```
public void click(View view){
    String msg="You have clicked Button" view.getId();
    Toast.makeText(this, msg, Toast.LENGTH_SHORT).show();
 }
1.ALL ONSTART STUFF
package com.example.program1;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity {
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity main);
    Toast.makeText(getApplicationContext(),"onCreate",Toast.LENGTH_SHORT).show();
  }
  @Override
  protected void onStart() {
    super.onStart();
    Toast.makeText(getApplicationContext(),"onStart",Toast.LENGTH_SHORT).show();
  }
  @Override
  protected void onResume() {
    super.onResume();
    Toast.makeText(getApplicationContext(),"onResume",Toast.LENGTH_SHORT).show();
  }
  @Override
  protected void onPause() {
    super.onPause();
    Toast.makeText(getApplicationContext(),"onPause",Toast.LENGTH SHORT).show();
  }
```

```
@Override
  protected void onStop() {
    super.onStop();
    Toast.makeText(getApplicationContext(),"onStop",Toast.LENGTH_SHORT).show();
  }
  @Override
  protected void onDestroy() {
    super.onDestroy();
    Toast.makeText(getApplicationContext(),"onDestroy",Toast.LENGTH_SHORT).show();
  }
  @Override
  protected void onRestart() {
    super.onRestart();
    Toast.makeText(getApplicationContext(),"onRestart",Toast.LENGTH_SHORT).show();
  }
}
```

2. LINEAR LAYOUT adding two number

```
XML FILE
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"</p>
  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"
  android:orientation="vertical">
  <EditText
     android:id="@ id/e1"
     android:layout_width="100dp"
     android:layout height="wrap content"
     android:layout_gravity="center"
     android:layout marginTop="200dp"
     android:hint="first"
```

```
/>
  <EditText
    android:id="@ id/e2"
    android:layout_width="100dp"
    android:layout height="wrap content"
    android:layout gravity="center"
    android:layout marginTop="20dp"
    android:hint="second"
    />
  <Button
    android:id="@ id/button"
    android:layout_width="wrap_content"
    android:layout height="wrap content"
    android:layout_marginLeft="160dp"
    android:layout_marginTop="35dp"
    android:gravity="center"
    android:text="add"
    tools:layout editor absoluteX="163dp"
    tools:layout editor absoluteY="545dp" />
</LinearLayout>
JAVA FILE
package com.example.program2linearlayout;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity {
  private EditText et1,et2;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    clicked();
```

}

```
public void clicked()
  {
     et1=(EditText) findViewById(R.id.e1);
     et2=(EditText) findViewById(R.id.e2);
     Button b1 = (Button) findViewById(R.id.button);
     b1.setOnClickListener(new View.OnClickListener() {
       @Override
       public void onClick(View view) {
         String value1=et1.getText().toString();
         String value2=et2.getText().toString();
         int a=Integer.parseInt(value1);
         int b=Integer.parseInt(value2);
         int sum = a b;
Toast.makeText(getApplicationContext(),String.valueOf(sum),Toast.LENGTH LONG).show();
       }
    });
  }
}
3.RELATIVE LAYOUT
XML
<?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"
  android:paddingLeft="10dp"
  android:paddingRight="10dp"
  tools:context=".MainActivity">
  <Button
     android:id="@ id/btn1"
     android:layout_width="wrap_content"
     android:layout_height="wrap_content"
     android:layout alignParentLeft="true"
     android:text="Button1" />
  <Button
     android:id="@ id/btn2"
     android:layout_width="wrap_content"
```

```
android:layout height="wrap content"
  android:layout_alignParentRight="true"
  android:layout centerVertical="true"
  android:text="Button2" />
<Button
  android:id="@ id/btn3"
  android:layout width="wrap content"
  android:layout height="wrap content"
  android:layout alignParentLeft="true"
  android:layout centerVertical="true"
  android:text="Button3" />
<Button
  android:id="@ id/btn4"
  android:layout_width="match_parent"
  android:layout height="wrap content"
  android:layout alignParentBottom="true"
  android:text="Button4" />
<Button
  android:id="@ id/btn5"
  android:layout width="wrap content"
  android:layout height="wrap content"
  android:layout_alignBottom="@ id/btn2"
  android:layout centerHorizontal="true"
  android:text="Button5" />
<Button
  android:id="@ id/btn6"
  android:layout_width="wrap_content"
  android:layout height="wrap content"
  android:layout above="@ id/btn4"
  android:layout_centerHorizontal="true"
  android:text="Button6" />
<Button
  android:id="@ id/btn7"
  android:layout width="wrap content"
  android:layout_height="wrap_content"
  android:layout toEndOf="@ id/btn1"
  android:layout_toRightOf="@ id/btn1"
  android:layout alignParentRight="true"
  android:text="Button7" />
```

