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TOAST(BILL GENERATION)

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">

    <CheckBox
        android:id="@+id/c2"
        android:layout_width="216dp"
        android:layout_height="49dp"
        android:text="burger"
        android:textSize="20sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.498"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.371" />

    <CheckBox
        android:id="@+id/c1"
        android:layout_width="213dp"
        android:layout_height="48dp"
        android:text="pizza"
        android:textSize="20sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.498"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.24" />

    <CheckBox
        android:id="@+id/c3"
        android:layout_width="212dp"
        android:layout_height="53dp"
        android:text="Pepsi"
        android:textSize="20sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.487"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Bill"
        app:layout_constraintBottom_toBottomOf="parent"
```

```

        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.463"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.682" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

Java code

```

package com.example.toast;

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 {

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

        Button b1=(Button)findViewById(R.id.button);
        CheckBox c1=(CheckBox) findViewById(R.id.c1);
        CheckBox c2=(CheckBox) findViewById(R.id.c2);
        CheckBox c3=(CheckBox) findViewById(R.id.c3);

        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {

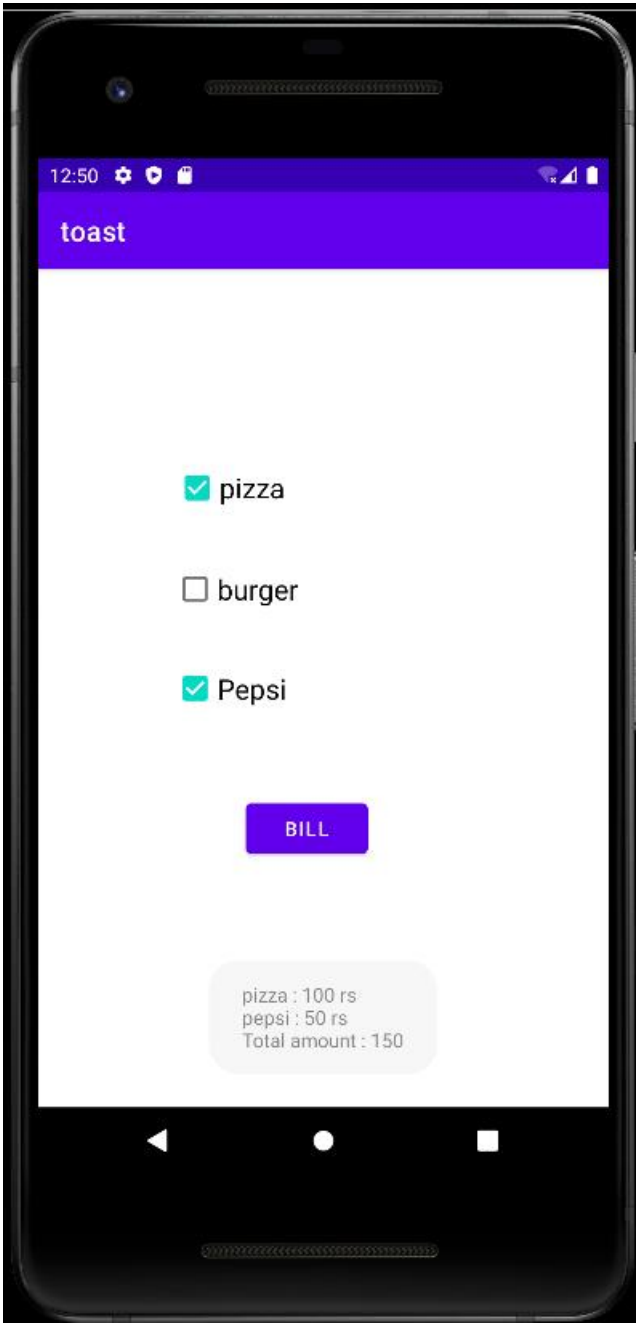
                StringBuilder output = new StringBuilder();
                int total=0;

                if(c1.isChecked())
                {
                    total=total+100;
                    output.append("pizza : 100 rs");
                }
                if(c2.isChecked())
                {
                    total=total+75;
                    output.append("\nBurger : 75 rs");
                }
                if(c3.isChecked())
                {
                    total=total+50;
                    output.append("\npepsi : 50 rs");
                }

                Toast.makeText(getApplicationContext(),output+"\n"+"Total amount : "+total,Toast.LENGTH_LONG).show();
            }
        });
    }
}

```

```
}  
}
```



Rating Bar

Activity main.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">

    <RatingBar
        android:id="@+id/rate"
        android:layout_width="228dp"
        android:layout_height="82dp"
        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="0.385" />

    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="view rating"
        android:onClick="function"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.498"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.576" />

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

Java code

```
package com.example.rating;

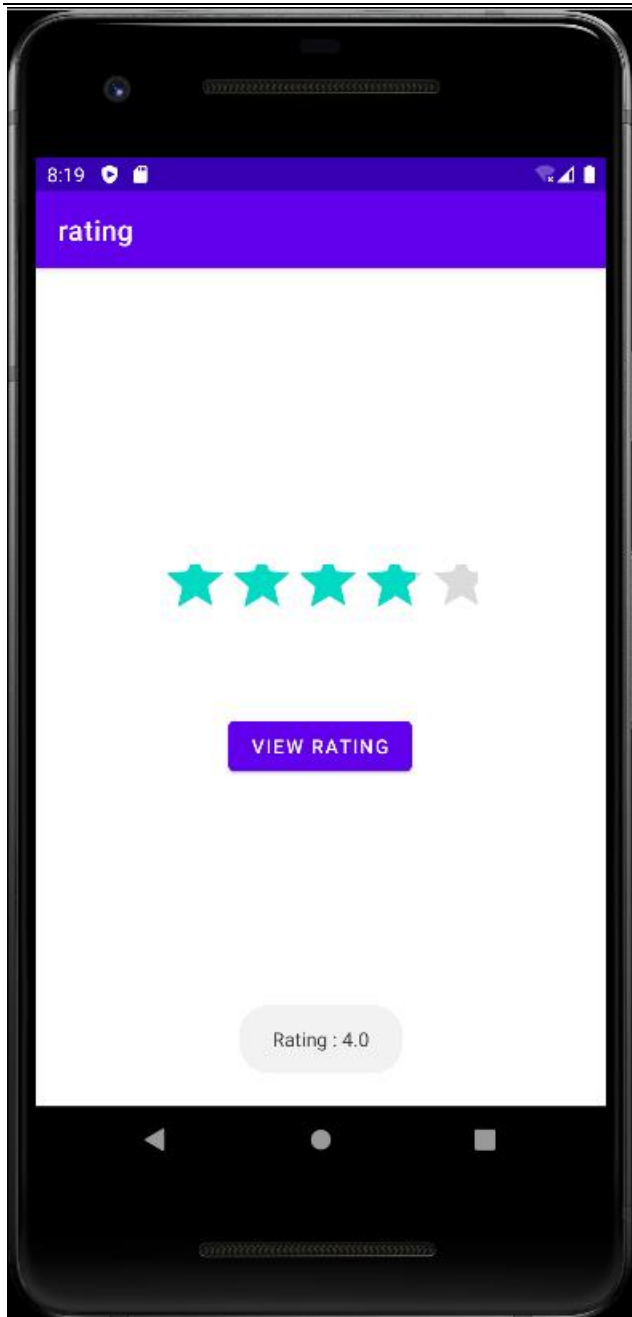
import androidx.appcompat.app.AppCompatActivity;

import android.media.Rating;
import android.view.View;
import android.widget.Button;
import android.os.Bundle;
import android.widget.RatingBar;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

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

```
}  
  
public void function(View v)  
{  
    RatingBar r=(RatingBar)findViewById(R.id.rate);  
    String rating=String.valueOf(r.getRating());  
    Toast.makeText(getApplicationContext(),"Rating :  
"+rating,Toast.LENGTH_LONG).show();  
}  
}
```



RADIO BUTTON

Activity main.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">

    <RadioGroup
        android:layout_width="152dp"
        android:layout_height="144dp"
        android:id="@+id/radiogroup"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.304">

        <RadioButton
            android:id="@+id/male"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Male"
            app:layout_constraintEnd_toEndOf="parent"
            app:layout_constraintStart_toStartOf="parent" />

        <RadioButton
            android:id="@+id/female"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Female"
            app:layout_constraintEnd_toEndOf="parent"
            app:layout_constraintStart_toStartOf="parent" />

        <RadioButton
            android:id="@+id/others"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Others"
            app:layout_constraintEnd_toEndOf="parent"
            app:layout_constraintStart_toStartOf="parent" />
    </RadioGroup>

    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Show selected"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.498"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.571" />

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

MainActivity.java

```
package com.example.radio;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.RadioButton;
import android.widget.RadioGroup;
import android.widget.Toast;

