

# AUTOMATION SYLLABUS

## Software Testing Basics (Foundation 🔥)

- SDLC & STLC
- Types of Testing
- Test Case & Test Scenario
- Defect Life Cycle
- Severity vs Priority
- Agile & Automation Role

## Programming for Automation (CORE 🔥)

### Java / Python Basics

- Variables & Data Types
- Conditional Statements
- Loops
- Functions / Methods
- OOPS Concepts
- Exception Handling
- Collections / Lists
- File Handling

# AUTOMATION SYLLABUS

## Automation Tool Overview

- Automation Tools Comparison
- Open Source vs Paid Tools
- Automation Framework Concept

### Popular tools:

- Selenium
- Cypress (Basics)
- Playwright (Intro)

## Selenium Automation (CORE 🔥)

### Using Selenium

- Selenium Architecture
- WebDriver Setup
- Browser Drivers
- Locators (ID, Name, XPath, CSS)
- Handling Forms
- Buttons, Links & Dropdowns
- Alerts, Frames & Windows
- Mouse & Keyboard Actions
- Synchronization (Implicit & Explicit Wait)

# AUTOMATION SYLLABUS

## TestNG / PyTest Framework

- Annotations
- Test Execution Flow
- Assertions
- Test Suites
- Parallel Execution
- Reports Generation

## Automation Framework Design

- Framework Architecture
- Page Object Model (POM)
- Data-Driven Framework
- Keyword-Driven Framework
- Hybrid Framework
- Reusable Functions

# AUTOMATION SYLLABUS

## API Automation Testing

- What is API Testing
- REST API Basics
- HTTP Methods (GET, POST, PUT, DELETE)
- Status Codes
- API Automation Basics

### Tools:

- Postman
- REST Assured (Intro)

## Database Automation Testing

- Database Basics
- SQL Queries
- Data Validation
- Backend Testing

## CI/CD & DevOps Integration

- What is CI/CD
- Automation in CI Pipeline
- Build & Test Process