

QA – FULLSTACK SOFTWARE TESTING

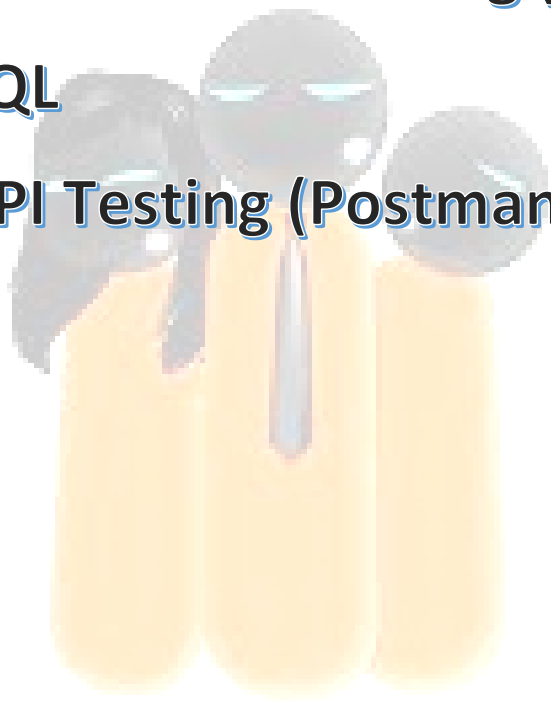
Manual Testing

Core Java

Automation Testing (Selenium)

SQL

API Testing (Postman)



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MODULE 1: SOFTWARE TESTING INTRODUCTION

- What is software testing?
- Why is testing necessary?
- What exactly does a software tester do?
- Testing Principles Guidelines for new testers
- What makes a good tester?

MODULE 2: SOFTWARE DEVELOPMENT LIFE CYCLE

SDLC Phases

- Requirements Phase.
- Analysis Phase.
- Design phase.
- Coding Phase.
- Testing phase.
- Delivery and Maintenance Phase.

SDLC Models

- Waterfall Model.
- Spiral Model
- Prototype Model
- V Model
- Hybrid Model
- Agile Model

MODULE 3: SOFTWARE TESTING METHODOLOGIES

- White Box Testing.
- Black Box Testing.
- ❖ Functional Testing
 - Functional Testing
 - Integration Testing
 - System Testing
 - User Acceptance Testing.
 - Sanity/Smoke Testing.
 - Regression Test.

- Retest
- ❖ Non-Functional Testing
 - Performance Testing.
 - Compatibility Testing.
 - Security Testing.
 - Recovery Testing.
 - Ad-hoc Testing.
 - I18N Testing.
 - L10N Testing.
- Grey Box Testing.

MODULE 4: HOW TO WRITE TEST CASES

- Test case design techniques
 - Boundary value analysis
 - Error guessing
 - Equivalence class partitioning
- Test case template and attributes in it
- Writing test cases and practice

MODULE 5: SOFTWARE TESTING LIFE CYCLE

- STLC
- Test Plan
- Traceability Matrix

MODULE 6: DEFECT MANAGEMENT

- Defect / Bug life cycle
- Severity and Priority
- Defect Tracking
- Defect Reporting

MODULE 7: WHAT IS JIRA SOFTWARE

- Introduction to Jira
- How to create account in Jira
- Workflow in Jira
- Raising Defects in Jira

MODULE 8: INTRODUCTION TO JAVA

- Introduction
- Features of Java
- JDK, JRE & JVM
- Installation of JAVA and ECLIPSE

MODULE 9: BASICS OF JAVA

- Structure of programming language
- Datatypes
- Operators
- Keywords
- Executing first program in JAVA
- Access modifiers

MODULE 10: CONTROL FLOW STATEMENTS

- If – else
- If – else – if
- Nested if
- Switch case
- Switch case fall through

MODULE 11: LOOPING IN JAVA

- For Loop
- While Loop
- Do – while Loop
- Continue statement
- Break statement
- Inner Loop / Nested Loop

MODULE 12: METHODS IN JAVA

- Declaration
- Parameterization
- Returning value
- Automatic promotion
- Method signature