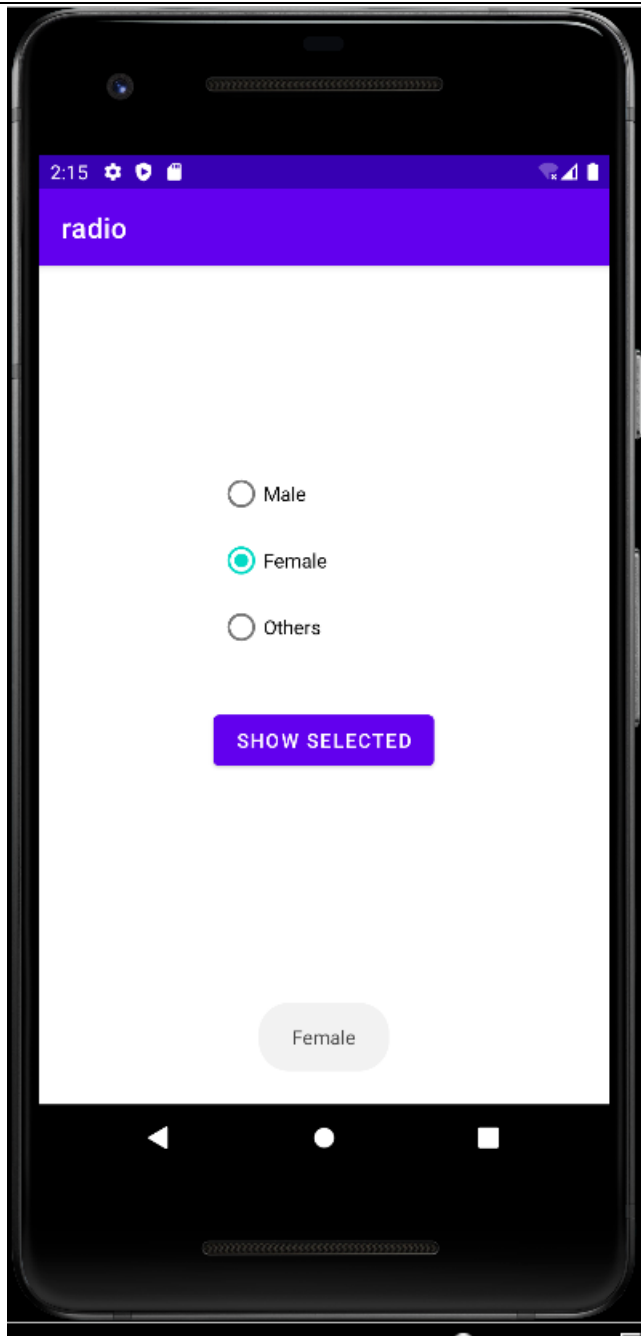
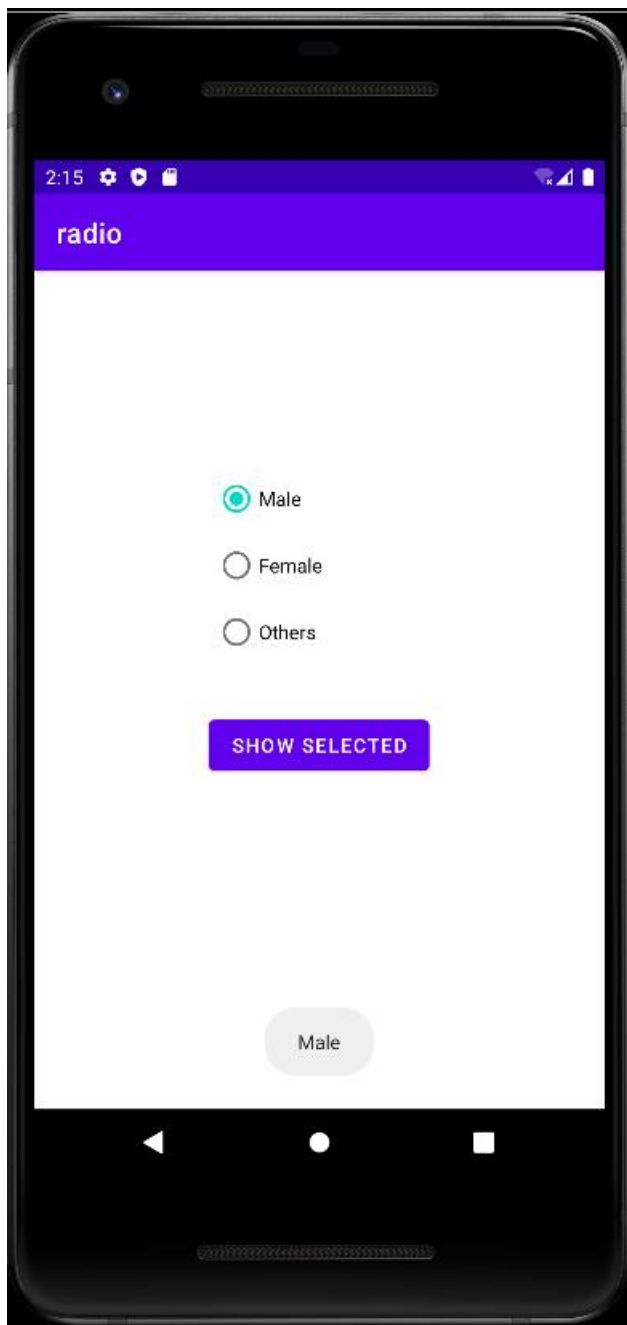
public class MainActivity extends AppCompatActivity {

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

        RadioGroup rg=(RadioGroup) findViewById(R.id.radiogroup);
        Button b1=(Button) findViewById(R.id.button);

        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                int result=rg.getCheckedRadioButtonId();
                RadioButton radio=(RadioButton) findViewById(result);

                String temp=radio.getText().toString();
                Toast.makeText(getApplicationContext(),temp,Toast.LENGTH_LONG).show();
            }
        });
    }
}
```

DATE PICKER

Acitivity main.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">

    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Open Date Picker"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <EditText
        android:id="@+id/editTextTextPersonName"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPersonName"
        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="0.6" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.java

```
package com.example.datepicker;

import androidx.appcompat.app.AppCompatActivity;

import android.app.DatePickerDialog;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.DatePicker;
import android.widget.EditText;

import java.util.Calendar;

public class MainActivity extends AppCompatActivity {

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

        Button butt=(Button)findViewById(R.id.button);

        EditText disptxt=(EditText)findViewById(R.id.editTextTextPersonName);
```

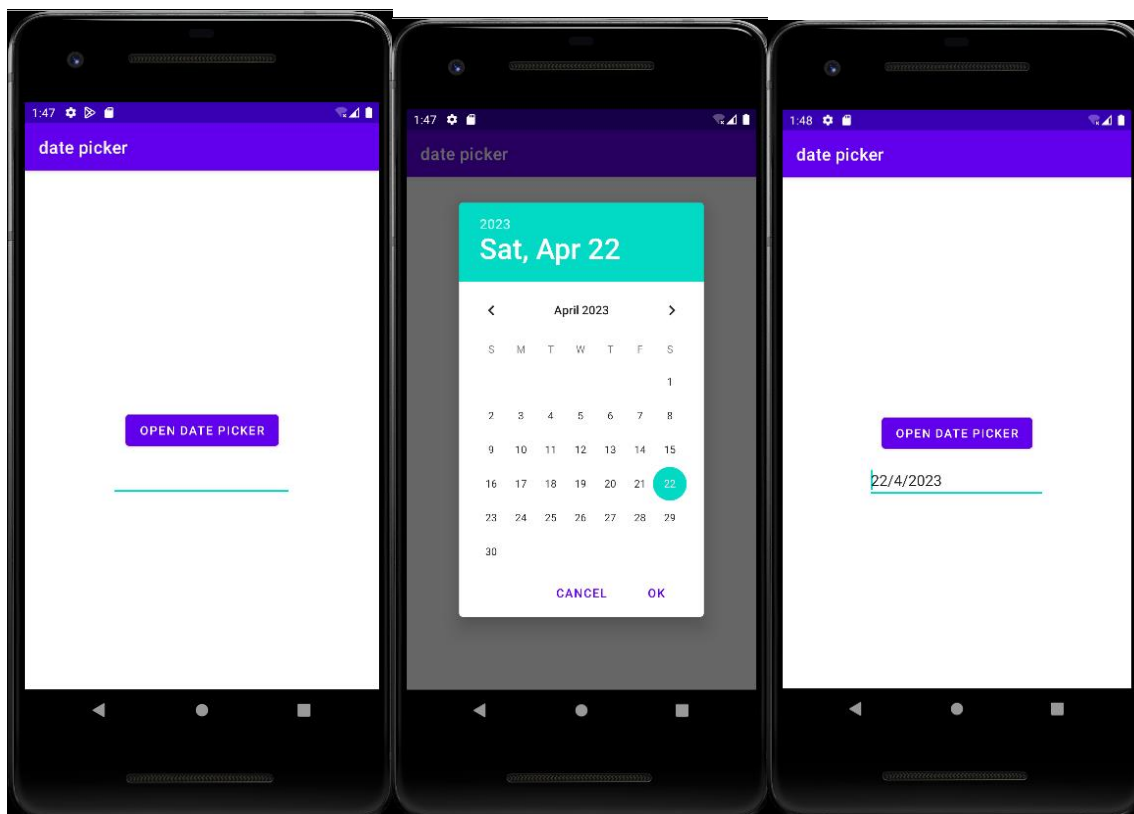
```

butt.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        final Calendar cal =Calendar.getInstance();

        int year=cal.get(Calendar.YEAR);
        int month=cal.get(Calendar.MONTH);
        int day=cal.get(Calendar.DAY_OF_MONTH);

