



Software Testing

Introduction to Software Testing

- Introduction to Software Testing & Importance
- Software Development Life Cycle (SDLC)
- Software Testing Life Cycle (STLC)
- Types of Testing (Functional & Non-Functional)
- Difference Between Test Case, Use Case, and Scenario
- Testing Techniques (White Box & Black Box Testing)

Test Design & Execution

- Writing Test Cases & Test Scenarios
- Decision Table Testing & Equivalence Partitioning
- Boundary Value Analysis (BVA)
- State Transition Testing & Exploratory Testing

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- Test Case Reviews & Best Practices

Hands-on Assignment: Writing Test Cases

Test Management & Bug Reporting

- Test Plan Preparation & Test Strategy
- Defect Lifecycle & Bug Tracking
- Bug Reporting in JIRA & Bugzilla
- Severity vs Priority in Defect Management
- Hands-on Practice: Logging Defects in JIRA
- Test Metrics and KPI Measurement

Automation Testing with Selenium

- Introduction to Automation Testing & Benefits
- Introduction to Selenium WebDriver
- Selenium Locators & XPath in Web Automation
- Writing Basic Test Scripts in Selenium
- Data-Driven Testing with Selenium & Excel
- Hands-on Project: Automating a Web Application

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API Testing & Performance Testing

- Introduction to API Testing
- Using Postman for API Testing
- Writing Test Cases for REST APIs
- Introduction to Performance Testing
 - Basics of JMeter for Load Testing
- Hands-on: Performance Testing using JMeter

Database & Security Testing

- Introduction to Database Testing
- SQL Queries for Testers (Select, Insert, Update, Delete)
- Backend Testing Techniques
- Introduction to Security Testing
- Common Security Threats (SQL Injection, XSS)
- Hands-on: SQL Query Testing & Security
 - Vulnerability Testing

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Test Automation Frameworks & CI/CD

- Introduction to Test Automation Frameworks
- Keyword-Driven & Data-Driven Frameworks
- Introduction to CI/CD for Testers
- Jenkins for Test Automation Execution
- Hands-on: Running Selenium Tests in Jenkins
- Best Practices in Test Automation

Mobile testing

- Introduction to Mobile testing
 - IOS app testing
- Android app testing
- Mobile testing challenges and solutions
- UI testing for mobile apps
- Mobile responsive test
- Cloud based mobile application testing and tools
- Mobile Automation testing
- Mobile testing interview questions

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UI TESTING

- UI testing fundamentals
- Types of UI
- What is UI testing
- Manual Vs Automated UI testing
- The benefits of UI testing
- Scope of UI Testing
- User interface testing challenges