</RelativeLayout>

4.CONSTRAINT LAYOUT autocomplete

```
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:id="@ id/tv1"
    android:layout width="wrap content"
    android:layout height="wrap content"
    android:text="Select Programming langauage"
    app:layout_constraintBottom_toBottomOf="parent"
    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="0.301" />
  < AutoCompleteTextView
    android:id="@ id/at1"
    android:layout width="100dp"
    android:layout height="wrap content"
    android:layout_marginBottom="288dp"
    app:layout constraintBottom toBottomOf="parent"
    app:layout constraintEnd toEndOf="parent"
    app:layout constraintHorizontal bias="0.498"
    app:layout constraintStart toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@ id/textView"
    app:layout constraintVertical bias="0.289" />
  <Button
    android:id="@ id/b1"
    android:layout width="wrap content"
    android:layout height="wrap content"
    android:text="Submit"
    app:layout constraintBottom toBottomOf="parent"
    app:layout constraintEnd toEndOf="parent"
```

```
app:layout_constraintTop_toBottomOf="@ id/at1" />
</androidx.constraintlayout.widget.ConstraintLayout>
JAVA
package com.example.program4constraintlayout;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.ArrayAdapter;
import android.widget.AutoCompleteTextView;
import android.widget.Button;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity {
  String[] language ={"C","C ","Java",".NET","iPhone","Android","ASP.NET","PHP"};
  Button b;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity main);
    clicked();
  }
  public void clicked()
    ArrayAdapter<String> adapter = new
ArrayAdapter<String>(this,android.R.layout.select_dialog_item,language);
    AutoCompleteTextView actv =findViewById(R.id.at1);
    actv.setThreshold(1);
    actv.setAdapter(adapter);
    b =findViewById(R.id.b1);
    b.setOnClickListener(new View.OnClickListener() {
       @Override
       public void onClick(View view) {
         String s = actv.getText().toString();
         Toast.makeText(MainActivity.this,s, Toast.LENGTH_SHORT).show();
       }
    });
```

app:layout constraintStart toStartOf="parent"

```
4.Date picker
<?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/tv1"
    android:layout width="wrap content"
    android:layout_height="wrap_content"
    android:text="Date picker"
    android:textStyle="bold"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout constraintStart toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout constraintVertical bias="0.042" />
  <DatePicker
    android:id="@ id/dp1"
    android:layout_width="238dp"
    android:layout_height="212dp"
    android:layout marginTop="48dp"
    android:calendarViewShown="false"
    android:datePickerMode="spinner"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout constraintHorizontal bias="0.496"
    app:layout_constraintStart_toStartOf="parent"
    app:layout constraintTop toBottomOf="@ id/tv1" />
  <Button
    android:id="@ id/b1"
    android:layout_width="wrap_content"
    android:layout height="wrap content"
    android:text="submit"
```

}

```
app:layout constraintBottom toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout constraintStart toStartOf="parent"
    app:layout constraintTop toBottomOf="@ id/dp1"
    app:layout_constraintVertical_bias="0.176" />
</androidx.constraintlayout.widget.ConstraintLayout>
package com.example.program5date_time_picker;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.DatePicker;
import android.widget.TextView;
public class MainActivity extends AppCompatActivity {
  DatePicker dp;
  TextView tv:
  Button b;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity main);
    clicked();
  public void clicked()
    dp = findViewById(R.id.dp1);
    tv = findViewByld(R.id.tv1);
    b = findViewById(R.id.b1);
    b.setOnClickListener(new View.OnClickListener() {
       @Override
       public void onClick(View view) {
         tv.setText("Selected Date: " dp.getDayOfMonth() "/" (dp.getMonth() 1) "/"
dp.getYear());
       }
    });
  }
```