MODULE 13: TYPES OF VARIABLES

- Local variable
- Instance variable
- Static / Global variable

MODULE 14: OBJECT ORIENTED PROGRAMMING (OOP) IN JAVA

- Objects
- Class
- Inheritance
 - ✓ Single inheritance
 - ✓ Multilevel inheritance
 - ✓ Hierarchical inheritance
- Polymorphism
 - ✓ Method overloading
 - ✓ Method overriding
- Abstraction
 - ✓ Abstract class
 - ✓ Interface
- super keyword
- this keyword
- final keyword
- Encapsulation

MODULE 15: COLLECTIONS IN JAVA

MODULE 16: EXCEPTION HANDLING IN JAVA

- Concept of Exception and Exception handling
- Try – catch block
- Multiple catch block
- Finally block

MODULE 17: INTRODUCTION TO AUTOMATION TESTING

- Difference between Manual & Automation Testing

- Advantages Automation Testing
- Limitations of Automation Testing
- Tools for Automation Testing

MODULE 18: GETTING STARTED WITH SELENIUM

- What is Selenium ?
- Advantages & limitations of Selenium
- Components of Selenium
- Comparison of Selenium with other tools

MODULE 19: SELENIUM WEBDRIVER

- Introduction
- Evolution
- Architecture
- Automation using Selenium WebDriver
- Important methods in Selenium WebDriver

MODULE 20: LOCATOR TECHNIQUES IN SELENIUM

- Introduction to Locators
- Locating web elements using
 - ✓ id
 - ✓ name
 - ✓ className
 - ✓ tagName
 - ✓ linkText
 - ✓ partialLinkText
 - ✓ cssSelector
 - ✓ xpath
- Types of X – Path
- Absolute and Relative X- path

MODULE 21: UI TESTING IN SELENIUM PART – 1

- Types of Alerts
- Handling Alerts
- Handling multiple windows & tabs
- Verify Page title in Selenium WebDriver

- Navigation in selenium
- Handling Edit-box
- Handling links
- Handling Radio button & Check-box

MODULE 22: UI TESTING IN SELENIUM PART – 2

- Handling Drop Down using Select class
- Methods under Select class
- Handling Drag and Drop
- Resize operations
- Handling Mouse Hover
- Keyword Events using Action class
- Scrolling on a web page using JavaScript Executor

MODULE 23: UI TESTING IN SELENIUM PART – 3

- What is an IFrame
- Identifying an IFrame
- Switching to specific IFrame in Selenium WebDriver
- Handling File upload
- How to take screenshot using selenium
- Handling WebTable
- Handling WebCalendar

MODULE 24: TestNG

- Configure Eclipse with Selenium and TestNG
- Create First TestNG Program and Execute
- Attributes in TestNG
- Parallel test execution capability
- TestNG Listeners
- Reports using TestNG

MODULE 25: MAVEN

- Introduction to Maven
- Maven usage
- Configuring Maven with Eclipse
- Test execution in Maven

- Creating a POM.xml file
- Maven integration tool

MODULE 26: CUCUMBER & GHERKIN

- BDD – Behaviour driven development
- Advantages & drawbacks of BDD
- Introduction to Cucumber
- Gherkin syntax in Cucumber
- Implementation of BDD framework using Cucumber

MODULE 27: JENKINS

- Introduction to Jenkins
- CI/CD
- Important terminologies
- Workflow

MODULE 28: BASICS OF API TESTING USING POSTMAN TOOL

- Introduction to API
- Difference between API & Web services
- Difference between SOAP & REST API
- Architecture of Web application
- POSTMAN Tool
 - Introduction
 - Installation
 - GET Method
 - PUT Method
 - POST Method
 - Delete
 - Parallel execution
 - Skipping specific methods
 - Important status code

MODULE 29: BASICS OF SQL

- What is Data & Database ?
- DBMS & RDBMS

- MySQL Server
- Introduction to – Structured Query Language
 - Datatypes
 - DML
 - DDL
 - Where clause
 - Select distinct
 - Order by keyword
 - Group by
 - Having
 - Like operator
 - In operator
 - Between operator
 - Aggregate function

MODULE 30: PROJECT

- Business requirement understanding
- Process flow of project
- Hands on with real time scenarios example
- Hands on with real time use cases.

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