

Introduction to Appium

- Overview of Appium's features and internal architecture.
- Guidance on setting up Appium on Windows and Mac, including installation of necessary software (Java, Android Studio, Node).

Mobile Automation with Appium

- **Android Automation:**
 - Techniques for long press, scroll, swipe, drag & drop.
 - Use of locators like ID, XPath, and Accessibility ID.
 - End-to-end exercises to automate various app functionalities.
- **iOS Automation:**
 - Introduction to iOS-specific locators (IOSClassChain, IOSPredicateString).
 - Automation of built-in iOS apps and gestures (swipe, scroll).

Framework Design

- Emphasis on the importance of framework design patterns (Page Object Model).
- Implementation of reusable methods and test strategies.
- Data-driven testing using TestNG with parameterization from JSON files.

Integration and Reporting

- Setup for generating reports using Extent Reports.
- Integration with Jenkins for CI/CD processes.
- Techniques for taking screenshots on test failures.

Advanced Topics

- Handling hybrid apps and context switching between web views and native apps.
- Real device testing guidelines for both Android and iOS.
- Cloud testing using BrowserStack for parallel execution.