5.TIME PICKER <RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android" xmlns:tools="http://schemas.android.com/tools" android:layout width="match parent" android:layout height="match parent" android:paddingBottom="@dimen/activity vertical margin" android:paddingLeft="@dimen/activity_horizontal_margin" android:paddingRight="@dimen/activity horizontal margin" android:paddingTop="@dimen/activity_vertical_margin" tools:context=".MainActivity"> <TimePicker android:id="@ id/simpleTimePicker" android:layout_width="wrap_content" android:layout height="wrap content" android:layout centerHorizontal="true" android:layout_marginTop="50dp" android:background="#090" android:padding="20dp" android:timePickerMode="spinner" /> <TextView android:id="@ id/time" android:layout_width="wrap_content" android:layout_height="wrap_content"

```
</RelativeLayout>
```

public class MainActivity extends AppCompatActivity {

android:layout centerHorizontal="true"

android:text="Time Is ::" android:textColor="#090" android:textSize="20sp" android:textStyle="bold" />

TextView time;

```
TimePicker simpleTimePicker;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity main);
    time =findViewById(R.id.time);
    simpleTimePicker = findViewById(R.id.simpleTimePicker);
   // simpleTimePicker.setIs24HourView(false); // used to display AM/PM mode
    // perform set on time changed listener event
    simpleTimePicker.setOnTimeChangedListener(new TimePicker.OnTimeChangedListener()
{
       @Override
       public void onTimeChanged(TimePicker view, int hourOfDay, int minute) {
         // display a toast with changed values of time picker
         Toast.makeText(getApplicationContext(), hourOfDay " " minute,
Toast.LENGTH_SHORT).show();
         time.setText("Time is :: " hourOfDay ": " minute); // set the current time in text view
       }
    });
 }
6.ALERT DIALOG
7.RADIOBUTTON
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout</pre>
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:layout marginStart="16dp"
  android:layout marginTop="40dp"
  android:text="Select your fav food"
  android:textSize="35sp"
  android:textStyle="bold"
  app:layout constraintStart toStartOf="parent"
  app:layout_constraintTop_toTopOf="parent" />
<RadioButton
  android:id="@ id/dosa"
  android:layout width="wrap content"
  android:layout_height="wrap_content"
  android:layout marginStart="64dp"
  android:layout_marginTop="100dp"
  android:text="Dosa"
  android:checked="false"
  app:layout_constraintStart_toStartOf="parent"
  app:layout constraintTop toBottomOf="@ id/textView" />
<RadioButton
  android:checked="false"
  android:id="@ id/idly"
  android:layout_width="wrap_content"
  android:layout height="wrap content"
  android:layout_marginStart="64dp"
  android:layout marginTop="44dp"
  android:text="ldly"
  app:layout_constraintStart_toStartOf="parent"
  app:layout_constraintTop_toBottomOf="@ id/vada" />
<RadioButton
  android:id="@ id/vada"
  android:checked="false"
  android:layout width="wrap content"
  android:layout_height="wrap_content"
  android:layout marginStart="64dp"
  android:layout_marginTop="48dp"
  android:text="Vada"
  app:layout constraintStart toStartOf="parent"
  app:layout_constraintTop_toBottomOf="@ id/dosa" />
<Button
```

```
android:id="@ id/b1"
    android:layout_width="wrap_content"
    android:layout height="wrap content"
    android:text="Button"
    app:layout constraintBottom toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout constraintHorizontal bias="0.498"
    app:layout constraintStart toStartOf="parent"
    app:layout constraintTop toBottomOf="@ id/idly"
    app:layout constraintVertical bias="0.353" />
</androidx.constraintlayout.widget.ConstraintLayout>
package com.example.program7radiobutton;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle:
import android.view.View;
import android.widget.Button;
import android.widget.RadioButton;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity {
  RadioButton d, v, i;
  Button b:
  String selectedfood;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    d = findViewById(R.id.dosa);
    v = findViewByld(R.id.vada);
    i = findViewById(R.id.idly);
    b = findViewById(R.id.b1);
    b.setOnClickListener(new View.OnClickListener() {
       @Override
       public void onClick(View view) {
         if(d.isChecked())
            selectedfood = d.getText().toString();
```

