# 2CSDE80 Software Testing and Quality Assurance

## Lab-10 Task

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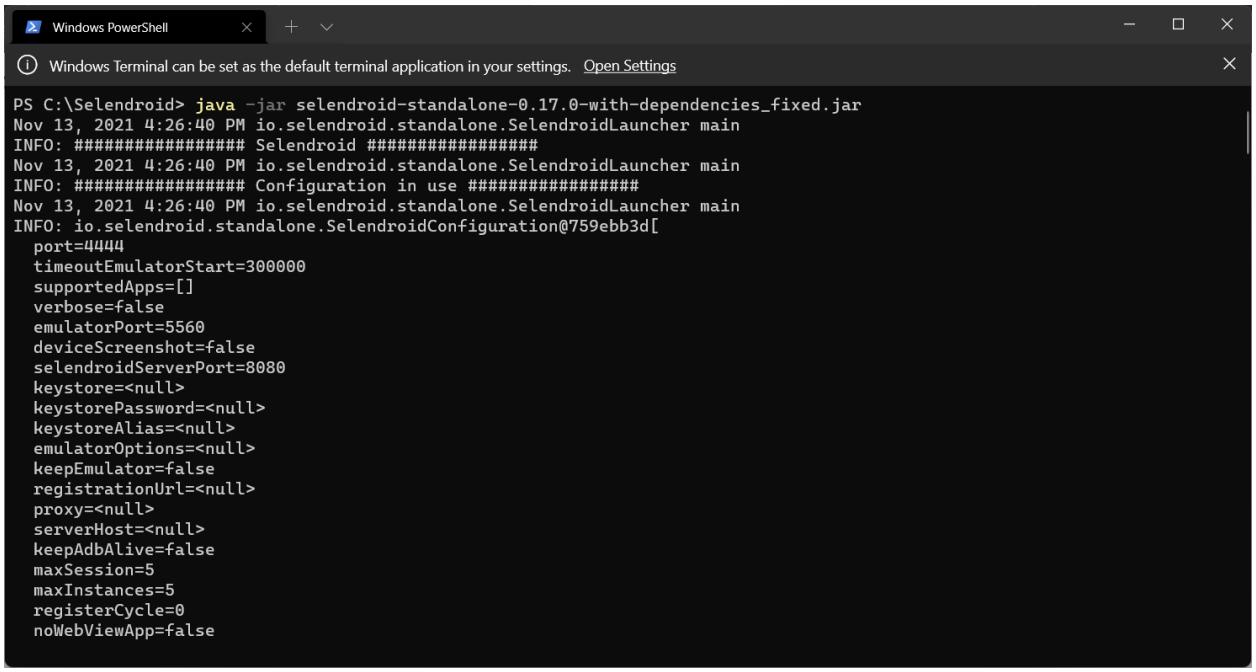
## <u>Aim:</u> To demonstrate the testing of a mobile application

**Tasks:**

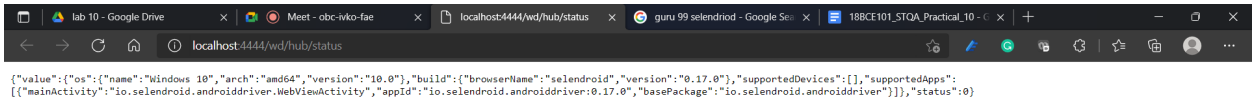
- **Understand the full functionalities of Selendroid.**
- **Create your own android app and append it with selendroid testing.**
- **Find an open-source performance testing tool for your apk.**

