SOFTWARE TESTING
MANUAL TESTING
Selenium

JOIN US
It's Time To Take The Right Step

Testing is not just taught, it is practiced at QEdge

QEdge Technologies
We Teach SUCCESS
WhatsApp: +91 9154 11 22 33
Skills Covered

- Software Testing Concepts
- Manual Testing
- AGILE
- JIRA
- Java
- Selenium WebDriver
- Data Driven Framework
- TestNG
- Using Apache POI
- BDD
- cucumber
- Behaviour Driven Development
- Hybrid Framework
- Page Object Model in Selenium
- Selenium Grid
- Maven
- Jenkins
- GitHub
SOFTWARE TESTING
(MANUAL TESTING + SELENIUM)

Manual Testing

About Manual Testing


Course Objectives

After the successful completion of the Manual Testing course, you will be able to:

- Learn fundamental concepts in software QA testing, including software testing objectives, processes, test strategies and testing techniques.
- Learn the software QA testing process and manual testing processes like System testing, Re-testing, Regression testing and System Integration Testing and UAT etc.
- Learn to plan a testing projects, design test scenarios, design test cases and data, conduct QA testing operations, manage defects and generate various test reports.
- Learn Defect Reporting process and Defect management process.
- Learn implementing Testing Process using tools like JIRA and ALM

Who can join this Course?

Any Fresh Graduates, Students and working professionals who want to learn and gain knowledge on software testing.

Pre-Requisites

No technical and programming knowledge required for this course, minimal knowledge on software applications is enough.

Project Work

Towards the end of the Course, student will learn working on a live project.
Curriculum

Software Testing Overview
- Introduction to Software Testing
- Why Testing is Necessary
- What is Manual Testing?
- What is Automation Testing?
- Error / Defect / Failure?
- Why Software has defects?
- Cost of fixing defects?
- Verification & Validation
- Quality Assurance & Quality Control
- Role of a Tester?

Software Development Life Cycle (SDLC)
- SDLC Phases
- SDLC Models
- Waterfall Model
- V Model
- Agile Model

Software Testing Methodologies
- Static Testing
- Dynamic Testing

Static Testing Techniques
- What is Static Testing?
- Reviews
- Different Types of Reviews
- Walkthroughs

White Box Testing
- What is White Box Testing?
- Unit Testing
- Integration Testing
- Why WBT is Necessary?

Black Box Testing
- What is Black Box Testing?
- Why BBT is Necessary?
- System Testing
- User Acceptance Testing (UAT)
  - Alpha Testing
  - Beta Testing

Smoke Testing & Sanity Testing

Functional Testing Types
- Formal Testing
- Ad-hoc Testing
- Re-Testing
- Regression Testing
- Difference between Re-Testing & Regression Testing

- System Integration Testing
- End-to-End Testing
- Exploratory Testing
- Monkey Testing

Non Functional Testing
- UI Testing
- Usability Testing
- Security Testing
- Compatibility Testing
- Load Testing
- Performance Testing
- Globalization Testing
- Localization Testing
- Recovery Testing

Software Testing Life Cycle (STLC)
- What is STLC
- STLC Phases

Test Planning
- Test Strategy
- Test Plan

Test Analysis
- Analyzing Functional Requirements SRS/FRS

Test Design
- Preparing Test Scenarios
- Preparing Test Cases
- Test Case Design Techniques
- ECP & BVA
- Test Data
- RTM

Test Execution
- Executing Test cases
- Defect Reporting Template

Defect / Bug Life Cycle

Defect Management
- What is defect?
- Defect Reporting Process
- Defect Severity & Defect Priority
- Defect Status

Test Closure
- Test Summary Reports
- Status Reports (Daily and Weekly)

Agile & Scrum
- What is Agile Testing?
- Scrum Introduction
- Getting Agile with Scrum
- Characteristics of Scrum
- Scrum Approach
- Scrum team
Scrum Project

- Defining Goals
- Scrum Planning
- Define the Product Roadmap
- Release Planning
- Sprint Planning
- Product backlog
- Concept of Epics
- Writing Epics - Examples
- Concept of User Stories
- Writing User Stories - Examples
- Defining Tasks
- Starting Sprint
- Monitoring Sprint status
- Completing Sprint
- The Daily Scrum Meeting
- Sprint Review Meeting
- Sprint Retrospection

Test Management

& Defect Management Tool JIRA

- JIRA Introduction
- How to Install JIRA
- JIRA Features
- Creating Scrum Project in JIRA
- Adding Users to our JIRA Account
- JIRA Issue types
- Workflow for a Project
- Creating Product backlog in JIRA
- Creating EPICS in JIRA
- Creating User Stories in JIRA
- Starting Sprint
- Writing TestCases in JIRA
- Executing TestCases from JIRA
- Adding Bugs to the JIRA Project
- Attaching screenshots of defects in JIRA
“Education is the development of power and ideal.”

