Assignment : 5

Title : Android Studio installation.

Problem Statement :

Install Android studio on Linux distribution and develop the android application as per the requirement.

Objective :

To learn Android Studio installation
To learn to develop an android application.

Outcome :

Students should be able to.
- Install android studio on linux distribution

Software and Hardware Packages :

Java JDK 8.
Android Studio ide linux tar.gz file.
64 bit OS : Ubuntu 18.04
Processor : intel i5, 8GB ram, Internet connectivity.

Theory :

Android studio :

Android studio is the official integrated development environment for google operating system built on JetBrain's IntelliJ IDEA for Java development and designed for android development. It is available for windows, MacOS and linux based operating system.

It has a strong editor tool for developing creative UI and emulators for different version to test and emulators for different version to test and simulate sensors without having actual android devices. It is very useful gradle plugin using which you can create application files (apks) with different Clicks.

Eclipse is an IDE widely for Java Based Android App development. It is simple, portable and has a short build time and is primarily used for Java. It supports android through google ADT extension. Eclipse has ant build tool which is out dated in comparison to Gradle android studio, though one can build an android application with any IDE with the release of android studio and gradle tool everything is shifting toward gradle dependencies also google is not going to continue support. Eclipse through android development.

Installation steps (ubuntu 18.04).

1) Download android studio installer from android's official website "developer.android.com" the installation file will be having tar.gz extension.

2) Open the tar.gz file and extract it content to /opt/ directory. you might want to use the file extensions in sudo mode in order to access root directory in linux ie.

3) Once the contents of tar.gz has been extracted navigate into it bin folder. precisely, "/opt/android-studio/bin" and open terminal at that directory level.

4) Locate studio.sh file and make it executable using sudo chmod + x studio.sh command in the terminal and execute the studio.sh file using "sudo ./studio.sh"

5) Locate studio.sh file & make it executable using sudo chmod +x studio.sh command in the terminal and then execute the studio.sh file using sudo ./studio.sh

Now you will see android studio installation GUI, select do not import setting for fresh installation proceed with ok.

Choose standard installation type:
Select ui theme
Browse the location to install android studio and proceed.

Now click on finish button to download all the sdk components wait for downloading process to finish and click finish to complete and quit the installation process.

Creating and Executing first App.

1) search for Android studio in all app section and launch android studio by clicking on icon.

2) Select start a new project from Android Studio wizard box.

3) Select empty activity proceed with next choose name & location for the project folder. click finish.

4) You will see editor view of Android Studio IDE with MainActivity.java and activity-main.xml opened now we need to setup Android virtual device (AVD) to launch the app.

5) Click on AVD Manager icon from toolbar on the top.
Select create new virtual device.
Select android device from the list of devices provided.
Select android system image from the list & download
Once the download finishes, select the downloaded System Image and proceed with 'next'.
Launch the created virtual device using run button.

6) Wait for the virtual device boot now launch the app from android studio by selecting the virtual device from tool bar.

7) Wait for the app to run and install in AVD, and completion of installation will be indicated by app getting launched in AVD.

8) App will be launched with Helloworld text view by default. Now you have successful executed first android app.

9) Close android virtual device and android studio IDE

Conclusion:

In this assignment we downloaded and installed android studio IDE in linux distribution Ubuntu and created android virtual device (API 24) for testing an simulation thus launched default "Helloworld" template using android studio & AVD.