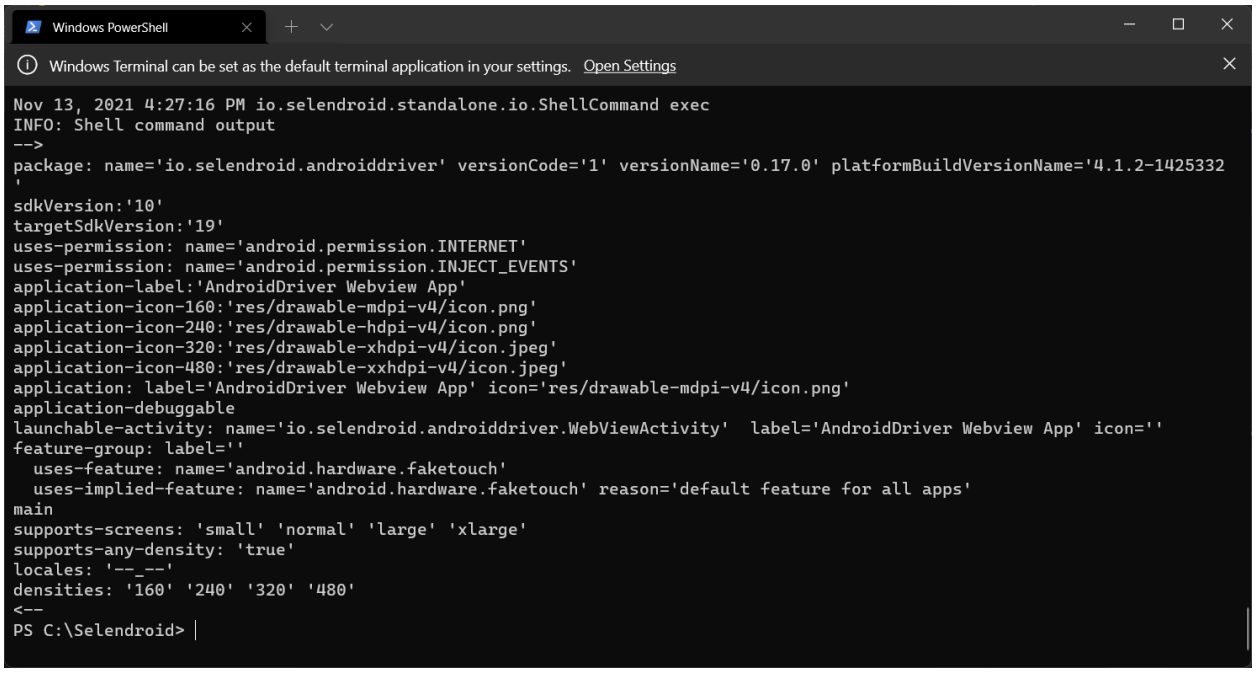
## Methodology:

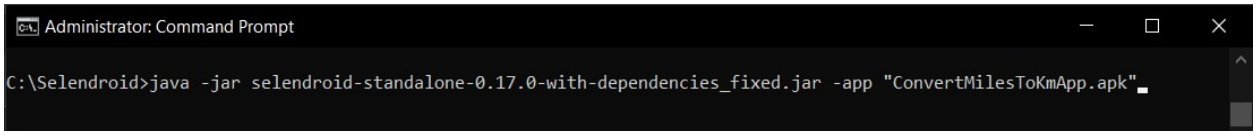
Selendroid is a test automation framework for multi-type of mobile applications: native and hybrid Android app and mobile web. It is a powerful testing tool. It can be used on emulators and real devices




After running this command, the Selendroid-standalone HTTP server starts! The default port number of this server is 4444. All hardware devices, as well as Android Virtual Devices, will be scanned and recognized automatically. Selendroid will identify the Android target version and device screen size.







Open source tools to check the apk:

1. Sauce labs:

   Sauce Labs is pretty popular these days and runs over a million cloud-based tests every day. This automated mobile app testing covers over 800 different browsers to ensure a bug-free user environment. Furthermore, the testing cloud runs tests in parallel and isn't time-consuming at all. It can

accommodate even the largest testing volume within the shortest possible time.

2. TestComplete:
   TestComplete is compatible with both Android and iOS devices, and it is possible to create automated test scripts or choose from programming languages including Python, VBScript, and JavaScript.
3. Calabash:
   Calabash is used to perform automated functional testing for native mobile apps. It comes with two open-source libraries for both Android and iOS devices. It can also provide APIs for touch screening experiences and works well with Ruby, NET, Java, and many other programming languages.
4. WebLoad:
   WebLoad is currently available in around 50 virtual users and is 100% free to use. It enables you to do a stress test to let you know of the device's performance. The tool also comes with an application that helps in recording scripts directly from a mobile device
5. Appium Studio:
   This free toll benefits the user in a multitude of ways. The main benefits include the ease of writing and recording tests using device reflection, Object Spy, and unique XPath. The tool even features running tests outside your application including audio features, barcode scanning, TouchID, and more.

## Conclusion:

Selendroid test app can interact with multiple devices or simulators simultaneously. So you can test your app with various Android devices to check compatibility. Selendroid can simulate human-user actions on an app, such as touch, swipe, drag, and drop on devices. You can change the hardware devices (Plug and unplug) during the testing without restarting or stopping the test. Selendroid recognizes the new devices automatically.