Program 5 : Create an UI with all views.

**activity_main.xml**

```xml
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    android:orientation="vertical"
    android:paddingBottom="5dp"
    android:paddingLeft="5dp"
    android:paddingRight="5dp"
    android:paddingTop="5dp">
    <TextView
        android:id="@+id/textView"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Hello Students!!" />
    <Button
        android:id="@+id/buttonExample"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Example Button" />
    <CheckBox
        android:id="@+id/checkBoxExample"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="CheckBox Example" />
    <ToggleButton
        android:id="@+id/toggleButtonExample"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="ToggleButton Example" />
    <RadioGroup
        android:id="@+id/radioGroupExample"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content" >
        <RadioButton
            android:id="@+id/radioBtton1"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:checked="true"
            android:text="RadioButton 1" />
        <RadioButton
            android:id="@+id/radioButton2"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="RadioButton 2" />
        <RadioButton android:id="@+id/radioButton3"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="RadioButton 3" />
    </RadioGroup>
```

```xml
        <ImageButton
            android:id="@+id/imageButtonExample"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:src="@drawable/baseline_ac_unit_24" />
</LinearLayout>
```

**MainActivity.java**

```java
package com.example.prog5;

import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.Menu;
import android.view.View;
import android.widget.Button;
import android.widget.CheckBox;
import android.widget.ImageButton;
import android.widget.RadioButton;
import android.widget.RadioGroup;
import android.widget.RadioGroup.OnCheckedChangeListener;
import android.widget.Toast;
import android.widget.ToggleButton;

public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Button example = (Button)
findViewById(R.id.buttonExample);
        CheckBox exampleCheckBox = (CheckBox)
findViewById(R.id.checkBoxExample);
        RadioGroup exampleRadioGroup = (RadioGroup)
findViewById(R.id.radioGroupExample);
        ToggleButton exampletoggleButton = (ToggleButton)
findViewById(R.id.toggleButtonExample);
        ImageButton exampleImageButton = (ImageButton)
findViewById(R.id.imageButtonExample);
        example.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View arg0) {
                // TODO Auto-generated method stub
                // Toast.makeText(this, "Hey Button is pressed
!!",
                // Toast.LENGTH_SHORT).show();
                ToastToDisplay("Hey Button is pressed!!");
            }
        });
        exampleCheckBox.setOnClickListener(new
View.OnClickListener() {
            @Override
            public void onClick(View v) {
```

```java
                // TODO Auto-generated method stub
                if (((CheckBox) v).isChecked()) {
                    ToastToDisplay("Check Box is checked");
                } else {
                    ToastToDisplay("Check box is unchecked");
                }
            }
        });
        exampleRadioGroup.setOnCheckedChangeListener(new
OnCheckedChangeListener() {
            @Override
            public void onCheckedChanged(RadioGroup group, int
checkedId) {
                // TODO Auto-generated method stub
                RadioButton rb1 = (RadioButton)
findViewById(R.id.radioBtton1);
                RadioButton rb2 = (RadioButton)
findViewById(R.id.radioButton2);
                if (rb1.isChecked()) {
                    ToastToDisplay("Radio Button 1 is checked");
                } else if (rb2.isChecked()) {
                    ToastToDisplay("Radio Button 2 is checked");
                } else {
                    ToastToDisplay("Radio Button 3 is checked");

                }
            }
        });
        exampletoggleButton.setOnClickListener(new
View.OnClickListener() {
            @Override
            public void onClick(View v) {
                // TODO Auto-generated method stub
                if (((ToggleButton) v).isChecked()) {
                    ToastToDisplay("Toggle button is ON");
                } else {
                    ToastToDisplay("Toggle Button is OFF");
                }

            }
        });
        exampleImageButton.setOnClickListener(new
View.OnClickListener() {
            @Override
            public void onClick(View v) {
                // TODO Auto-generated method stub
                ToastToDisplay("Image Button is pressed");
            }
        });
    }
    private void ToastToDisplay(String args) {
        Toast.makeText(getBaseContext(), args,
Toast.LENGTH_SHORT).show();
```

```java
    }
    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        getMenuInflater().inflate(R.menu.main, menu);
        return true;
    }
}
```