

Dear Student,

Based upon your enquiry we are pleased to send you the course curriculum for Mobile Testing

Given below is the brief description for the course you are looking for: -

Introduction : Mobile Automation

- What are the various tools for mobile application?
- Understanding basics about Appium
- Appium can be used for testing for following
- what is WebDriver Wire protocol
- what do you understand by Hybrid Apps, Native Apps and WebApps
- Explanation of Concept of UIAutomator
- When to use Selendroid and when to use Appium
- What is IOS-driver
- What are the Drawbacks and Limitations
- Understanding selendroid
- what is the Difference between Appium and Selendroid
- What should I learn?

Configure Appium/Maven Dependency

- How to Configuring appium on real device
- Why working on real device required.
- How to Download and Configure Android on local machine
- Basic Understanding difference between Api level and Android version
- API levels and Android versions supported by Appium supported by android
- how to get correct API level for Android
- how to get correct Android version in Phone - Provider dependant
- how to Enable developer mode
- Understanding Debug level settings in Phone
- DDMS(Pdanet software) and its use
- How to Install Node JS
- How Install Microsoft Dot Net framework
- From where we should Download Appium
- How to Configuring Various versioning/API level requirements for Appium
- How to Start Appium Server from Console
- How to Start Appium Server from command prompt
- What are the various command line arguments for Appium
- How to run your first Appium Program

- How to configuring appium on Simulator
- How to Install Simulator
- How running first Script on Simulator
- What are the Maven dependencies
- What are the Various Maven/POM dependencies for Appium
- How to Download/Configuring Appium, Selenium from Maven/POM dependencies

How to launching Hybrid/Native Apps with Appium

- What is Desired Capabilities for Appium and Android
- What is Concept of Apk file, AppCompatActivity and AppCompatActivity
- How to get Apk file, AppCompatActivity and AppCompatActivity for any application
- Do we need Apk file necessary to test App - Not in all cases
- What is Javadocs for Appium
- What do you understand by AppiumDriver and RemoteWebDriver classes
- How to Launch System Hybrid Apps
- How does Appium reinstalls App
- How can we Prevent Appium from deleting and reinstalling App
- How to Launch other user installed Hybrid Apps
- How to check wheter App is installed on Phone
- How to Launch native Apps like calculator, Contacts, Settings
- when we should quit appium - Mandatory

How to Identify Elements- Part 1

- Understanding Concept of UIAutomator
- Understanding Android Layouts
- Why Tagname not supported
- Understanding android.widget.* - everything starts from here
- What is Android UIAutomator framework
- How to FindElement and FindElementByAndroidUIAutomator
- How to Use UISelector Class
- Understanding Finding by Classname
- How to build Xpaths
- What are the Challenges faced in finding Elements and Workarounds
- What is the Use of Android UIAutomator's UISelector() and its functions
- Hiding Keyboard
- Understanding Waiting – Implicit and Explicit Waits

How to Identify Elements-2

- How to find multiple Elements
- How to find Elements inside Elements
- How do we do ComplexFind and MobileElement
- How do we find Elements with Multiple criterias using ComplexFind
- Understanding Selector Key codes
- How to Find elements by text using AndroidUIAutomator commands
- How to use Assertions
- How to handling Date Elements/Objects
- How do we selecting element in Spinner
- How do we select Elements
- How do we get Value from TextView
- Find selected Elements
- How do Clear value of a TextView
- Architecture of Appium API
- Understanding of "WebDriver, RemoteWebDriver, MobileDriver, AppiumDriver, AndroidDriver and IOSDriver - Relationship"
- How to Execute function in AndroidDriver
- Understanding Mobile commands
- Understanding JavascriptExecutor and mobile commands "AndroidDriver functions – isLocked, openNotifications, pressKeyCode, scrollTo, scrollToExact , pinch, tap, startActivity, closeApp(), execute, removeApp, resetApp, rotate, runAppInBackground, swipe"
- How to Scrolling and Swiping a ListView
- What is the Difference between Scroll and Swipe
- What is ScrollTO and ScrollTOExact
- What do you understand by UIScrollable and UISelector
- How to Search for products on amazon and get all product names
- What is command getAttribute - content-desc
- What is MobileElement, IOSElement and AndroidElement89
- What is the Difference in WebElement, MobileElement, AndroidElement
- What are MobileElement functions
- What is Selector Key codes
- How to understand Objects inside Objects
- Understanding Scrolling a listview and finding an element
- Detecting presence of Elements
- Understanding Using UI Automator in Compressed layout
- How to test different layouts-Switching layouts between portrait and landscape

XML view

- Understanding Getting and storing the Android App XML view
- When to use android xml view
- How to launch XML View from WebDriver
- How to find Elements in XML view
- How to find Scroll List elements in XML View
- You can do anything with XML View
- What are the Limitations of XML view

Understanding Touch Actions

- What is Touch Events
- What is Android key events like home, backspace, delete etc
- What is Wait Actions
- What is Dragging and dropping elements
- What is Multitouch Actions
- how to simulating multiple gestures
- What is Longpress and delete elements
- How to Handle Toggle buttons
- What is Pinching, tapping, holding

Exercises - 1

- How to dial a number and make a call with script
- How to find a contact and call contact
- How to take pic from camera
- Handling Navigartion drawer
- How to manage date calenders
- Building a simple test and parameterizing.
- Running test with ant and maven to generate reports
- Reports Customizing
- files Uploading/downloading
- Executing function in Appium

How to Implement Grid/Parallel execution

- Parallel execution requirements
- Parallelism and testing
- Starting the hub
- Registering nodes with hub