Selenium / WebDriver

About The Course
Selenium is used for automating Web Application Testing. Selenium is open source tool, hence many companies preferring Selenium to cut down project maintenance cost which increased demand for Selenium Testers. In this course you will experience to work with Modularity Framework, Data Driven Framework, Keyword Driven Framework and Hybrid Framework. Cucumber BDD Framework, Selenium WebDriver, Selenium-Grid, AutoIT, TestNG, Apache POI, JDBC, MAVEN, Jenkins and Cucumber are covered during the course. You will learn developing and running automations tests on different real-time applications.

Course Objectives
After successful completion of ‘QATesting with Selenium WebDriver’ Course, you should be able to

- Learn Selenium WebDriver/ Selenium 3.0
- Learn Selenium Architecture and its components
- Working with different Browsers.
- Identifying elements using different locator’s id, name, classname, tagname, linktext, CSS, XPath etc.
- Automating Editbox, DropdownList, Links, Checkboxes, RadioButtons, Tables, Calendars, Keyboard and Mouse Operations.
- Handling window components with AutoIT.
- Handling Alerts, Frames and Multiple windows.
- Validate page content using Selenium WebDriver
- Write Tests using TestNG
- Learn TestNG Annotations, Assertions, Generating Test Reports etc.,
- Learn developing and executing Test Suits using testng.xml
- Creating Reusable automation Tests
- Generating customized test results with extent reports.
- Use WebDriver advanced features e.g. taking screenshots, handling cookies and managing Exceptions
- Create Data driven, Keyword driven and Hybrid test frameworks
- Create BDD Framework with Cucumber
- Conduct Cross browser testing with Mozilla Firefox, Google Chrome, IE, Safari and Opera
- Conduct Cross platform testing with Windows, UNIX and Mac etc.,
- Conduct distributed automated testing using Selenium GRID
- Project dependency management with MAVEN.
- Scheduling Tests with Jenkins

Who can join this course?
Any Fresh Graduates, Students and working professionals who want to learn and become Automation Test Engineer. Selenium is a new and booming Test tool in Software Testing Industry. People with basic knowledge of Object Oriented Programming can easily take up this course.

Pre-requisites
Basic knowledge of Core Java programming is essential for SELENIUM. We provide a complimentary course "Java Essentials for Testing with Selenium WebDriver" to all the students who enroll for Selenium course.

Project Work
Towards the end of the course you will be working on aLive Project where we will be automating a Web application to cover all the possible scenarios with application. Project will be Keyword Driven so that it should work as per user instructions. Test cases will be executed multiple times using Data Driven approach. Project will handle Textboxes, Links, Checkboxes, Submit button, reset button, URL, Page Title, synchronization between pages when navigating from one page to another, taking screenshots of application for each of the validation of – verbose, textbox value, dynamic links, handling of dialog and alert box, fetching data from application. We will build this Project using Eclipse and Selenium WebDriver.
Curriculum
Java Essentials for SELENIUM

Java Programming Basics
- Why Java for Selenium
- Installing Java
- Installing Eclipse
- Creating Java Project
- First Java program
- Concept of class file
- Datatypes in Java
- String class and functions
  - Practical Examples on Strings handling
- Conditional Statements
  - If...else...
  - switchcase
  - Practical Examples with conditions
- Loops
  - While Loop
  - For Loop
  - Practical Examples with loops
- Arrays
  - Single Dimensional Arrays
  - Two Dimensional arrays
  - Practical usage of arrays in Selenium
- Operators
- What are Functions?
- Function Input Parameters
- Function Return Types

Object Oriented Programming in JAVA
- Local Variables
- Global Variables
- Static and Non-Static Variables
- Static and Non-Static Functions
- Creating Objects in Java
- Meaning of static
- Why main method static?
- Overloading and Overriding Functions
- Access Modifiers - Public/Private/Default/Protected

- Constructors
- Interface
- Usage of Objects in Selenium
- Inheritance
- Usage of Inheritance in Selenium
- Creating Packages
- Accessing Classes across Packages

Exception Handling
- Exception handling with try catch block
- Importance of exception handling
- Exception and Error
- Throwable Class
- Final and Finally
- Throw and Throws
- Different Types of Exceptions
- Need of exception handling in Selenium framework

Automating Excel file Operations using Apache POI
- Creating/Opening XL Files
- Reading data from XL Sheet
- Writing data into XL Sheet
- Counting Rows and Columns in XL Sheet
- Filling BG/Font Colours
- Creating ExcelUtils Class

Automating Text File Operations
- Creating/Openning Text Files
- Reading/Writing Text Files
Selenium Introduction
- What is Selenium?
- Who developed Selenium?
- Selenium Components
- Introduction to WebDriver
- Installing Selenium WebDriver
- Architecture of selenium WebDriver
- Creating your First Script in Webdriver

Launching AUT and Inspecting properties of Elements
- Launching AUT in FireFox
- Launching AUT in InternetExplorer
- Launching AUT in Chrome
- Launching AUT in Safari
- Inspecting properties of Elements on different Browsers
- Creating FireFox Profile

