KOENIG
step forward

KOENIG SOLUTIONS · COURSE OUTLINE

Android App Testing: Appium & TestNG Framework

Learn to automate Android app testing with Appium, TestNG and Maven, from locating elements to data-driven test scripts.

9	78
MODULES	TOPICS

COURSE OVERVIEW

This course covers the fundamentals of software testing and how testing applies to Android applications using JUnit. It introduces mobile automation concepts and Appium, then moves into setting up and configuring Appium on real devices and emulators. It addresses testing hybrid, native and web-based Android apps, locating UI elements, and building a testing framework with TestNG and Maven. It concludes with data-driven testing using Apache POI to read and update data from Excel.

WHO THIS COURSE IS FOR

- **QA Engineers**
- **Test Automation Engineers**
- **Mobile App Testers**
- **Software Developers**
- **Automation Testers**

LEARNING OBJECTIVES

- Describe software testing types and testing frameworks
- Explain Android architecture and running tests with JUnit
- Compare Appium with UIAutomator and Selendroid
- Configure Appium on real devices and emulators
- Test hybrid, native and web Android applications
- Locate UI elements using UISelector and Xpaths
- Implement a testing framework with TestNG and Maven
- Apply data-driven testing using Apache POI and Excel

COURSE SYLLABUS

9 Modules, 78 Topics

01

Introduction of Testing

TOPICS

Software bugs · What to test

TYPES OF TESTS

Unit Tests · Integration tests · Functional or acceptance tests · Performance tests · System Tests

Testing framework

02

Testing on Android

TOPICS

Junit · Android architecture · Creating the Android Sample project · Package explorer · Running the project · Debugging tests

03

Introduction to Mobile Automation

TOPICS

- **Basic Terminology:** Testing, Types of Testing, Manual/Automation
- What is Mobile Automation Testing
- Mobile Application Testing Tools
- Introduction to Appium
- Where Appium can be used
- Hybrid Apps, Native Apps and WebApps
- UIAutomator
- Appium VS Selendroid
- Drawbacks and Limitations

04

Appium Setup & Configurations

TOPICS

- Configuring appium on real device
- Why work on real device?
- Download and Configure Android on local machine
- Api levels & Android version
- Supported API levels & Android versions
- API level for Android
- Android version in Phone
- Developer mode in Mobiles
- Debug level settings in Phone
- Connecting & detecting a phones
- Install Microsoft Dot Net framework
- Download Appium
- Configuring Various versioning API level requirements for Appium
- Starting Appium Server from Console
- Running Appium Program
- Installing Emulator in eclips
- Installing apps in Emulator via command prompt

05

Hybrid/Native Android Apps Test

TOPICS

- Required Capabilities for Appium and Android
- Concept of Apk file, AppActivityName and AppPackage
- How to get Apk file, AppActivityName and AppPackage for any application
- When Apk file necessary to test App?
- AppiumDriver and RemoteWebDriver classes
- Programme on invoking Apps
- Invoking app with package activity
- Example on package name and activity invoking
- Mobile Gesture Automation
- Testing native Apps like calculator, Contacts, Settings
- Hybrid app features and ways to test them
- Example on Hybrid app handling
- Testing Book My show App

06

Locating Elements

TOPICS

- Concept of UI Automator
- FindElement 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's UISelector() and its functions
- Waiting - Implicit and explicit waits

07

Testing WebApps

TOPICS

Chrome browser configuration · Using ADB Plugin · Automating the chrome Browser · Automating mobile specific websites · Exercise on real device browser automation · Automating Udemy site in mobile browser

08

Mobile Testing Framework

TOPICS

Testng Framework · Testng installation in eclips · Testng Annotations · Maven Configuration · Creating Basic Maven project · Running appium test in Maven

09

Data Driven Testing

TOPICS

Configuring Apache poi · Excel Api methods · Programme for retrieving data from excel · Programme for Updating data back to excel

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

FLEXIBLE DELIVERY

Learn the Way That Suits You

Classroom Training | Live Online Classes (ILO) | Fly-Me-A-Trainer (FMAT) | Flexi (Self-Paced) | 1-on-1 Training

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