



SOFTWARE DEVELOPMENT ENGINEER IN TEST

SDET Bootcamp



SIDHARTH SHUKLA
SDET-2, MAANG

2500+

Students Taught

51k+

Readers And Followers

Global

Renowned Speaker

Get Certified From CMMI Level 3 Software Testing Organization

ABOUT THE COURSE

In the current evolving tech landscape, simply developing softwares is not enough. Automation testers are what most organizations are looking out for. Our SDET Automation training course is skillfully designed for teaching Automation Testing and Quality Assurance hands-on, preparing students for a prosperous career as a Software Development Engineer in Test automation.

START DATE:

8th July

DURATION:

3 Months

PRICE:

3000 USD

DAYS:

Mon - Wed - Fri

SESSION TIME:

5 - 8 pm PST ~ 8 - 11 pm EST

COURSE OVERVIEW

1

INTRODUCTION TO SOFTWARE TESTING

- Fundamentals of software testing
- Different types of testing
- Software development life cycle (SDLC) and testing

2

INTRODUCTION TO SDET ROLE

- Understanding the responsibilities and role of an SDET
- Importance of test automation in software development

3

SOFTWARE ARCHITECTURE

- Introduction to software architecture and its importance in software development
- Overview of different architectural styles (e.g., Monolithic, Microservices, SOA)
- Pros and cons of Monolithic and Microservices architectures
- Key considerations for selecting an appropriate architecture
- Understanding architectural patterns (e.g., Layered, MVC, Event-driven)
- Design principles and best practices for software architecture

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SELENIUM WEBDRIVER

- Introduction to Selenium WebDriver
- Setting up Selenium WebDriver environment
- Locators and element identification
- Writing automated tests with Selenium WebDriver
- Handling different types of web elements
- Implementing synchronization and waits
- Handling pop-ups, alerts, and frames
- Working with browser windows and tabs
- Test data management and parameterization
- Test automation best practices with Selenium

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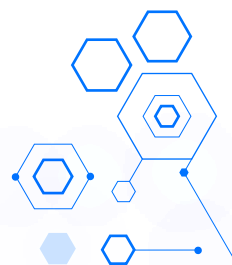
JAVA DESIGN PATTERNS FOR TEST AUTOMATION

- Introduction to design patterns in the context of test automation
- Singleton pattern for managing shared resources (e.g., WebDriver instances)
- Factory pattern for creating test objects (e.g., test data, test steps)
- Builder pattern for creating complex test objects with flexible configuration
- Page Object Model (POM) pattern for organizing and maintaining automated tests
- Applying design patterns to common test automation scenarios and challenges

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API TESTING FUNDAMENTALS

- Introduction to API testing
- Understanding RESTful APIs and HTTP methods
- Tools and frameworks for API testing



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POSTMAN

- Introduction to Postman
- Building requests and sending API calls
- Testing APIs and validating responses
- Environment variables and data-driven testing in Postman
- Automating API tests with Postman collections

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DEPENDENCY MANAGEMENT WITH MAVEN

- Introduction to Jenkins and continuous integration
- Setting up Jenkins server and jobs
- Configuring build triggers and scheduling
- Building, testing, and deploying software with Jenkins
- Integrating Jenkins with Git and Maven

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TESTNG FRAMEWORK

- Introduction to TestNG framework
- Writing and executing TestNG tests
- TestNG annotations and test configuration
- Grouping and prioritizing tests
- Data-driven testing with TestNG
- Generating TestNG reports

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REST ASSURED

- Introduction to Rest Assured framework
- Setting up Rest Assured environment
- Writing API tests using Rest Assured
- Request and response validation
- Handling authentication and authorization
- Data-driven testing with Rest Assured
- Integrating Rest Assured with TestNG



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SOURCE CODE MANAGEMENT WITH GIT

- Introduction to version control and Git
- Setting up Git and creating a repository
- Working with branches, commits, and merging
- Resolving merge conflicts
- Collaborating with remote repositories (GitHub, GitLab)

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CONTINUOUS INTEGRATION (CI_CD) WITH JENKINS

- Introduction to Jenkins and continuous integration
- Setting up Jenkins server and jobs
- Configuring build triggers and scheduling
- Building, testing, and deploying software with Jenkins
- Integrating Jenkins with Git and Maven

