Assignment No. 05

- Title: Android Studio Installation

- Problem Statement: To install Android Studio on Fedora Linux & develop the android application as per the requirement.

- Objective: 1. To learn Android Studio installation
  2. To learn to develop on android application

- Outcome: Student should be able to:
  1. Install the Android Studio
  2. Develop an application as per requirement.

- S/W & H/W Requirements: Fedora/Windows, Android Studio, Oracle Java JDK 8.

- Concepts related theory:

Android Studio: Android Studio is the official IDE for Google's Android OS, built on JetBrains' IntelliJ IDEA software and designed specifically for Android development.

Use of Android studio: It has a strong editor tool for developing creative UI and emulators for different versions to test and simulate sensors without having actual Android

devices! It also has a very useful Gradle plugin using which you can create application files (apks) with different configurations. moreover it makes exporting and uploading apk on playstore easy with a single clice!

What is the difference between Android Studio & Eclipse?

It supports goadle (this allows you to really have control over the build). In the layout view you have the option to view both the actual layout & the xml at the same time, while in Eclipse, you must choose between the two tabs.

Can you still use eclipe with android?

In fact, you can build an android application with an IDE at all. With the release of Android Studio & the Android Gradle plugin, everything is shifting towards Gradle dependencies. Also be aware that Google is not going to continue supporting Eclipse development.

Installation steps:

• Download Android Studio IDE for Fedora Linux.
• Double-Click /Right-Click on Archive & Extract into /tmp or from shell,
      unzip -d /tmp/ /Downloads /android-studio*.zip
• Install required packages
• Type in shell :

sudo df install compat-libstdc++296.i686 compat-libstdc++ 33.i686
bzip2-libs.i686.glibc.i686glibc-devel.i686 Libstdc++.i686\
libXrender.i686 libXrandr.i686

- Install Recommended Oracle Java JDK 8 an Linux Fedora
- After to Relocate Android Studio IDE:
    Set the SuperUser as holder (in shell):
    Sudo chown -R root: root /tmp/android-studio
        Then switch the Contents with (in shell):
            Sudo mv /tmp/android-studio /opt\
    finally End the SuperUser Session (in shell):
        exit

- This setup will be useful after the first launch
  of Android Studio IDE and the installation of
  android SDK Tools

    - Finally to start Android studio IDE from shell:
        cd /opt/android-studio
        bin /studio.sh

Conclusion: We were able to install Android Studio and
            develop an android application.

Sample Code

MainActivity.java

```java
package com.example.android.hello;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

public class MainActivity extends AppCompatActivity {
```

```java
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
}
```

activity_main.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello World!"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

Output