Software Testing Syllabus

for

2nd Year MCA,

Kristu Jayanti College,

Bengaluru

Unit 1 – Introduction to Software Testing

- What is Software Testing ?
- Types of Software Testing.
- Significance of Software Testing.
- Software Development Life Cycle (SDLC)
- Phases in software development life cycle
- Waterfall and Agile method of software development
- Scrum methodology of agile software development
- Software Testing Life Cycle (STLC)

Unit 2 – Introduction to Software Testing Tools

- Introduction to tools used in software testing
- Unit Testing tools/libraries – Junit/TestNG
- API Testing tool - Postman
- Test Automation Tool – Selenium
- Performance testing tool – Jmeter

Unit 3 – Manual Testing, Test Management and Defect Tracking

- Introduction to test plan, test case and test execution
- Writing manual test cases for unit testing, integration testing and system testing
- Execution of test cases
- Introduction to bug and bug life cycle
- Introduction to bug tracking tools such as Bugzilla
- Introduction to Jira a tool for project management and bug tracking
- Hands on assignment

Unit 4 – API Testing

- Introduction to API testing
- Downloading and installing Postman application

- Setting up postman to test API
- API testing using Post,Get,Put and Delete methods
- Hands on assignment

Unit 5 – Version Control System

- Introduction to Version Control System
- Download and install git
- Open an account in github.com
- Git commands to manage project source code
- Executing of git commands such as git init,git add,commit,status,push,clone, pull etc.
- Hands on assignment

Unit 6 – Unit Testing using TestNG

- Downloading and installing JDK and Eclipse
- Downloading TestNG from Eclipse Market place
- Writing sample java programs by creating project java project in eclipse
- Writing unit test cases using TestNG
- TestNG annotations
- Hands on assignment

Unit 7 – Test Automation using selenium for java

- Introduction to Selenium and its suite
- Selenium IDE and Web driver
- Creating maven project in eclipse and configuring dependencies in POM file
- Writing sample test cases by using selenium web driver and chrome browser
- Locators in Selenium
- Exploring different types of locators in selenium
- Writing sample test cases to understand various locators
- Writing test cases using TestNG and selenium
- Generating test report using TestNG

- Introduction to Page Object Model
- Introduction to Selenium Grid
- Hands on assignment

Unit 8 – Performance testing using Apache Jmeter

- Introduction to Apache Jmeter
- Downloading and installing Apache Jmeter
- Testing performance of sample websites
- Increasing the number of concurrent users to test the performance of the sample websites
- Downloading and saving report as CSV file
- Hands on assignment