**Practical – 3**

Aim: Development of Hello World Application through Android Studio

*MainActivity.java file:*

package com.example.myfirstapp;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
import android.view.KeyEvent;  
import android.widget.Switch;  
  
public class MainActivity extends AppCompatActivity {  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 }  
  
 public boolean dispatchKeyEvent(KeyEvent event) {  
 Switch s1 = (Switch) findViewById(R.id.*switch1*);  
 Switch s2 = (Switch) findViewById(R.id.*switch2*);  
  
 switch (event.getKeyCode()) {  
 case KeyEvent.*KEYCODE\_VOLUME\_DOWN*:  
 if(event.getAction()==KeyEvent.*ACTION\_UP*) {  
 if(s1.isChecked()==true)  
 s1.setChecked(false);  
 else {  
 s1.setChecked(true);  
 s2.setChecked(false);  
 }  
 }  
 break;  
 case KeyEvent.*KEYCODE\_VOLUME\_UP*:  
 if(event.getAction()==KeyEvent.*ACTION\_UP*) {  
 if(s2.isChecked()==true)  
 s2.setChecked(false);  
 else {  
 s2.setChecked(true);  
 s1.setChecked(false);  
 }  
 }  
 break;  
 default:  
 super.dispatchKeyEvent(event);  
 break;  
 }  
  
 return true;  
 }  
}

*activity\_main.xml file:*

<?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:id="@+id/textView"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:fontFamily="@font/asde"  
 android:text="Hello World!"  
 android:textAppearance="@style/TextAppearance.AppCompat.Large"  
 app:layout\_constraintBottom\_toTopOf="@+id/switch2"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.929" />  
  
 <ImageView  
 android:id="@+id/imageView"  
 android:layout\_width="232dp"  
 android:layout\_height="265dp"  
 android:layout\_marginTop="4dp"  
 app:layout\_constraintBottom\_toTopOf="@+id/textView"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.497"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.206"  
 app:srcCompat="@drawable/qq" />  
  
 <ImageView  
 android:id="@+id/imageView3"  
 android:layout\_width="201dp"  
 android:layout\_height="317dp"  
 android:layout\_marginTop="326dp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="@+id/imageView"  
 app:layout\_constraintVertical\_bias="0.6"  
 app:srcCompat="@drawable/img" />  
  
 <Switch  
 android:id="@+id/switch1"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginStart="19dp"  
 android:layout\_marginEnd="13dp"  
 android:layout\_marginBottom="32dp"  
 android:minHeight="48dp"  
 android:text="@string/vd"  
 app:layout\_constraintBottom\_toTopOf="@+id/imageView3"  
 app:layout\_constraintEnd\_toStartOf="@+id/switch2"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/textView" />  
  
 <Switch  
 android:id="@+id/switch2"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginBottom="468dp"  
 android:minHeight="48dp"  
 android:text="@string/vu"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.81"  
 app:layout\_constraintStart\_toStartOf="parent" />  
  
</androidx.constraintlayout.widget.ConstraintLayout>

*AndroidManifest.xml*

<?xml version="1.0" encoding="utf-8"?>  
<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools">  
  
 <application  
 android:allowBackup="true"  
 android:dataExtractionRules="@xml/data\_extraction\_rules"  
 android:fullBackupContent="@xml/backup\_rules"  
 android:icon="@mipmap/ic\_launcher"  
 android:label="@string/app\_name"  
 android:roundIcon="@mipmap/ic\_launcher\_round"  
 android:supportsRtl="true"  
 android:theme="@style/Theme.MyFirstApp"  
 tools:targetApi="31">  
 <activity  
 android:name=".MainActivity"  
 android:exported="true">  
 <intent-filter>  
 <action android:name="android.intent.action.MAIN" />  
  
 <category android:name="android.intent.category.LAUNCHER" />  
 </intent-filter>  
  
 <meta-data  
 android:name="android.app.lib\_name"  
 android:value="" />  
 </activity>  
 </application>  
  
</manifest>

*Screenshot:*