        DatePickerDialog picker=new DatePickerDialog(
            MainActivity.this, new DatePickerDialog.OnDateSetListener() {
                @Override
                public void onDateSet(DatePicker view, int t_year, int t_month, int
t_day) {
                    disptxt.setText(t_day+"/"+(t_month+1)+"/"+t_year);
                }
            },
            year,month,day);
        picker.show();
    }
});
}
}

```



TIME PICKER

Activity main.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">

    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Set Time"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.498"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.874" />

    <TextView
        android:id="@+id/textView"
        android:layout_width="272dp"
        android:layout_height="52dp"
        android:textSize="20sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.115"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.761" />

    <TimePicker
        android:id="@+id/time"
        android:layout_width="371dp"
        android:layout_height="334dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.181"
        tools:ignore="MissingConstraints" />

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

Java code

```
package com.example.timepicker;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.TextView;
import android.widget.TimePicker;
```

```

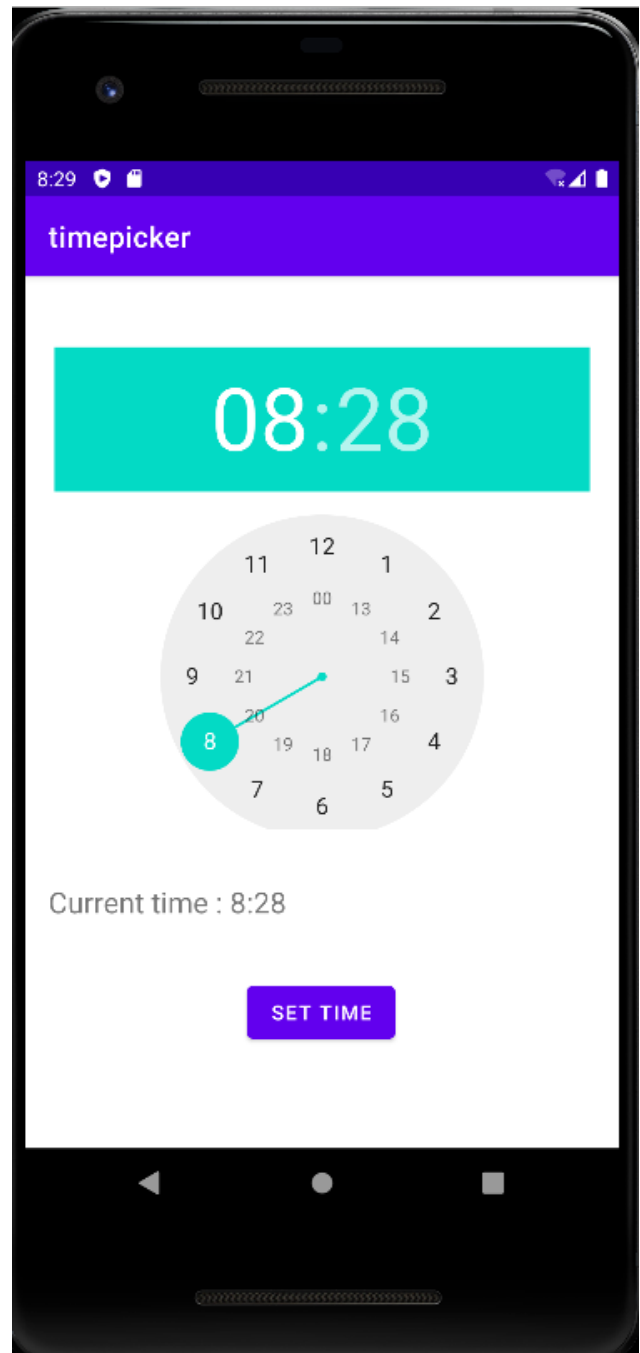
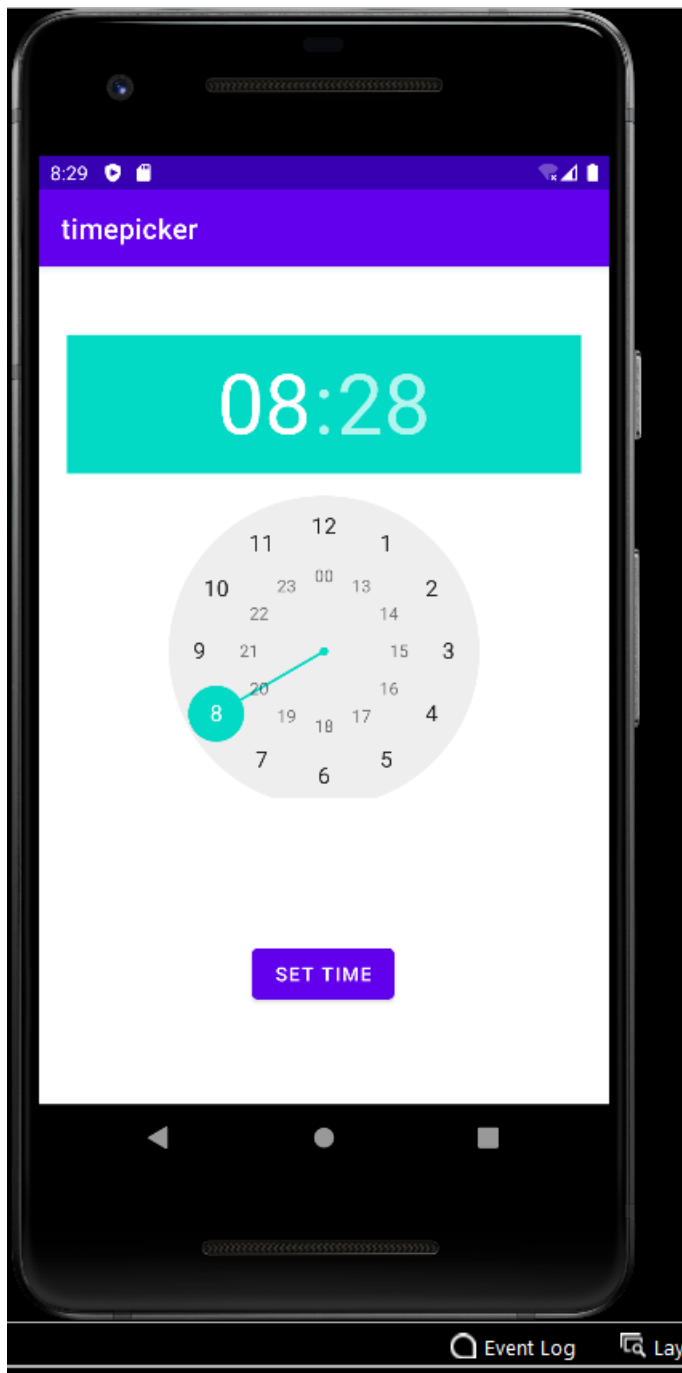
public class MainActivity extends AppCompatActivity {

    TimePicker t;
    Button b1;
    TextView txt;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        b1 = (Button) findViewById(R.id.button);
        t = (TimePicker) findViewById(R.id.time);
        txt = (TextView) findViewById(R.id.textView);
        t.setIs24HourView(true);

        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                txt.setText(getCurrentTime());
            }
        });
    }
    public String getCurrentTime()
    {
        String time="Current time : "+t.getCurrentHour()+":"+t.getCurrentMinute();
        return time;
    }
}

```



TOGGLE BUTTON

Activity main.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">

    <ToggleButton
        android:id="@+id/toggleButton"
        android:layout_width="113dp"
        android:layout_height="51dp"
        android:text="ToggleButton"
        android:textOff="button off"
        android:textOn="button on"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.214"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.307" />

    <ToggleButton
        android:id="@+id/toggleButton2"
        android:layout_width="113dp"
        android:layout_height="51dp"
        android:text="ToggleButton"
        android:textOff="button off"
        android:textOn="button on"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.758"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.307" />

    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Display state"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.498"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.524" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.java

```
package com.example.toggle;

import androidx.appcompat.app.AppCompatActivity;
```

```

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
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 b1=(Button) findViewById(R.id.button);

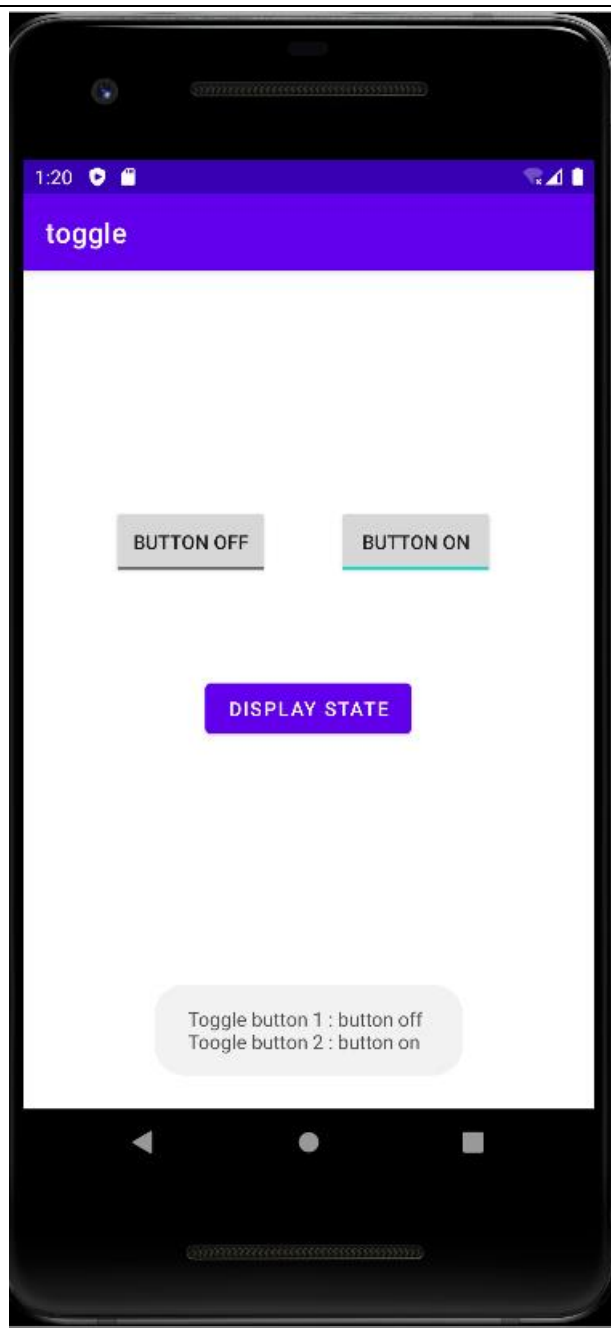
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                ToggleButton t1=(ToggleButton) findViewById(R.id.toggleButton);
                ToggleButton t2=(ToggleButton) findViewById(R.id.toggleButton2);