else if(v.isChecked())

```
selectedfood =v.getText().toString();
         else
            selectedfood=i.getText().toString();
         Toast.makeText(MainActivity.this, selectedfood, Toast.LENGTH_SHORT).show();
       }
    });
  }
}
9.CHECK BOX
<?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:layout marginStart="40dp"
     android:layout marginTop="68dp"
     android:text="Select your choices"
     android:textColor="@color/black"
     android:textSize="35sp"
     android:textStyle="bold"
     app:layout_constraintStart_toStartOf="parent"
     app:layout_constraintTop_toTopOf="parent" />
  <CheckBox
     android:id="@ id/co"
     android:layout width="wrap content"
     android:layout_height="wrap_content"
     android:layout marginStart="40dp"
     android:layout marginTop="120dp"
     android:text="coffee"
     app:layout constraintStart toStartOf="parent"
     app:layout_constraintTop_toBottomOf="@ id/textView" />
```

```
<CheckBox
    android:id="@ id/sa"
    android:layout width="wrap content"
    android:layout height="wrap content"
    android:layout marginStart="40dp"
    android:layout marginTop="52dp"
    android:text="sandwich"
    app:layout_constraintStart_toStartOf="parent"
    app:layout constraintTop toBottomOf="@ id/co" />
  <CheckBox
    android:id="@ id/dosa"
    android:layout_width="wrap_content"
    android:layout height="wrap content"
    android:layout_marginStart="40dp"
    android:layout_marginTop="52dp"
    android:text="Dosa"
    app:layout_constraintStart_toStartOf="parent"
    app:layout constraintTop toBottomOf="@ id/sa" />
  <Button
    android:id="@ id/b1"
    android:layout width="wrap content"
    android:layout_height="wrap_content"
    android:text="Submit"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout constraintEnd toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@ id/dosa"
    app:layout constraintVertical bias="0.394" />
</androidx.constraintlayout.widget.ConstraintLayout>
JAVA
package com.example.program8checkbox;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
```

```
import android.widget.Button;
import android.widget.CheckBox;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity {
  CheckBox c,s,d;
  Button b;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
     super.onCreate(savedInstanceState);
     setContentView(R.layout.activity_main);
     c = findViewById(R.id.co);
     s = findViewById(R.id.sa);
     d = findViewById(R.id.dosa);
     b = findViewById(R.id.b1);
     b.setOnClickListener(new View.OnClickListener() {
       @Override
       public void onClick(View view) {
         int totalamount=0;
         StringBuilder result=new StringBuilder();
         result.append("Selected Items:");
         if(c.isChecked()){
            result.append("\nCoffee 50Rs");
            totalamount =50;
         if(s.isChecked()){
            result.append("\nSandwich 100Rs");
            totalamount =100;
         if(d.isChecked()){
            result.append("\nDosa 90Rs");
            totalamount =90;
         result.append("\nTotal: " totalamount "Rs");
         //Displaying the message on the toast
         Toast.makeText(getApplicationContext(), result.toString(),
Toast.LENGTH_LONG).show();
       }
    });
  }
```

```
10.CUSTOM TOAST
ACTIVITY MAIN
<?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">
  <Button
    android:id="@ id/button"
    android:layout width="wrap content"
    android:layout_height="wrap_content"
    android:text="Button"
    tools:layout editor absoluteX="157dp"
    tools:layout_editor_absoluteY="417dp" />
</androidx.constraintlayout.widget.ConstraintLayout>
CUSTOM.XML
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"</p>
  android:layout_width="match_parent"
  android:layout height="match parent"
  xmlns:app="http://schemas.android.com/apk/res-auto"
  android:orientation="horizontal"
  android:padding="16dp"
  android:id="@ id/toastroot">
  <ImageView
    android:id="@ id/img"
    app:srcCompat="@drawable/ic_android_black_24dp"
    android:layout width="wrap content"
    android:layout_height="55dp"
    android:layout weight="1" />
  <TextView
    android:id="@ id/t1"
```

```
android:layout_width="wrap_content"
    android:layout height="55dp"
    android:text="This is a custom toast"
    android:gravity="center"
    android:textColor="@android:color/holo green dark"
    android:textSize="30sp" />
</LinearLayout>
JAVA
11.TOGGLEBUTTON
JAVA
public class MainActivity extends AppCompatActivity {
  ToggleButton simpleToggleButton1, simpleToggleButton2;
  Button submit;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity main);
     simpleToggleButton1 = (ToggleButton) findViewById(R.id.simpleToggleButton1);
    simpleToggleButton2 = (ToggleButton) findViewById(R.id.simpleToggleButton2);
    submit = (Button) findViewByld(R.id.submitButton);
    submit.setOnClickListener(new View.OnClickListener() {
       @Override
       public void onClick(View view) {
         String status = "ToggleButton1:" simpleToggleButton1.getText() "\n"
"ToggleButton2: " simpleToggleButton2.getText();
         Toast.makeText(getApplicationContext(), status, Toast.LENGTH_SHORT).show();
    }); } }
XML
```