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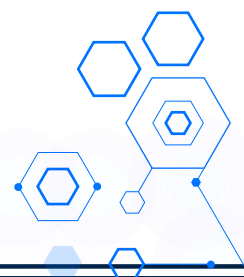
ISSUE TRACKING WITH JIRA

- Introduction to JIRA and its features
- Creating and managing projects in JIRA
- Creating and tracking issues (bugs, tasks, user stories)
- Assigning and resolving issues
- Integration of JIRA with test management and automation tools

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AGILE METHODOLOGY AND TESTING

- Introduction to Agile software development
- Agile principles and values
- Roles and responsibilities in Agile teams
- Agile ceremonies (sprints, stand-ups, retrospectives)
- Testing in Agile projects
- Test-driven development (TDD) and behavior-driven development (BDD)



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INTRODUCTION TO FUNCTIONAL TESTING

- Importance of functional testing
- Importance of Integration testing
- Designing Test Scenarios/Test Cases
- Prioritizing the test cases based on business needs
- How to prepare the level of efforts for testing the product
- Hands on practice to prepare the level of effort
- Define STLC
- Test life cycle process

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TEST CASE DESIGN TECHNIQUES

- Boundary Value Analysis
- State Transition
- Decision Table Based Testing
- Error Guessing

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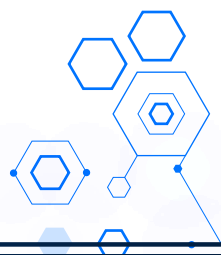
DEFECT LIFE CYCLE

- Define a defect/bug
- How to log a good bug/defect
- Defect like cycle
- Issue triage
- Severity and Priority of a bug
- Bug management tools(Jira)

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GENERATIVE AI FOR SOFTWARE TESTING

- What is AI,ML,Generative AI and LLM Model?
- How to use GPT for Test Automation?
- How to migrate automation projects using GPT?
- What is Code Generation Tool?
- How to generate automation test scripts using Code Generation tools?



PROJECT TIMELINE

1

WEB APPLICATION TESTING WITH SELENIUM

- Develop a test automation framework using Selenium WebDriver
- Write automated test scripts to validate the functionality of a web application
- Implement various testing techniques (e.g., data-driven testing, cross-browser testing)
- Handle different types of web elements and navigate through different pages
- Generate comprehensive test reports and log results

2

API TESTING WITH POSTMAN AND REST ASSURED

- Perform API testing using Postman and Rest Assured framework
- Write automated test scripts to validate RESTful API endpoints
- Handle authentication, headers, and request/response validation
- Test different API methods (GET, POST, PUT, DELETE)
- Execute API tests in different environments (e.g., local, staging, production)

3

CONTINUOUS INTEGRATION WITH JENKINS AND MAVEN

- Set up a CI/CD pipeline using Jenkins and Maven
- Automate the build, test, and deployment process
- Configure Jenkins jobs to trigger builds based on source code changes
- Integrate version control (e.g., Git) and generate build artifacts
- Monitor build status and generate test reports

4

TEST MANAGEMENT WITH JIRA

- Utilize JIRA as a test management tool
- Create test cases, test plans, and test cycles
- Execute and track test execution status
- Raise and manage defects
- Collaborate with team members and stakeholders using JIRA

5

AGILE TESTING WITH SCRUM

- Apply Agile principles and methodologies (e.g., Scrum) to software testing
- Participate in Agile ceremonies (e.g., sprint planning, daily stand-ups, retrospectives)
- Collaborate with developers, product owners, and stakeholders in an Agile environment
- Perform iterative and incremental testing
- Adapt testing strategies based on changing requirements and priorities

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GENERATIVE AI FOR SOFTWARE TESTING

- AI powered Code Generation Tool for Automation

ABOUT TRAINER



**SIDHARTH
SHUKLA**

Sidharth is an experienced Educator and passionate Tester with 12+ Years of Experience in different domains of Testing. He's worked across E-commerce, Finance, Insurance, OTT, and VOIP. He's also a passionate writer with over 51K+ Testers across the world following his content. Additionally, his style of teaching is appreciated with over 2,500 students across the globe and his style of teaching is extremely appreciated.