

```
1 package AppiumAssignments;
2
3 import java.net.MalformedURLException;
4 import java.net.URL;
5 import org.openqa.selenium.remote.DesiredCapabilities;
6 import org.testng.annotations.Test;
7 import io.appium.java_client.AppiumDriver;
8 import io.appium.java_client.android.AndroidDriver;
9 // 1. Write automation script for connecting android device and capture the session Id for connection.
   Run All
10 public class ConnectingAndroidDevice
11 {
12     @Test
   Run | Debug
13     public void sessionTest() throws MalformedURLException
14     { //Capabilities
15         DesiredCapabilities cap=new DesiredCapabilities();
16         cap.setCapability("platformName", "Android");
17         cap.setCapability("appium:automationName", "uiautomator2");
18         cap.setCapability("appium:deviceName", "pixel_6");
19         cap.setCapability("appium:udid", "emulator-5554");
20
21         //Application - ApiDemos-debug.apk
22         String appPath=System.getProperty("user.dir")+"/src/test/resources/ApiDemos-debug.apk";
23         cap.setCapability("appium:app", appPath);
24         //Server connectivity
25         URL url=new URL("http://0.0.0.0:4723");
26
27         //To create a session
28         AppiumDriver driver=new AndroidDriver(url,cap);
29         System.out.println("Session ID is: "+driver.getSessionId());
30     }
31 }
```

```
[RemoteTestNG] detected TestNG version 7.7.1
SLF4J: Failed to load class "org.slf4j.impl.StaticLoggerBinder".
SLF4J: Defaulting to no-operation (NOP) logger implementation
SLF4J: See http://www.slf4j.org/codes.html#StaticLoggerBinder for further details.
Session ID is: e75d3ed7-06e3-420f-83c5-58151d955fd0
PASSED: AppiumAssignments.ConnectingAndroidDevice.sessionTest
```

```
=====
Default test
```

```
Tests run: 1, Failures: 0, Skips: 0
=====
```

```
=====
Default suite
```

```
Total tests run: 1, Passes: 1, Failures: 0, Skips: 0
=====
```

The screenshot shows the TestNG GUI with three tabs: 'All Tests', 'Failed Tests', and 'Summary'. The 'All Tests' tab is active, displaying a tree view of the test results. The tree shows a 'Default suite (1/0/0/0) (37.297 s)' which contains a 'Default test (37.297 s)' which in turn contains a single test 'AppiumAssignments.ConnectingAndroidDevice.sessionTest (37.297 s)'. The test is marked as passed with a green icon. At the bottom of the window, there is a 'Failure Exception' section which is currently empty, and a small icon in the bottom right corner.

Test Name	Time	Status
Default suite (1/0/0/0)	37.297 s	Passed
Default test	37.297 s	Passed
AppiumAssignments.ConnectingAndroidDevice.sessionTest	37.297 s	Passed



3:40



API Demos

Access'ibility

Accessibility

Animation

App

Content

Graphics

Media

NFC

OS

Preference

Text

Views



1:1




```
1 package AppiumAssignments;
2
3 import java.net.MalformedURLException;
4 import java.net.URL;
5 import org.openqa.selenium.remote.DesiredCapabilities;
6 import io.appium.java_client.AppiumDriver;
7 import io.appium.java_client.android.AndroidDriver;
8
9 // 2: Write automation script for launching mobile application
10 public class CreateSession
11 {
12     public static AppiumDriver initializeDriver()
13     {
14         //Capabilities
15         DesiredCapabilities cap=new DesiredCapabilities();
16         cap.setCapability("platformName", "Android");
17         cap.setCapability("appium:automationName", "uiautomator2");
18         cap.setCapability("appium:deviceName", "pixel_6");
19         cap.setCapability("appium:udid", "emulator-5554");
20         //Application - ApiDemos-debug.apk
21         String appPath=System.getProperty("user.dir")+"/src/test/resources/ApiDemos-debug.apk";
22         cap.setCapability("appium:app", appPath);
23         AppiumDriver driver=null;
24         //Server connectivity
25         URL url;
26         try {
27             url = new URL("http://0.0.0.0:4723");
28             //To create a session
29             driver=new AndroidDriver(url,cap);
30             System.out.println("Session ID is: "+driver.getSessionId());
31         } catch (MalformedURLException e) {
32             // TODO Auto-generated catch block
33             e.printStackTrace();
34         }
35         return driver;
36     }
37 }
```

```
WorkingOnApp.java X
1 package AppiumAssignments;
2
3 import java.time.Duration;
4 import org.testng.annotations.Test;
5 import io.appium.java_client.AppiumDriver;
6 import io.appium.java_client.android.AndroidDriver;
7 import session.CreateSession;
8 public class WorkingOnApp
9 {
10     @Test
11     public void appTest() throws InterruptedException
12     {
13         AppiumDriver driver=CreateSession.initializeDriver();
14
15         // a. Test the application current state
16         System.out.println("Application Current Status is: "+((AndroidDriver)driver).queryAppState("io.appium.android.apis"));
17
18         // b. Send application in background and the again capture the state
19         ((AndroidDriver)driver).runAppInBackground(Duration.ofMillis(5000));
20         System.out.println("Application will run in background for 5 seconds!");
21         System.out.println("Application Current Status is: "+((AndroidDriver)driver).queryAppState("io.appium.android.apis"));
22
23         // c. Un-install the app
24         ((AndroidDriver)driver).removeApp("io.appium.android.apis");
25         System.out.println("App is uninstalled from the device!");
26         System.out.println("Application Current Status is: "+((AndroidDriver)driver).queryAppState("io.appium.android.apis"));
27
28         Thread.sleep(2000);
29
30         // d. Install the app using command
31         String appPath=System.getProperty("user.dir")+"/src/test/resources/ApiDemos-debug.apk";
32         ((AndroidDriver)driver).installApp(appPath);
33         System.out.println("App is installed successfully in the device!");
34         System.out.println("Application Current Status is: "+((AndroidDriver)driver).queryAppState("io.appium.android.apis"));
35     }
36 }
```

```
[RemoteTestNG] detected TestNG version 7.7.1
SLF4J: Failed to load class "org.slf4j.impl.StaticLoggerBinder".
SLF4J: Defaulting to no-operation (NOP) logger implementation
SLF4J: See http://www.slf4j.org/codes.html#StaticLoggerBinder for further details.
Session ID is: 6c219b36-a4ba-4dc4-84a9-12114a82cfba
Application Current Status is: RUNNING_IN_FOREGROUND
Application will run in background for 5 seconds!
Application Current Status is: RUNNING_IN_FOREGROUND
App is uninstalled from the device!
Application Current Status is: NOT_INSTALLED
App is installed successfully in the device!
Application Current Status is: NOT_RUNNING
PASSED: AppiumAssignments.WorkingOnApp.appTest

=====
    Default test
    Tests run: 1, Failures: 0, Skips: 0
=====

=====
Default suite
Total tests run: 1, Passes: 1, Failures: 0, Skips: 0
=====
```