                StringBuilder result=new StringBuilder();
                String a=t1.getText().toString();
                String b=t2.getText().toString();

                result.append("Toggle button 1 : "+a);
                result.append("\nToggle button 2 : "+b);

                Toast.makeText(getApplicationContext(),result,Toast.LENGTH_LONG).show();
            }
        });
    }
}

```



SEEK BAR

Activity main.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">

    <SeekBar
        android:id="@+id/seekBar"
        android:layout_width="315dp"
        android:layout_height="47dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.412" />

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

MainActivity.java

```
package com.example.seekbar;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.widget.SeekBar;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

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

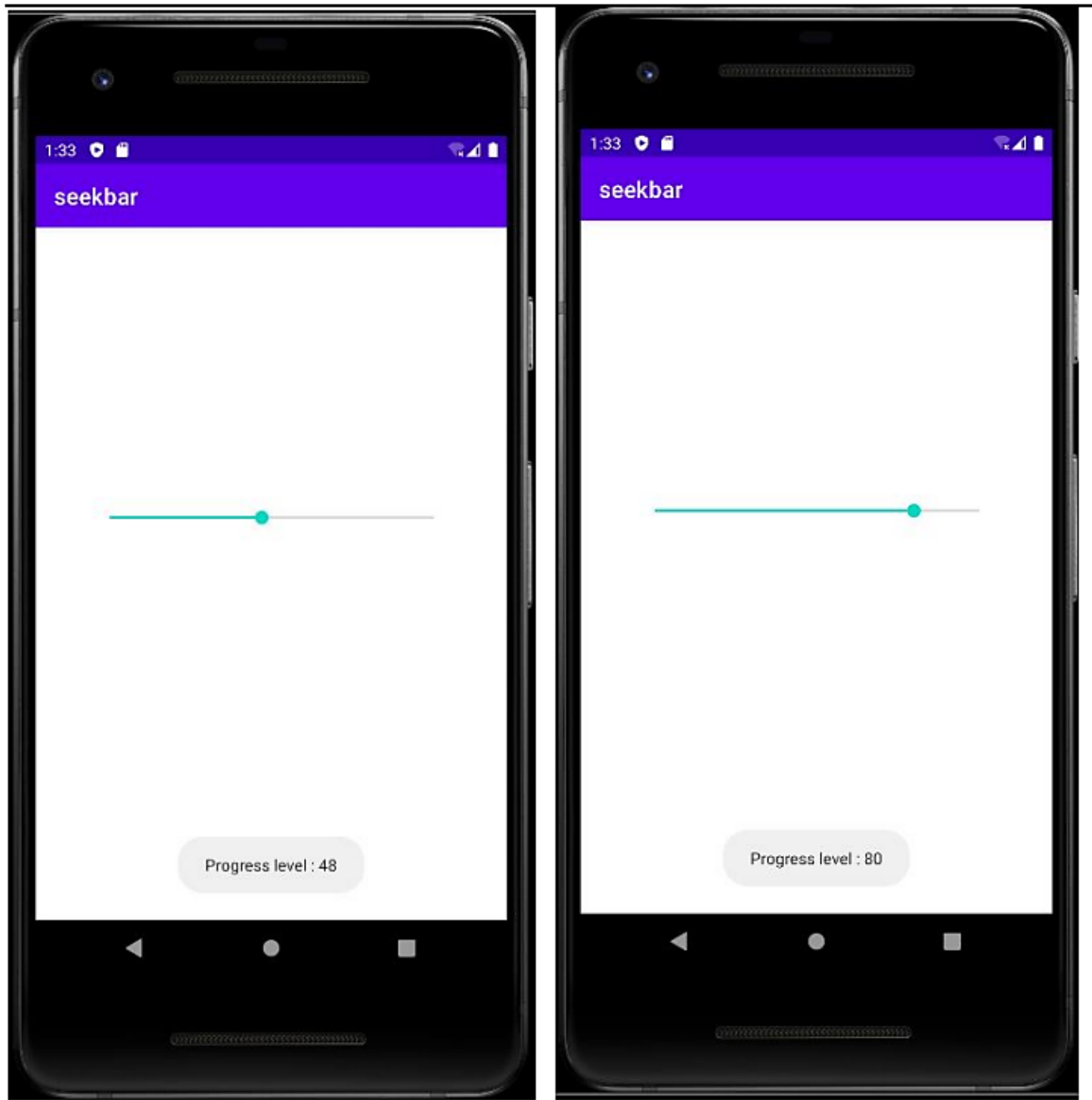
        SeekBar s=(SeekBar) findViewById(R.id.seekBar);
        s.setOnSeekBarChangeListener(new SeekBar.OnSeekBarChangeListener() {
            @Override
            public void onProgressChanged(SeekBar seekBar, int i, boolean b) {
                Toast.makeText(getApplicationContext(),"Progress level :
"+i,Toast.LENGTH_LONG).show();
            }

            @Override
            public void onStartTrackingTouch(SeekBar seekBar) {

            }

            @Override
            public void onStopTrackingTouch(SeekBar seekBar) {

            }
        });
    }
}
```



SPINNER

Activity_main.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">

    <Spinner
        android:id="@+id/spinner"
        android:layout_width="395dp"
        android:layout_height="78dp"
        android:entries="@array/course"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.454" />

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

Strings.xml

```
<resources>
    <string name="app_name">spinner</string>
    <string-array name="course">
        <item>C</item>
        <item>C++</item>
        <item>Java</item>
    </string-array>
</resources>
```

MainActivity.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 {

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

        String[] course={"C","C++","Java"};
        Spinner sp=(Spinner) findViewById(R.id.spinner);
```