Finding elements using Locators
Creating Customize XPath/CSS Selectors
- What is Xpath
- When to Use Xpath
- Absolute XPath/Relative XPath
- Specifying conditions with Xpath
- CSS Selectors

Automating WebElements Operation
- Browser
- TextBox
- ListBox
- Links
- Check Box
- Radio Button
- HTML Tables
- Calendars

Automating Keyboard and Mouse Events
- Action Class
- Keyboard Events
- Drag & Drop Actions
- Mouse Hover Action
- RightClick, Double Click & Tool Tip

Handling Alerts
- accept()
- dismiss()
- get()Text()

Handling Frames
- What is iFrame?
- Locating Frames
- Handling Frames

Handling multiple Windows
- getwindowHandle()
- getwindowHandles()
- Switching between windows
- Handling elements present in different

Synchronization
- ImplicitWait
- WebDriverWait
- FluentWait
- PageLoadTimeout

AutoIT
- Installing AutoIT
- Components of AutoIT
- Using FinderTool
- AutoIT commands
- Creating Scripts in AutoIT
- Creating executable files
- Running AutoIT Scripts from Selenium

TestNG
- Advantages of TestNG over Junit
- Why do we need TestNG in Selenium?
- Installing TestNG in Eclipse
- Creating a New TestNG Test File
- TestNG annotation
- TestNG assertions
- Running the TestNG Test
- Checking reports created by TestNG
- Creating multiple Tests
- Prioritizing Tests
- Parameterizing Tests with @dataProvider
- TestNGdataProvider with Excel
- Creating and Running Test Suites with TestNG.xml
- Sequential Test Execution with TestNG
- Parallel Test Execution with TestNG
Automation Test Frameworks
- Modularity Framework
- Data Driven Framework
- Hybrid Framework
- Page Object Model (POM)
- BDD Cucumber Framework

Modularity Framework
- Identifying Automation Test Scenarios
- Preparing individual Module Scripts
- Building Test Suite by grouping all Test Scripts
- Executing Tests independently
- Executing Test Suite
- Analyzing Test Results

Data Driven Framework
- Configure Apache POI jar files & TestNG in Eclipse
- Preparing Test Data.
- Preparing Data Driven Test using @dataProvider
- Executing Data Driven Tests
- Analysing Test Results

Hybrid Framework
- Creating Constant Functions
- Creating Application Function Library
- Preparing Keywords
- Design Test Case Template
- Creating Object Repository For Elements
- Preparing TestData
- Preparing Driver Script
- Executing Driver Script
- Analyzing Test Results

Page Object Model
- Creating TestBase class
- Creating Page Classes
- Defining Elements in Page Class
- Defining Functions
- Creating TestCase Classes
- Executing POM TestCases

Cucumber Framework
- Overview of BDD and Cucumber
- How to install and setup Cucumber with Eclipse
- Overview of Gherkin keywords
- How to create Feature file
- How to generate Step Definition file
- How to integrate Cucumber with Selenium WebDriver
- JUnit Test Runner Class
- Data Driven Testing in Cucumber
- Configure Cucumber with Maven and Jenkins
- How generate Reports in Cucumber

Selenium GRID
- What is Selenium Grid?
- When to Use Selenium Grid?
- What is a Hub and Node?
- How to Install and Use Grid 2.0?
- Designing Test Scripts That Can Run on the Grid
- Using the DesiredCapabilities Object
- Using the RemoteWebDriver Object
- Running a Sample Test Case on the Grid
- Sequential and Parallel Test Execution
- Running Tests on different Operating Systems
- Running Tests on different Browsers

Maven
- What is Maven and Why Maven?
- Installing/Configuring Maven
- Creating Maven Project
- Importing Maven Project into Eclipse
- What is POM.xml?
- Adding Dependencies to POM.xml

GitHub
- Create GitHub Account
- Configure Git & GitHub with Eclipse
- GitHub Commands

Jenkins
- Installing/Configuring Jenkins
- Scheduling Test Execution in Jenkins
- Auto mail configuration in Jenkins
- What is continues integration?
- Continues integration with JENKINS
Job Placements
QEdge has its own placement cell serves 365 days placement assistance with 150+ partner clients.

In Class
The experts teach by lecturing and demonstrating.

Live Project
Students will be placed in live project teams to experience the real world of development and QA Testing activities they will be required to perform.

After Class
Learning exercises designed for students to apply the theories and develop understanding.

Assessments
Students will be assessed and guided to crack job opportunity by conducting mock tests and mock interviews.

Cloud Platform
Easy access to study lessons & others interactive assignments.

Software Testing
Live Project
Data Science
Artificial Intelligence
Machine Learning
Selenium
Python
DevOps
AWS

Ameerpet Hyderabad
# 2nd Floor, Nagasuri Plaza, Opp. Mythri vihar,
Ameerpet. Hyderabad - 500016
Ph: +91 9154 11 22 33

info@qedgetech.com
www.qedgetech.com

+91 9154 11 22 33

facebook
linkedin
instagram
qedgetech