Appium Training Curriculum

1. Introduction to Appium

- Introduction to Mobile Automation
- Various tools for mobile application?
- What is Appium?
- What all can be tested with Appium?
- WebDriver Wire protocol
- Hybrid Apps, Native Apps and WebApps
- Concept of UIAutomator
- When to use Selendroid and when to use Appium
- IOS-driver
- Drawbacks and Limitations
- What is seledroid
- Difference between Appium and Selendroid
- How things came into being
- What should I learn?
- Appium Internal Architecture

2. Download and Configure Appium/Maven Dependency

- Configuring Appium on real device
- Why work on real device?
- Download and Configure Android on local machine
- Understanding difference between Api level and Android version
- API levels and Android versions supported by Appium supported by android
- Getting correct API level for Android
- Getting correct Android version in Phone – Provider dependant
- Enabling developer mode
- Debug level settings in Phone
- Connecting phone and making sure it's being detected in DDMS(Pdanet software)
- Install Node JS
- Install Microsoft Dot Net framework
- Download Appium
- Configuring Various versioning/API level requirements for Appium
- Starting Appium Server from Console
- Starting Appium Server from command prompt
- Various command line arguments for Appium

- Running your first Appium Program
- Configuring Appium on Simulator
- Installing Simulator
- Running first Script on Simulator
- Maven dependencies
- Various Maven/POM dependencies for Appium
- Downloading/Configuring Appium, Selenium from Maven/POM dependencies

3. Launching Hybrid/Native Apps with Appium

- Desired Capabilities for Appium and Android
- Concept of Apk file, AppActivityName and AppPackage
- How to get Apk file, AppActivityName and AppPackage for any application
- Is Apk file necessary to test App – Not in all cases
- Javadocs for Appium
- AppiumDriver and RemoteWebDriver classes
- Launching System Hybrid Apps
- Appium reinstalls App
- Preventing Appium from deleting and reinstalling App
- Launching other user installed Hybrid Apps
- Launching native Apps like calculator, Contacts, Settings
- Always quit Appium – Mandatory

4. Identifying Elements-1

- Concept of UI Automator
- Understanding Android Layouts
- Tag name not supported
- android.widgit.* – everything starts from here
- Find Element and FindElementByAndroidUIAutomator
- Using UISelector Class in UIAutomator API
- Finding by Classname
- Detecting presence of Elements
- Building Xpaths
- Challenges faced in finding Elements and Workarounds
- Using Android UI Automator'sUISelector() and its functions
- Hiding Keyboard

- · Waiting – Implicit and explicit waits
- · Using UI Automator in Compressed layout

5. Identifying Elements-2

- · Finding multiple Elements
- · Finding Elements inside Elements
- · ComplexFind and Mobile Element
- · Finding Elements with Multiple criteria using Complex Find
- · Selector Key codes
- · Finding elements by text using AndroidUIAutomator commands
- · Using Assertions
- · Handling Date Elements/Objects
- · Selecting element in Spinner
- · Finding selected Elements
- · Getting Value from Text View
- · Finding selected Elements & Clear value of a Text View

6. XML Viewer

- · Getting and storing the Android App XML view
- · When to use android xml view
- · Launching XML View from WebDriver
- · Finding Elements in XML view
- · Finding Scroll List elements in XML View
- · you can do anything with XML View
- · Limitations of XML view
- · Touch Actions
- · Touch Events
- · Android key events like home, backspace, delete etc.
- · Wait Actions
- · Dragging and dropping elements
- · Multitouch Actions
- · Simulating multiple gestures
- · Longpress and delete elements
- · Handling Toggle buttons
- · Pinching, tapping, holding

7. Web Application Testing

- · Launching browser with Appium
- · Making sure you have the correct desired capabilities
- · When launch fails
- · Firing various commands on browser
- · Will UIAutomator work here?
- · How do I identify objects in mobile browser?
- · Will AppiumDriver commands work on browser?
- · WFinding and setting user agent

8. Appium First Program

- · Android App download for practice
- · What are desired capabilities? How to talk to appium server
- · Invoking Android Driver- Creating base program
- · Execution of Appium first program on Mobile Native APP
- · Appium desired capabilities code download
- · UIAutomator tool usage-Inspection of elements

9. Native Apps Automation

- · Automating app UI Using Xpaths and text attributes
- · Appium API's for UI interaction with id's and classNames
- · Handling Mutiple similar objects of Apps with indexes
- · AndroidUIAutomator usage in identifying objects of Apps
- · TouchActions in Appium (Gestures Automation -1)
- · Tapping and longpress events (Gestures Automation -2)
- · Strategy for automating Swipping event(Gestures Automation -3)

10. Advanced Gestures Automation with Key Events Handling

- · Events Handling
- · Demo on swapping the clock- Practice exercises
- · How to automate scrolling? Gestures Automation -5
- · Drag and drop on Native Apps with Appium (Gesture Automation -6)
- · Automating Android Key Events with Appium

- Miscellaneous key Events handling with Appium
- Invoking App with package Activity
- Example on package name and Activity Invoking apps
- Automation on real devices

11. Web Apps Automation

- Mobile Browser Configuration setup for Appium Tests
- Code for Mobile Browser capabilities
- Automating the Chrome Mobile Browser

12. Practical Problems and solutions with Mobile Browsers

- Identifying frames from Html view
- Element Hidden or Invisible-How to validate
- Writing Generic functions to Identify Frames/Windows
- Example Demonstrating Multiple Frames
- Handling Auto suggestive dropdown options
- Dynamic data loading- Exception Techniques

13. Hybrid Apps Automation

- Hybrid Apps features and ways to test them
- Views switching Mechanism
- Example on Hybrid App handling.

14. Appium Framemwork-Learn TestNG

15. Integrating TestNG with Maven

16. Pageobject Pattern & Page Factory

17. Data driving from Excel for feeding data into Appium Test Cases

18. Logging Framework - log4j

19. Database connection to Selenium/Appium Test Cases

Additional Software Testing Programs

Manual Testing	ISTQB Testing	Mobile Application
Database Testing	Selenium	API Testing - SoapUI
Coded UI - VSTS	ETL Testing	HP - QTP / HP - UFT
HP - Load Runner	Jmeter	Selenium with

Cucumber

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