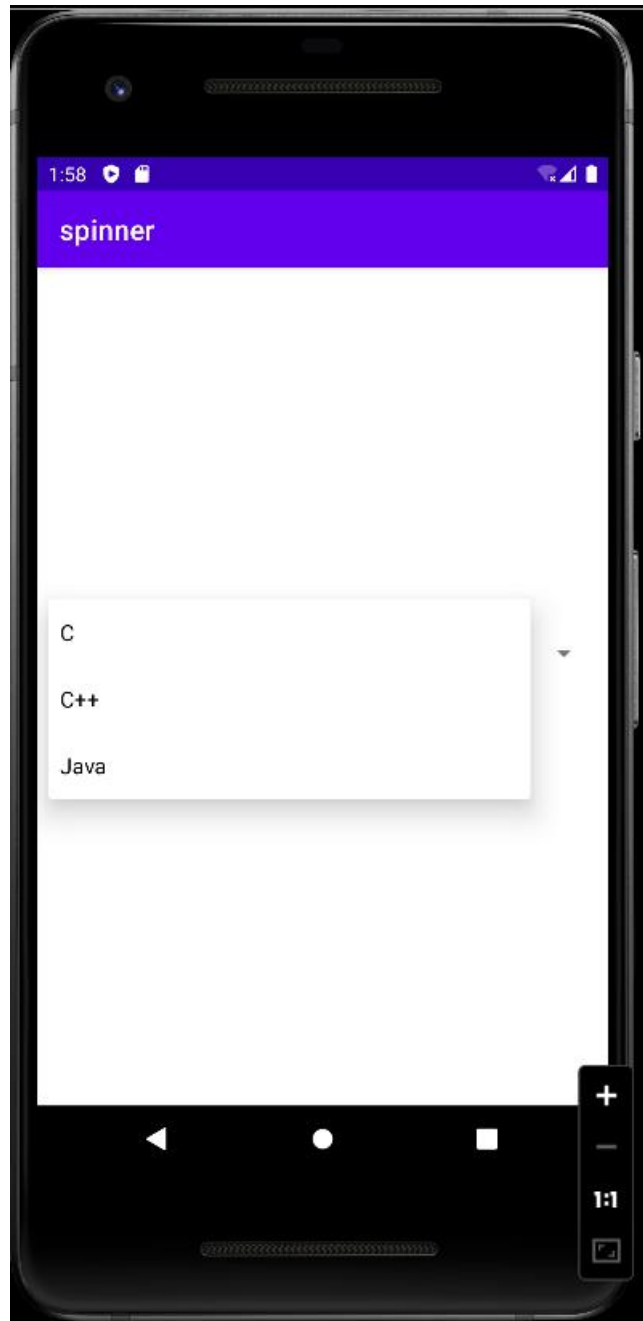
```
        ArrayAdapter<String> adp=new ArrayAdapter<>(getApplicationContext(),
android.R.layout.simple_spinner_dropdown_item,course);
        sp.setAdapter(adp);

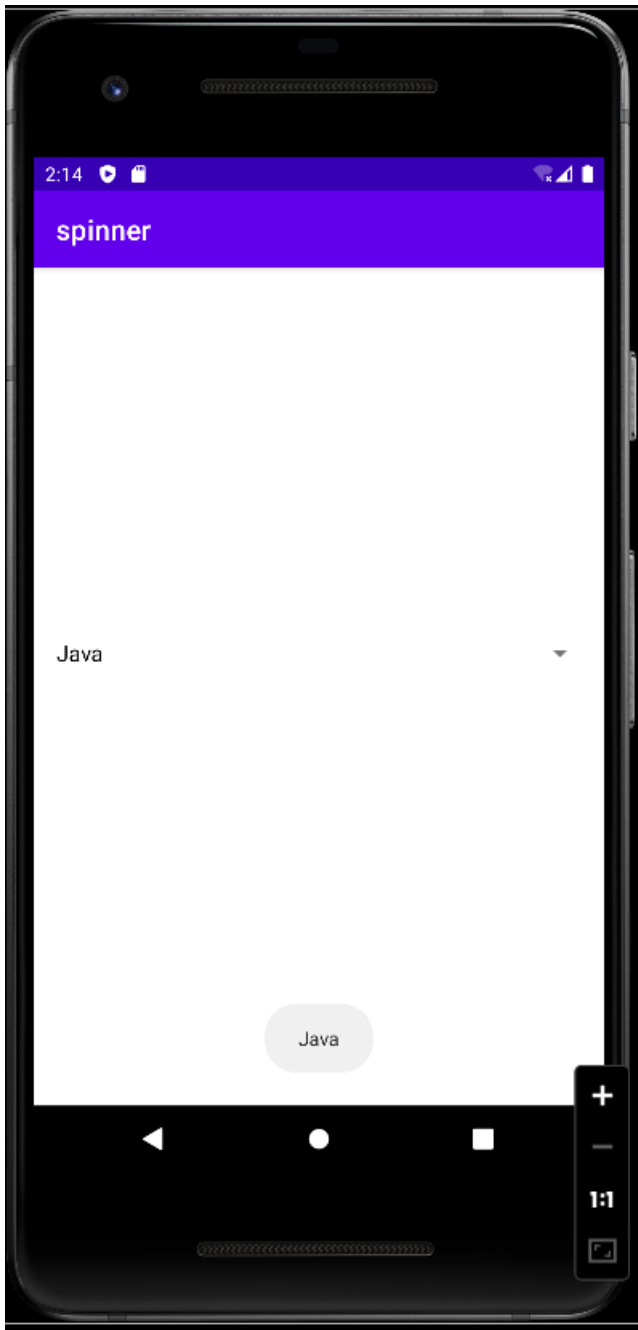
        sp.setOnItemClickListener(new AdapterView.OnItemClickListener() {
            @Override
            public void onItemClick(AdapterView<?> adapterView, View view, int i,
long l) {
Toast.makeText(getApplicationContext(),course[i],Toast.LENGTH_LONG).show();
            }

            @Override
            public void onNothingSelected(AdapterView<?> adapterView) {

            }

        });
    }
}
```





AUTO COMPLETE TEXT VIEW

Activity main.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">

    <AutoCompleteTextView
        android:id="@+id/autoCompleteTextView"
        android:layout_width="256dp"
        android:layout_height="65dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.432"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.364" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.java

```
package com.example.autocompleteview;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.widget.ArrayAdapter;
import android.widget.AutoCompleteTextView;

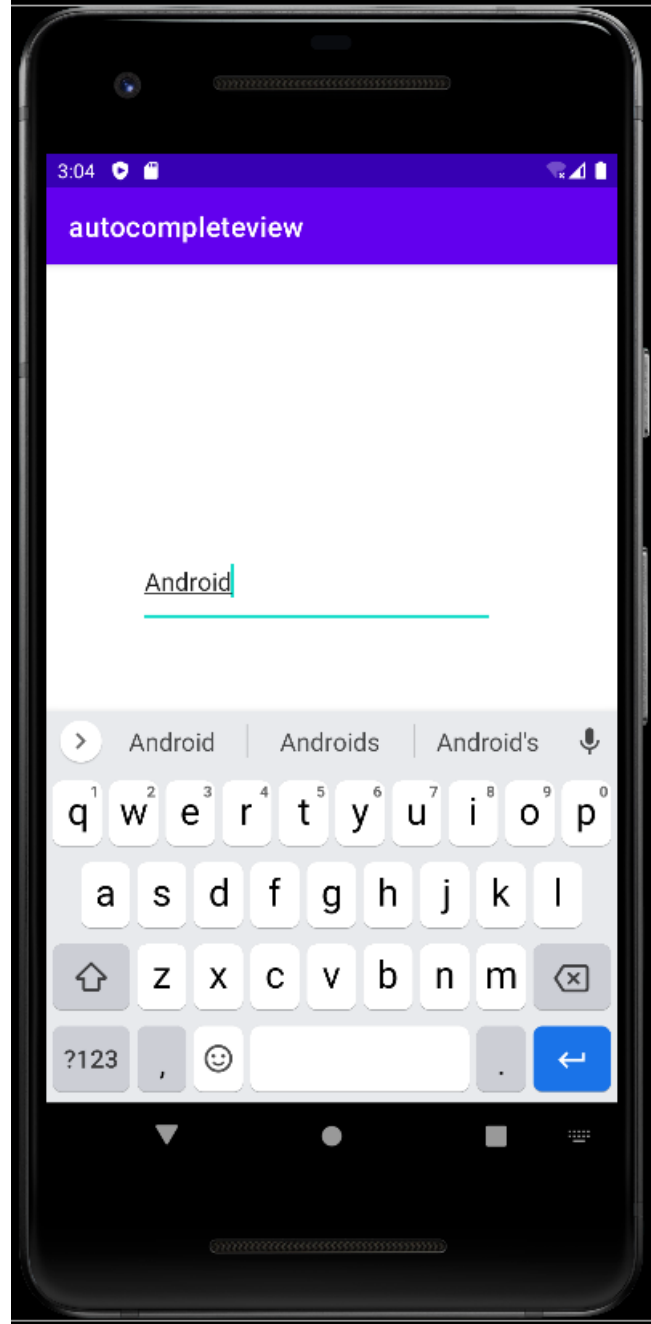
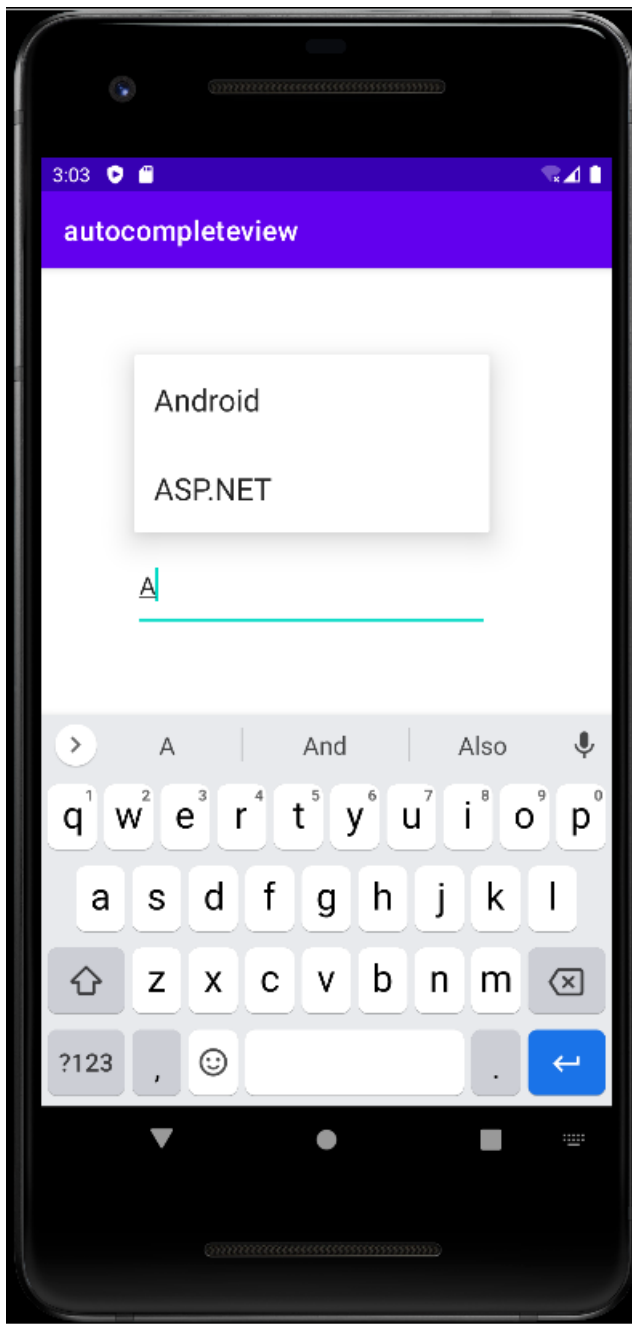
public class MainActivity extends AppCompatActivity {

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

        String[] lan={"C","C++","Java",".NET","Android","ASP.NET","PHP"};

        ArrayAdapter<String> adp=new ArrayAdapter<>(this,
android.R.layout.select_dialog_item,lan);

        AutoCompleteTextView at=(AutoCompleteTextView)
findViewById(R.id.autoCompleteTextView);
        at.setThreshold(1); //from 1st char
        at.setAdapter(adp);
    }
}
```