Example of Linear layout nested with another linear layout. Any layout can be choosen for the Design:

```
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"</p>
  xmlns:tools="http://schemas.android.com/tools"
  android:layout width="match parent"
  android:layout height="match parent"
  android:orientation="vertical"
  android:paddingBottom="@dimen/activity vertical margin"
  android:paddingLeft="@dimen/activity horizontal margin"
  android:paddingRight="@dimen/activity horizontal margin"
  android:paddingTop="@dimen/activity vertical margin"
  tools:context=".MainActivity">
  <LinearLayout
    android:layout width="wrap content"
    android:layout height="wrap content"
    android:layout_gravity="center horizontal"
    android:orientation="horizontal">
<ToggleButton
       android:id="@ id/simpleToggleButton1"
       android:layout width="wrap content"
       android:layout_height="wrap_content"
       android:layout gravity="center horizontal"
       android:checked="false"
       android:drawablePadding="20dp"
       android:drawableRight="@drawable/ic launcher"
       android:textColor="#000" />
<ToggleButton
       android:id="@ id/simpleToggleButton2"
       android:layout width="wrap content"
       android:layout_height="wrap_content"
       android:layout gravity="center horizontal"
       android:layout marginLeft="50dp"
       android:checked="true"
       android:drawableLeft="@drawable/ic_launcher"
       android:drawablePadding="20dp"
       android:textColor="#000" />
  </LinearLayout>
```

```
<Button
    android:id="@ id/submitButton"
    android:layout width="wrap content"
    android:layout height="wrap content"
    android:layout gravity="center"
    android:layout marginTop="50dp"
    android:background="#0f0"
    android:padding="10dp"
    android:text="Submit"
    android:textColor="#fff"
    android:textSize="20sp"
    android:textStyle="bold" />
</LinearLayout>
12.SWITCH
<?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:id="@ id/b1"
  android:layout width="match parent"
  android:layout height="match parent"
  tools:context=".MainActivity">
  <Switch
    android:id="@ id/s1"
    android:layout width="wrap content"
    android:layout_height="wrap_content"
    android:layout marginTop="84dp"
    android:layout_marginEnd="184dp"
    android:minHeight="48dp"
    android:text="Switch1"
    android:textOff="OFF"
    android:textOn="ON"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout constraintTop toTopOf="parent" />
<Switch
```

```
android:id="@ id/s2"
    android:layout_width="wrap_content"
    android:layout height="wrap content"
    android:layout marginTop="64dp"
    android:layout marginEnd="184dp"
    android:checked="true"
    android:minHeight="48dp"
    android:text="Switch2"
    android:textOff="OFF"
    android:textOn="ON"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintTop_toBottomOf="@ id/s1" />
  <Button
    android:id="@ id/B1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout marginTop="76dp"
    android:layout_marginEnd="186dp"
    android:text="Submit"
    app:layout constraintEnd toEndOf="parent"
    app:layout_constraintTop_toBottomOf="@ id/s2" />
</androidx.constraintlayout.widget.ConstraintLayout>
JAVA
package com.sindhu.aswitch;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.Switch;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity {
  Switch simpleSwitch1, simpleSwitch2;
  Button submit:
```

```
@Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity main);
    simpleSwitch1 = findViewById(R.id.s1);
    simpleSwitch2 = findViewById(R.id.s2);
    submit = findViewById(R.id.B1);
submit.setOnClickListener(new View.OnClickListener() {
       @Override
       public void onClick(View view) {
         String statusSwitch1, statusSwitch2;
         if (simpleSwitch1.isChecked())
            statusSwitch1 = simpleSwitch1.getTextOn().toString();
         else
            statusSwitch1 = simpleSwitch1.getTextOff().toString();
         if (simpleSwitch2.isChecked())
            statusSwitch2 = simpleSwitch2.getTextOn().toString();
