

Quality Assurance Syllabus

Software Testing Fundamentals: Week 1

- Software Quality Assurance Basic Concepts
 - Definition of software testing and quality assurance
 - Understanding bugs, defects, and the necessity of QA
 - Determining the appropriate timing for testing
- Software Testing Life Cycle (STLC)
 - Overview of STLC phases
- Introduction to Agile Methodology and its relevance to testing
- Understanding the V Model of Software Development and Testing
- Test Strategies and their importance in the testing process

Test Artifacts: Week 2

- Functional Requirements and Technical Requirement Documents
- Roles in Software Development Lifecycle (BA, Technical Architect, Developer, Tester)
- Various SDLC models:
 - Waterfall Model
 - Iterative Model
 - Spiral Model
 - Rapid Application Development
 - Agile (Scrum, Extreme Programming)
- Writing Business Requirement Document (BRD), Functional Requirement Document (FRD), and System Requirement Specification (SRS)
- Test Scenarios and Test Cases
 - Test case Design
 - Building test cases with practical examples
- Test Execution and Project Management using Trello

Version Control: Week 3

- Defect Management, Change Management, and Version Control
- Overview of Test Management and Bug Tracking Tools
- Reporting Bugs using Bugzilla and JIRA
- Understanding JIRA:
 - Installation and setup

- Creating projects and managing boards
- Defect lifecycle management in JIRA
- Importance of JIRA dashboard
- Classifying defects
- Introduction to JIRA Agile, Epics, Scrum, and Kanban
- Using GIT for Version Control:
 - Repository management
 - Basic and advanced GIT commands

Automation: Week 4

- Performance / Load Testing with JMeter
 - Introduction, Installation, and Configuration
 - Recording and executing JMeter Scripts
 - Advanced topics: Timers, Assertions, Regular expressions, Beanshell Scripting, REST API Load Testing
- Introduction to Selenium IDE
 - Installation and Configuration
 - Scripting with Selenium IDE
 - Enhancing scripts and transitioning beyond Selenium IDE
- API Testing with RequestBin and Runscope

Practical Workshop

- Hands-on exercises using Trello, Bugzilla, JIRA, JMeter, Selenium IDE, RequestBin, Runscope, and GIT
- Practical application of Firebug for debugging and development support