THREE IMAGES WITH BUTTON

Activity main.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">

    <ImageView
        android:id="@+id/imageView"
        android:layout_width="352dp"
        android:layout_height="398dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.491"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.117"
        tools:srcCompat="@tools:sample/avatars" />

    <Button
        android:id="@+id/b1"
        android:layout_width="215dp"
        android:layout_height="60dp"
        android:onClick="Loadimage"
        android:text="Kl Rahul"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.773" />

    <Button
        android:id="@+id/b2"
        android:layout_width="215dp"
        android:layout_height="60dp"
        android:onClick="Loadimage"
        android:text="Virat Kholi"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.876" />

    <Button
```

```
        android:id="@+id/b3"
        android:layout_width="215dp"
        android:layout_height="60dp"
        android:onClick="Loadimage"
        android:text="R Sharma"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.976" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.java

```
package com.example.three_images;

import androidx.appcompat.app.AppCompatActivity;

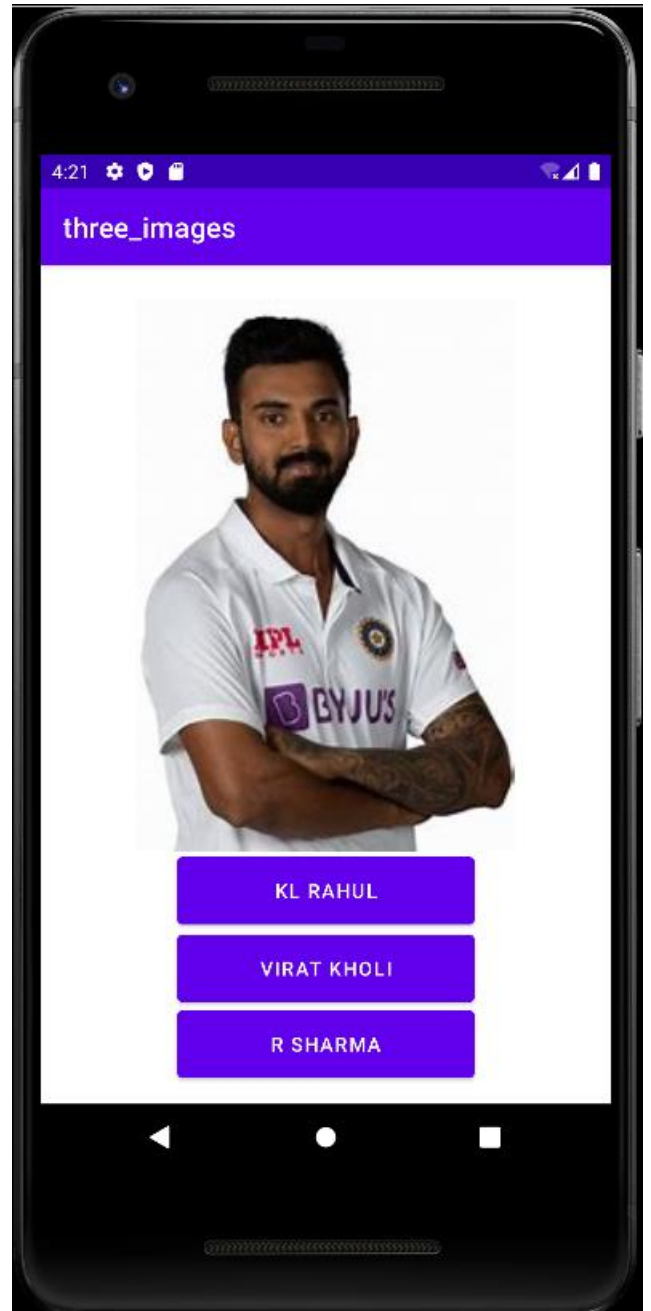
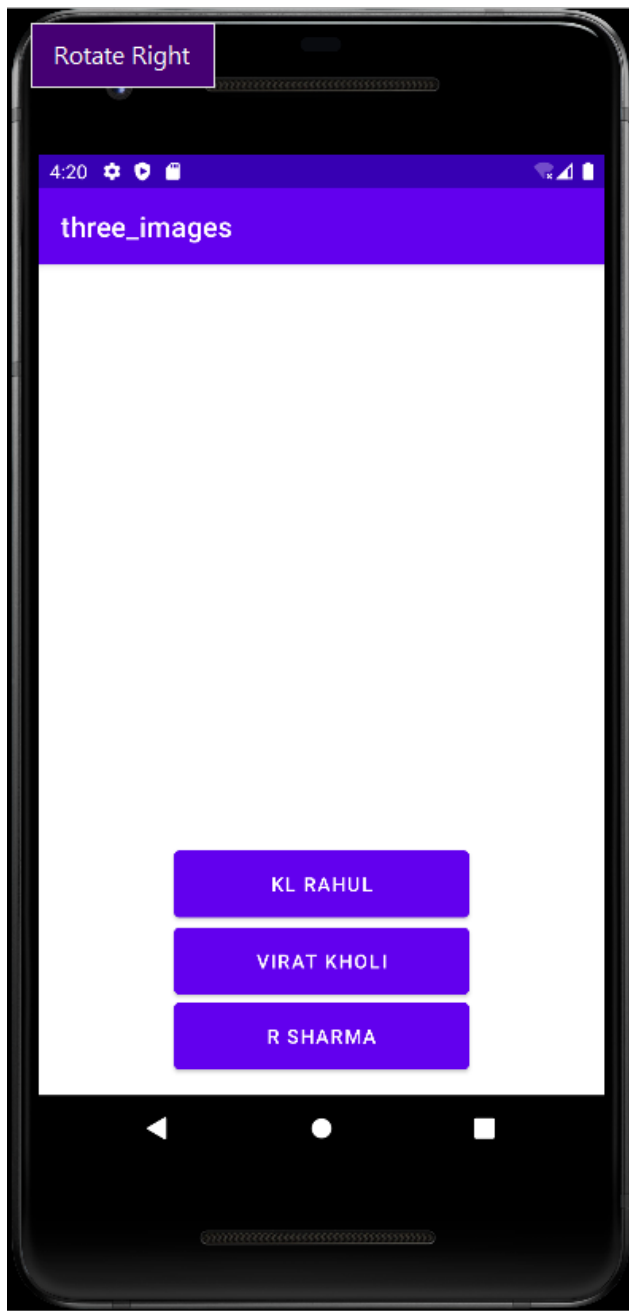
import android.os.Bundle;
import android.view.View;
import android.widget.*;

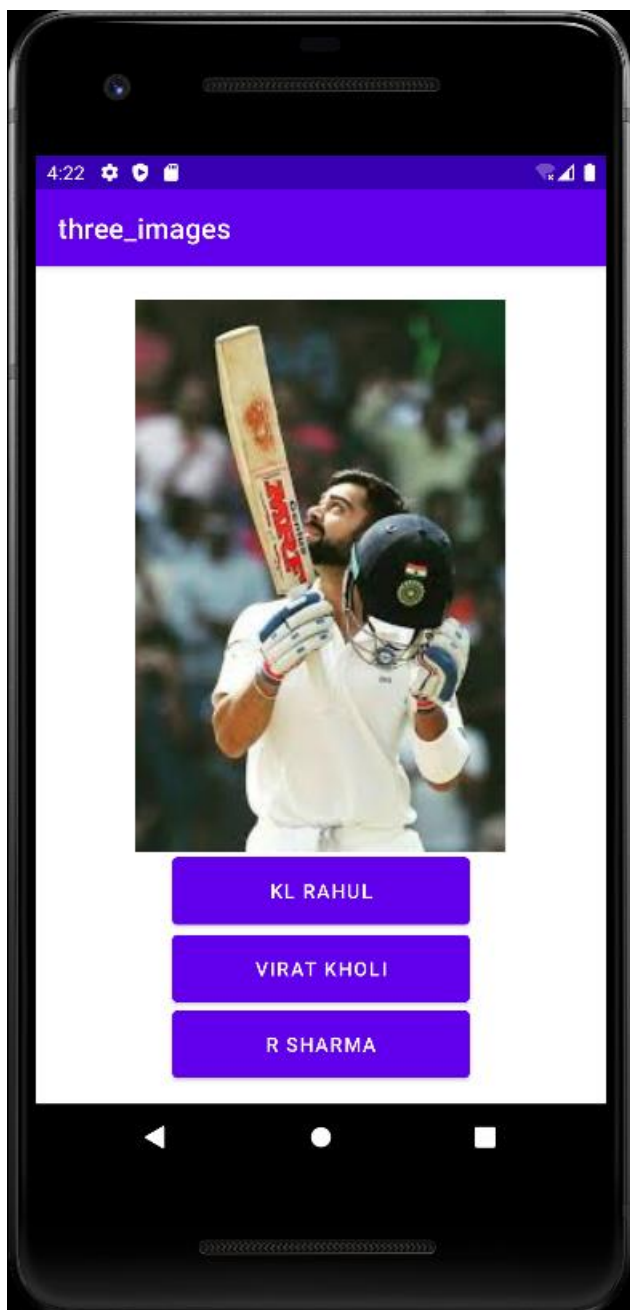
public class MainActivity extends AppCompatActivity {
    //YUVARAJ 20BCA0114
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }

    public void Loadimage(View view)
    {
        ImageView img1=(ImageView) findViewById(R.id.imageView);
        switch(view.getId())
        {
            case R.id.b1:
                img1.setImageResource(R.drawable.rahul);
                break;

            case R.id.b2:
                img1.setImageResource(R.drawable.kholi);
                break;

            case R.id.b3:
                img1.setImageResource(R.drawable.rohit);
                break;
        }
    }
}
```