         else
            statusSwitch2 = simpleSwitch2.getTextOff().toString();
         Toast.makeText(getApplicationContext(), "Switch1:" statusSwitch1 "\n" "Switch2:"
statusSwitch2, Toast.LENGTH LONG).show(); // display the current state for switch's
    });
  }
13.SPINNER
<?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">
  <Spinner
    android:id="@ id/spinner"
    android:layout width="149dp"
```

```
android:layout height="40dp"
    android:layout_marginBottom="8dp"
    android:layout marginEnd="8dp"
    android:layout marginStart="8dp"
    android:layout marginTop="8dp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout constraintEnd toEndOf="parent"
    app:layout constraintHorizontal bias="0.502"
    app:layout constraintStart toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.498"
</androidx.constraintlayout.widget.ConstraintLayout>
JAVA
package com.example.spinner;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.Spinner;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity {
  String[] country={"USA","UK","France","Russia","Canada"};
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity main);
    Spinner spinner=findViewById(R.id.spinner);
    ArrayAdapter aa=new ArrayAdapter(this,
android.R.layout.simple_spinner_dropdown_item,country);
```

```
aa.setDropDownViewResource(android.R.layout.simple spinner dropdown item);
    spinner.setAdapter(aa);
    spinner.setOnItemSelectedListener(new AdapterView.OnItemSelectedListener() {
      @Override
      public void on Item Selected (Adapter View <?> parent, View view, int position, long id) {
         Toast.makeText(getApplicationContext(), country[position],
Toast.LENGTH SHORT).show();
      }
      @Override
      public void onNothingSelected(AdapterView<?> parent) {
      }
    });
  }
14.INTENTS
<Button
    android:id="@ id/implicit"
    android:layout_width="wrap_content"
    android:layout height="wrap content"
    android:layout marginStart="148dp"
    android:layout_marginLeft="148dp"
    android:layout marginTop="152dp"
    android:text="Implicit"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
  <Button
    android:id="@ id/explicit"
    android:layout width="wrap content"
    android:layout_height="wrap_content"
    android:layout marginTop="72dp"
    android:layout marginEnd="172dp"
    android:layout_marginRight="172dp"
    android:text="Explicit"
    app:layout constraintEnd toEndOf="parent"
```

```
app:layout_constraintTop_toBottomOf="@ id/button" />
<TextView
     android:id="@ id/textView"
     android:layout width="wrap content"
     android:layout height="wrap content"
     android:layout marginTop="224dp"
     android:textAppearance="?android:attr/textAppearanceLarge"
     android:text="Second Activity"
     app:layout constraintEnd toEndOf="parent"
     app:layout constraintHorizontal bias="0.538"
     app:layout constraintStart toStartOf="parent"
     app:layout_constraintTop_toTopOf="parent" />
java
public class MainActivity extends AppCompatActivity {
  @Override
  protected void onCreate(Bundle savedInstanceState) {
     super.onCreate(savedInstanceState);
     setContentView(R.layout.activity_main);
     Button explicit btn = findViewById(R.id.explicit);
     Button implicit btn = findViewByld(R.id.implicit);
     //implement Onclick event for Explicit Intent
     explicit btn.setOnClickListener(new View.OnClickListener() {
       @Override
       public void onClick(View v) {
          Intent intent = new Intent(this, MainActivity2.class);
          startActivity(intent);
     });
 //implement onClick event for Implicit Intent
     implicit_btn.setOnClickListener(new View.OnClickListener() {
       @Override
       public void onClick(View v) {
```

```
Intent intent = new Intent(Intent.ACTION_VIEW);
intent.setData(Uri.parse("https://www.google.com"));
startActivity(intent);
}
});

public class MainActivity2 extends AppCompatActivity {

@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main2);
Toast.makeText(getApplicationContext(), "We are moved to second Activity",
Toast.LENGTH_LONG).show();
}
```