All TestsFailed TestsSummary

Default suite (1/0/0/0) (45.976 s)

Default test (45.976 s)

AppiumAssignments.WorkingOnApp

appTest (45.976 s)

Failure Exception


```
DragAndDrop.java X
3=import java.time.Duration;
4 import org.openqa.selenium.JavascriptExecutor;
5 import org.openqa.selenium.WebElement;
6 import org.openqa.selenium.remote.RemoteWebElement;
7 import org.testng.annotations.Test;
8 import com.google.common.collect.ImmutableMap;
9 import io.appium.java_client.AppiumBy;
10 import io.appium.java_client.AppiumDriver;
11 import session.CreateSession;
12 // 3. Write automation script to open APIDemos application on Mobile device, Goto view and perform drag and drop functionality.
   Run All
13 public class DragAndDrop
14 {
   Run | Debug
15     public void dragNdropTest()
16     { // Opening the App
17         AppiumDriver driver = CreateSession.initializeDriver();
18         driver.manage().timeouts().implicitlyWait(Duration.ofSeconds(10));
19         System.out.println("Session ID is: " + driver.getSessionId());
20         // Views option
21         WebElement ele1 = driver.findElement(AppiumBy.xpath("//android.widget.TextView[@content-desc=\"Views\"]"));
22         // Click gesture on Views option
23         driver.executeScript("mobile: clickGesture", ImmutableMap.of("elementId", ((RemoteWebElement) ele1).getId()));
24         System.out.println("Clicked on Views through Mobile Gestures!");
25         // Clicking on Drag and Drop option
26         driver.findElement(AppiumBy.accessibilityId("Drag and Drop")).click();
27         System.out.println("Clicked on Drag & Drop option");
28         // Element
29         WebElement ele2 = driver.findElement(AppiumBy.id("io.appium.android.apis:id/drag_dot_3"));
30         // Action -Drag on element
31         ((JavascriptExecutor) driver).executeScript("mobile: dragGesture",
32             ImmutableMap.of("elementId", ((RemoteWebElement) ele2).getId(), "endX", 800, "endY", 2000));
33         System.out.println("Dragging on element is completed!");
34         String text = driver.findElement(AppiumBy.id("io.appium.android.apis:id/drag_result_text")).getText();
35         System.out.println("Result Text is : " + text);
36     }
37 }
```

```
[RemoteTestNG] detected TestNG version 7.7.1
SLF4J: Failed to load class "org.slf4j.impl.StaticLoggerBinder".
SLF4J: Defaulting to no-operation (NOP) logger implementation
SLF4J: See http://www.slf4j.org/codes.html#StaticLoggerBinder for further details.
Session ID is: d8celf75-c821-4bb2-b735-847e0465220d
Session ID is: d8celf75-c821-4bb2-b735-847e0465220d
Clicked on Views through Mobile Gestures!
Clicked on Drag & Drop option
Dragging on element is completed!
Result Text is : Dropped!
PASSED: AppiumAssignments.DragAndDrop.dragNdropTest
```

```
=====
Default test
```

```
Tests run: 1, Failures: 0, Skips: 0
=====
```

```
=====
Default suite
```

```
Total tests run: 1, Passes: 1, Failures: 0, Skips: 0
=====
```