LISTVIEW

Activity main.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/textView2"
        android:layout_width="189dp"
        android:layout_height="43dp"
        android:text="Select Your Country"
        android:textSize="18sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.198"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.201" />

    <ListView
        android:layout_width="335dp"
        android:layout_height="50dp"
        android:id="@+id/listview"
        android:entries="@array/country"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.64"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.328" />

    <Button
        android:id="@+id/button2"
        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_constraintHorizontal_bias="0.501"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.54" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.java

```
package com.example.listview;

import androidx.appcompat.app.AppCompatActivity;
```

```

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.ArrayAdapter;
import android.widget.Button;
import android.widget.ListView;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

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

        String[] arr={"India","China","Japan"};

        ArrayAdapter<String> adp=new ArrayAdapter<>(getApplicationContext(),
android.R.layout.simple_list_item_1,arr);

        ListView lv=(ListView) findViewById(R.id.listview);
        Button b1=(Button) findViewById(R.id.button2);
        lv.setAdapter(adp);

        lv.setOnItemClickListener(new AdapterView.OnItemClickListener() {
            @Override
            public void onItemClick(AdapterView<?> adapterView, View view, int i, long
1) {
                String str=(String) lv.getItemAtPosition(i);

                Toast.makeText(getApplicationContext(),"The country :
"+str,Toast.LENGTH_LONG).show();

            }
        });
    }
}

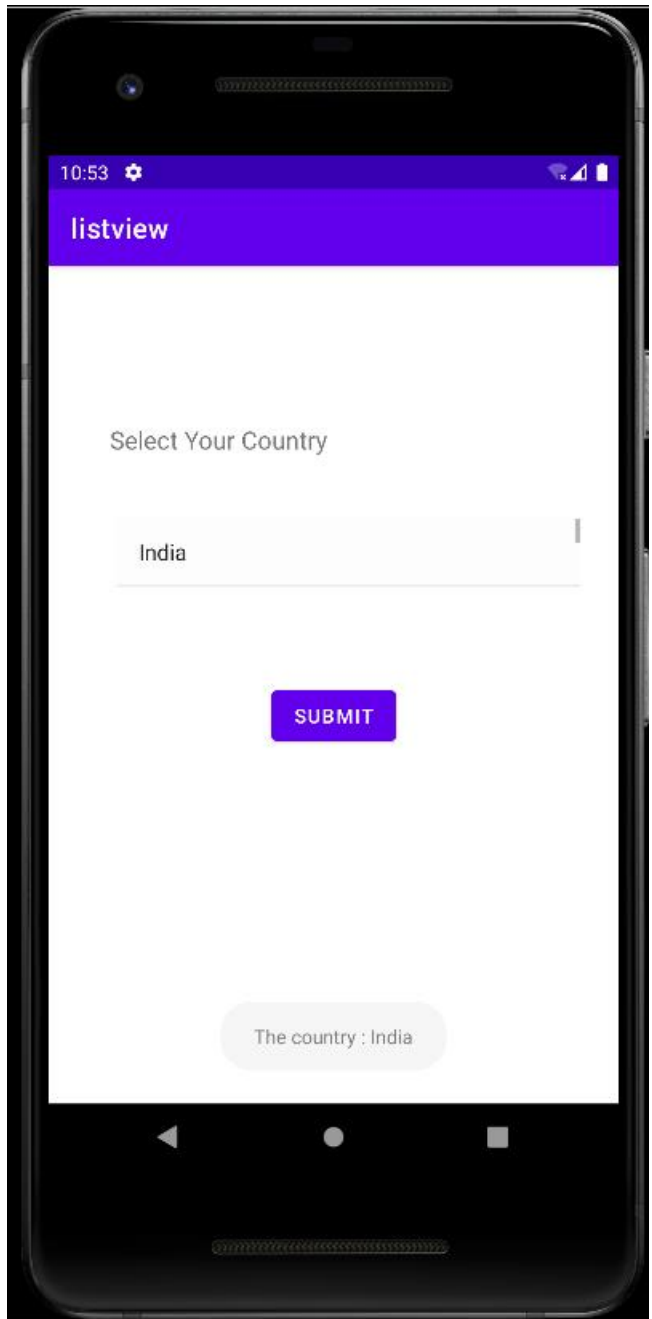
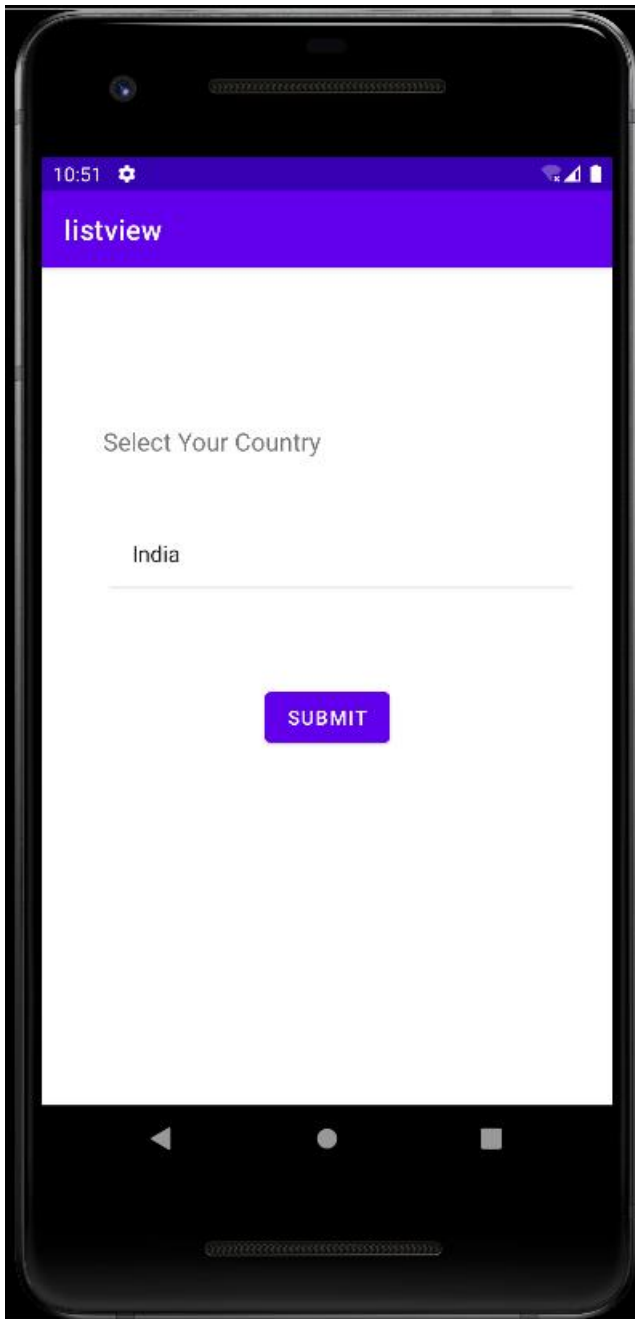
```

strings.xml

```

<resources>
    <string name="app_name">listview</string>
    <string-array name="country">
        <item>India</item>
        <item>China</item>
        <item>Japan</item>
    </string-array>
</resources>

```

CUSTOM LISTVIEW

Activity main.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">

    <ListView
        android:layout_width="306dp"
        android:id="@+id/list1"
        android:layout_height="294dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.491"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.459" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

Activity mylist.xml

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

    <ImageView
        android:id="@+id/icon"
        android:layout_width="123dp"
        android:layout_height="89dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.065"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        tools:srcCompat="@tools:sample/avatars" />

    <TextView
        android:id="@+id/title1"
        android:layout_width="162dp"
        android:layout_height="48dp"
        android:text="TextView"
        android:textSize="20sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.924"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.459" />
```

```

<TextView
    android:id="@+id/title2"
    android:layout_width="160dp"
    android:layout_height="50dp"
    android:text="TextView"
    android:textSize="17sp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.984"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="1.0" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

MainActivity.java

```

package com.example.custom_listview;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.ListView;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

    ListView list;
    String[] maintitle={
        "Google","Insta","You Tube"
    };
    String[] subtitle={
        "-to search","-social media","-to play videos"
    };
    Integer[] imgid={
        R.drawable.google, R.drawable insta,R.drawable.youtube
    };
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        SocialAdapter adp=new SocialAdapter(this,maintitle,subtitle,imgid);

        list=(ListView) findViewById(R.id.list1);
        list.setAdapter(adp);

        list.setOnItemClickListener(new AdapterView.OnItemClickListener() {
            @Override
            public void onItemClick(AdapterView<?> adapterView, View view, int i, long
1) {
                if(i==0)
                {
                    Toast.makeText(getApplicationContext(),"This is
google",Toast.LENGTH_LONG).show();
                }
                else if(i==1)
                {
                    Toast.makeText(getApplicationContext(),"This is
insta",Toast.LENGTH_LONG).show();

