1. **Create an Android Application that Demonstrate Switch and Toggle Button.**

**XML code:**

*<?*xml version="1.0" encoding="utf-8"*?>*<LinearLayout  
 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"  
 android:orientation="vertical"  
 android:padding="16dp"  
 tools:context=".MainActivity"  
 android:background="#E0FFFF">  
  
 <Switch  
 android:id="@+id/switchBtn"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Switch"  
 android:checked="true"  
 android:layout\_marginTop="50dp"  
 android:layout\_marginLeft="150dp"/>  
  
 <ToggleButton  
 android:id="@+id/toggleBtn"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:textOff="Off"  
 android:textOn="On"  
 android:layout\_marginTop="20dp"  
 android:layout\_marginLeft="150dp"/>  
  
</LinearLayout>

**Java code:**

package com.example.myapplication;

import android.os.Bundle;

import android.view.View;

import android.widget.CompoundButton;

import android.widget.Toast;

import android.widget.ToggleButton;

import androidx.appcompat.app.AppCompatActivity;

import android.widget.Switch;

public class MainActivity extends AppCompatActivity {

Switch switchButton;

ToggleButton toggleButton;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.*activity\_main*);

switchButton = findViewById(R.id.*switchBtn*);

toggleButton = findViewById(R.id.*toggleBtn*);

switchButton.setOnCheckedChangeListener(new CompoundButton.OnCheckedChangeListener() {

@Override

public void onCheckedChanged(CompoundButton buttonView, boolean isChecked) {

if (isChecked) {

showToast("Switch is ON");

} else {

showToast("Switch is OFF");

}

}

});

toggleButton.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

if (toggleButton.isChecked()) {

showToast("Toggle Button is ON");

} else {

showToast("Toggle Button is OFF");

}

}

});

}

public void showToast(String message) {

Toast.*makeText*(getApplicationContext(), message, Toast.*LENGTH\_SHORT*).show();

}

}

**2.Construct an application that toggles a light bulb ON and OFF when the user clicks on the toggle button**

**Xml Code**

*<?*xml version="1.0" encoding="utf-8"*?>*<RelativeLayout  
 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">  
  
 <ToggleButton  
 android:id="@+id/toggleButton1"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_centerInParent="true"  
 android:textOn="On"  
 android:textOff="Off"  
 android:layout\_marginBottom="24dp"/>  
  
 <TextView  
 android:id="@+id/statusTextView1"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@+id/toggleButton1"  
 android:layout\_centerHorizontal="true"  
 android:layout\_marginTop="16dp"  
 android:text="Light Bulb: Off"/>  
</RelativeLayout>

**Java code:**

package com.example.myapplication;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

import android.view.View;

import android.widget.TextView;

import android.widget.Toast;

import android.widget.ToggleButton;

public class MainActivity extends AppCompatActivity {

ToggleButton toggleButton;

TextView statusTextView;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.*activity\_main*);

toggleButton = findViewById(R.id.*toggleButton1*);

statusTextView = findViewById(R.id.*statusTextView1*);

toggleButton.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

if (toggleButton.isChecked()) {

statusTextView.setText("Light Bulb: On");

showToast("Light Bulb is On");

} else {

statusTextView.setText("Light Bulb: Off");

showToast("Light Bulb is Off");

}

}

});

}

private void showToast(String message) {

Toast.*makeText*(this, message, Toast.*LENGTH\_SHORT*).show();

}

}