All Tests Failed Tests Summary

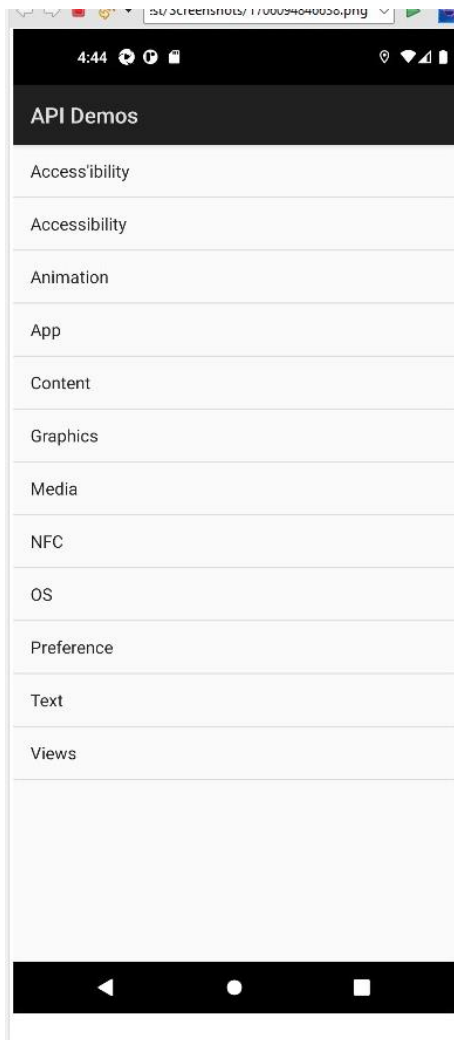
- ▼ Default suite (1/0/0/0) (36.462 s)
 - ▼ Default test (36.462 s)
 - ▼ AppiumAssignments.DragAndDrop
 - dragNdropTest (36.462 s)

Failure Exception

Utility.java X

```
1 package reusableMethods;
2
3 import java.io.File;
4 import java.io.IOException;
5 import org.openqa.selenium.OutputType;
6 import org.openqa.selenium.TakesScreenshot;
7 import org.openqa.selenium.io.FileHandler;
8 import io.appium.java_client.AppiumDriver;
9 // 4. Write Automation script to open API-Demos application and capture the screenshot
10 public class Utility
11 {
12
13     public static void capture(AppiumDriver driver) throws IOException
14     {
15         File src=((TakesScreenshot)driver).getScreenshotAs(OutputType.FILE);
16         File dest=new File(System.getProperty("user.dir")+"//Screenshots//" +System.currentTimeMillis()+".png");
17
18         FileHandler.copy(src, dest);
19     }
20 }
```

```
1 package AppiumAssignments;
2
3 import java.io.IOException;
4 import java.net.URL;
5 import org.openqa.selenium.remote.DesiredCapabilities;
6 import org.testng.annotations.Test;
7 import io.appium.java_client.AppiumDriver;
8 import io.appium.java_client.android.AndroidDriver;
9 import reusableMethods.Utility;
10
11 Run All
12 public class ConnectingAndroidDevice {
13     @Test
14     Run | Debug
15     public void sessionTest() throws IOException
16     { //Capabilities
17         DesiredCapabilities cap=new DesiredCapabilities();
18         cap.setCapability("platformName", "Android");
19         cap.setCapability("appium:automationName", "uiautomator2");
20         cap.setCapability("appium:deviceName", "pixel_6");
21         cap.setCapability("appium:udid", "emulator-5554");
22
23         //Application - ApiDemos-debug.apk
24         String appPath=System.getProperty("user.dir")+"/src/test/resources/ApiDemos-debug.apk";
25         cap.setCapability("appium:app", appPath);
26         //Server connectivity
27         URL url=new URL("http://0.0.0.0:4723");
28
29         //To create a session
30         AppiumDriver driver=new AndroidDriver(url, cap);
31
32         //Capture Screenshot
33         Utility.capture(driver);
34     }
```



```
[RemoteTestNG] detected TestNG version 7.7.1
SLF4J: Failed to load class "org.slf4j.impl.StaticLoggerBinder"
SLF4J: Defaulting to no-operation (NOP) logger implementation
SLF4J: See http://www.slf4j.org/codes.html#StaticLoggerBinder
PASSED: AppiumAssignments.ConnectingAndroidDevice.sessionTest
```

```
=====
      Default test
      Tests run: 1, Failures: 0, Skips: 0
=====
```

```
=====
Default suite
Total tests run: 1, Passes: 1, Failures: 0, Skips: 0
=====
```

Passed: 1 Failed: 0 Skipped: 0

Tests: 1/1 Methods: 1 (25804 ms)

All Tests Failed Tests Summary

- Default suite (1/0/0/0) (24.799 s)
 - Default test (24.799 s)
 - AppiumAssignments.ConnectingAndroidDevice
 - sessionTest (24.799 s)

Failure Exception