- configurations of Various node
- json files configuration for nodes
- Devices connected to same machine and running tests parallel on it
- Running tests parallel on devices connected to different machines

Understanding Web Application Testing

- How to launch browser with appium
- How to be sure you have the correct desired capabilities
- When launch will fail
- How to fire commands on browser
- Will UI Automator work here?
- How do I identify objects in mobile browser?
- Will AppiumDriver commands work on browser?
- WFinding and setting user agent

Understanding TESTNG AND Data driven framework

- What is Data Driven Framework?
- Discussion in brief about goals to be achieved after building data driven framework
- How to generating maven Project and packages
- How to generate a core framework structure which can be used with any project with minimum changes
- How to generating test cases
- Introducing dependency
- How to make testng.xml for batch running
- How to build the BaseTest and functions in base test-
- How to build validation functions
- How to build generic functions
- Build report generation functions
- How to Generate Reports and Logging in reports
- How to Put screenshots in extent reports
- How to Initiate the properties file
- How to Build a centralized/reusable function to extract objects
- How to read data from XLS-Parameterizing tests
- How to build the utility function for reading data
- Run tests Selectively/Optionally procedure
- Understanding Reports - XSLT, Extent Reports
- How to Run project with ANT/Maven/Eclipse
- Learn to Implement GRID - Parallel and reports/logs/screenshots
- Learning to run framework on diff env

- Understanding how to auto Email reports to team members
- Building Bat file for project
- Learn to Integrate framework with jenkins
- Learn to Schedule Execution

Detail description of TESTNG AND Page Object model with Page Factory

- Understanding Concept of Page object model
- Brief discussion about goals goals to be achieved in Page Object Model design
- Discussion about Concept of inheritance and encapsulation in java
- Basic Concept of Page Object Model
- Understanding Where can Page Object module be used
- What are the Issues faced in developing page object model
- How to Build a maven Project
- How to Build Page classes
- How to Implement PageFactory Design Pattern
- Annotations in Page Object Model Page factory
- How to Complete the flow
- How to Build the base Page class
- How to Build reusable validation functions
- What is the Encapsulate common features of pages
- How to build the base test class and common functions
- How to Remove Hardcoding/Use Constants file
- Understanding Implementing reporting-Extent reports
- Logging and page classes
- How toTake screenshots and put them in reports
- How to Read data from xls
- Understanding Reporting failure and putting screenshots of failure in reports
- How to Create custom utility functions for data reading
- Understanding Complete test cases
- How to Validate menu items/levels against XML
- Understanding Batch Running test cases
- Running with ANT
- Generating XSLT Reports
- Generating Extent Reports
- Implement GRID - Parallel and reports/logs/screenshots
- Execute script on diff env
- Understanding Integrating framework with jenkins
- Understanding Scheduling of Execution
- Understanding builing Bat file for project
- Appium on IOS real device/Simulator

Procedure to download and Configure Android on MAC

- How to Get the latest build tools and platform tools for Android
- How to enable debugging mode and developer mode in phone
- How to set env variables in MAC
- How to Install Android File transfer App
- How to extract APK file of application under test
- Appium Doctor - Check if everything is OK
- Running your first Appium program on real Android phone connected with mac

Understanding Appium Mac IOS Identifying Element-1

- Connecting iPhone and making sure its detected
- UIAutomation in IOS
- Launching Automation instrument in Xcode
- Recording/Running scripts in Automation Instrument
- What is Importance of Automation Instrument
- What is using Appium Inspector
- How to make sure Appium inspector Launches correctly
- How to analyse Object Hierarchy in inspector
- How to record/run in Appium inspector
- How to generate script from Inspector
- How to explore Touch, Text, Locator, Misc options in inspector

What is the basics of Appium IOS Architecture

- Understanding AppiumDriver Class
- What is IOSDriver Class
- How to be be sure about the port number
- Understanding Object Casting
- How to modify Eclipse settings to have Auto-suggest Enabled
- Help - Appium not running after inspecting element
- How to find bundle ID of App
- How to check if App is Installed
- Understanding Rotate - Landscape and Portrait Modes
- How to closeApp
- Understanding LaunchApp
- How to ResetApp
- How to lockScreen
- RunAppInBackground

- How to RemoveApp
- How to InstallApp

Understanding Locator Strategies - 1

- Understanding layout and Details in Appium Inspector
- Understanding Value, Label And StaticText in IOS Elements
- Understanding Locators - ID, Name, Xpaths
- What is Classes/Types in IOS
- What are different ways to make/generate Xpaths
- Understanding TextFields - write and read
- Hiding Keyboard
- Understanding Radios and Checkboxes - SelectView App
- Understanding DropDowns/Spinners
- When Objects are not identified
- Using UI Automation Framework - findElementByIOSUIAutomation
- Understanding Waiting - Implicit and Explicit waits

Understanding Locator Strategies - 2

- Understanding using UI Automation IOS AndroidFramework
- Understanding Challenges with UI Automation Framework
- How to multiple Elements
- How to find Elements inside Elements
- ComplexFind and MobileElement
- Understanding using JavascriptExecutor
- Understanding Execute and ExecuteScript Functions
- Selector Key codes
- Understanding Checking presence of Element
- Understanding Assertions and validatin
- TouchActions

Important topics

- Understanding Scroll and MobileElement
- Understanding Swipe
- How to find dimensions of Device under test
- TouchActions Class
- Various functions in TouchActions Class
- Mobile Commands and JavascriptExecutor
- Taking screenshots