radio Buttons
- Buttons
- Links
- Selecting values from a Dropdown list
- Understanding xpath to locate elements in webpage
- Working with Table Elements
- Reading data from Table
- Using Actions class
- Handling keyboard, mouse events

Data Driven Testing

- What is Data Driven Testing
- How to parameterize the data to the script using Excel
- Reading, writing data into Excel
- How to parameterize data to the script using Flat files

Debug Scripts in Eclipse

- Understanding Debug
- Using Breakpoints
- Verify the values during debug
- Using step over, step into

Recognizing elements in webpage

- Using xpath, DOM, CSS
- How to recognize dynamically changing elements
- Using Regular expressions

TestNG Framework

- What is TestNG
- Create TestNG.xml file
- Integrate the Selenium Scripts and Run from TestNG
- Reporting Results & Analyze
- TestNG Annotations
- Tags in TestNG xml file
- Groups
- Reporting Results

Apache Maven
Cucumber