```

```

    }
    else if(i==2)
    {
        Toast.makeText(getApplicationContext(),"This is you
tube",Toast.LENGTH_LONG).show();
    }
}
});
}
}

```

SocialAdapter.java

```

package com.example.custom_listview;

import android.app.Activity;
import android.text.Layout;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.ArrayAdapter;
import android.widget.ImageView;
import android.widget.TextView;

import org.w3c.dom.Text;

public class SocialAdapter extends ArrayAdapter<String> {
    Activity context;
    String[] maintitle;
    String[] subtitle;
    Integer[] imgid;

    public SocialAdapter(Activity context, String[] maintitle, String[] subtitle,
Integer[] imgid)
    {
        super(context,R.layout.activity_mylist,maintitle);

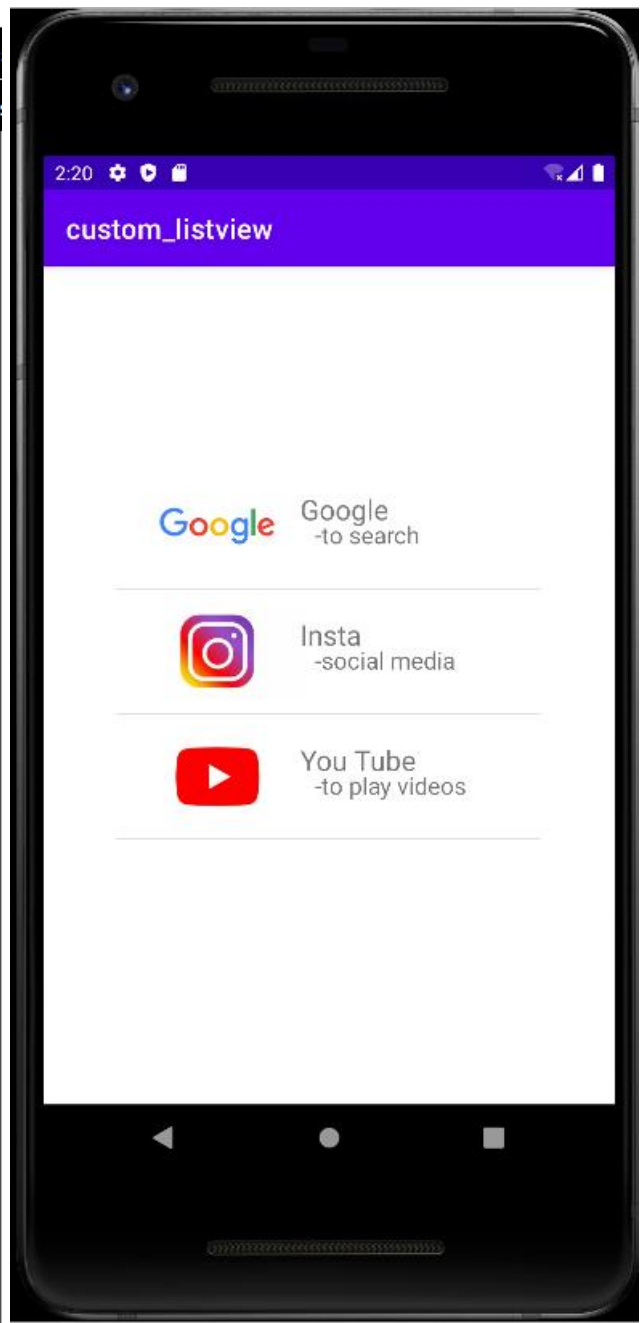
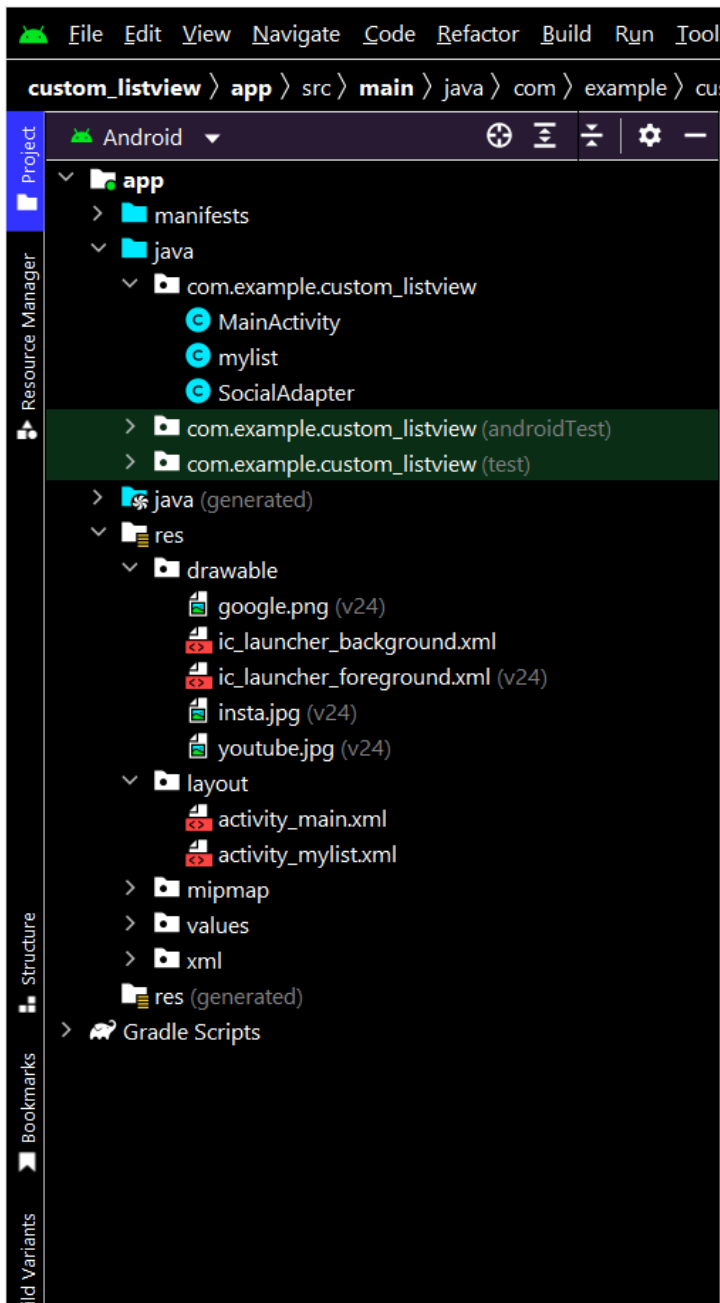
        this.context=context;
        this.maintitle=maintitle;
        this.subtitle=subtitle;
        this.imgid=imgid;
    }

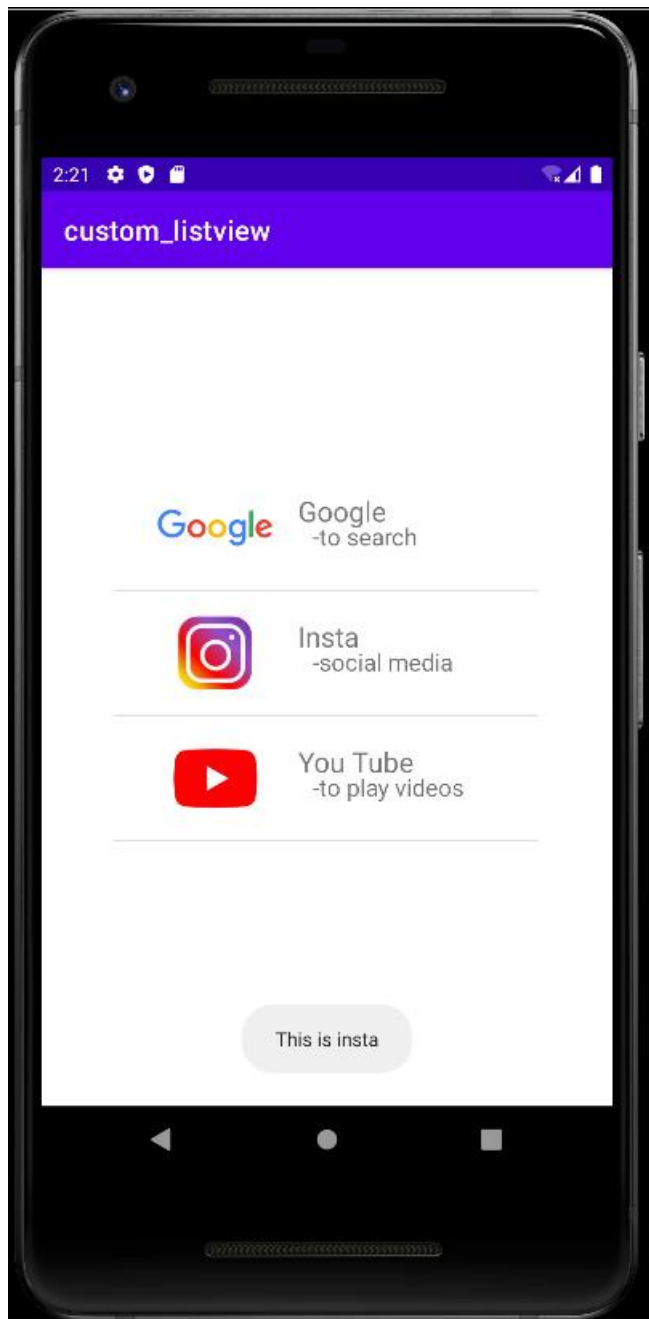
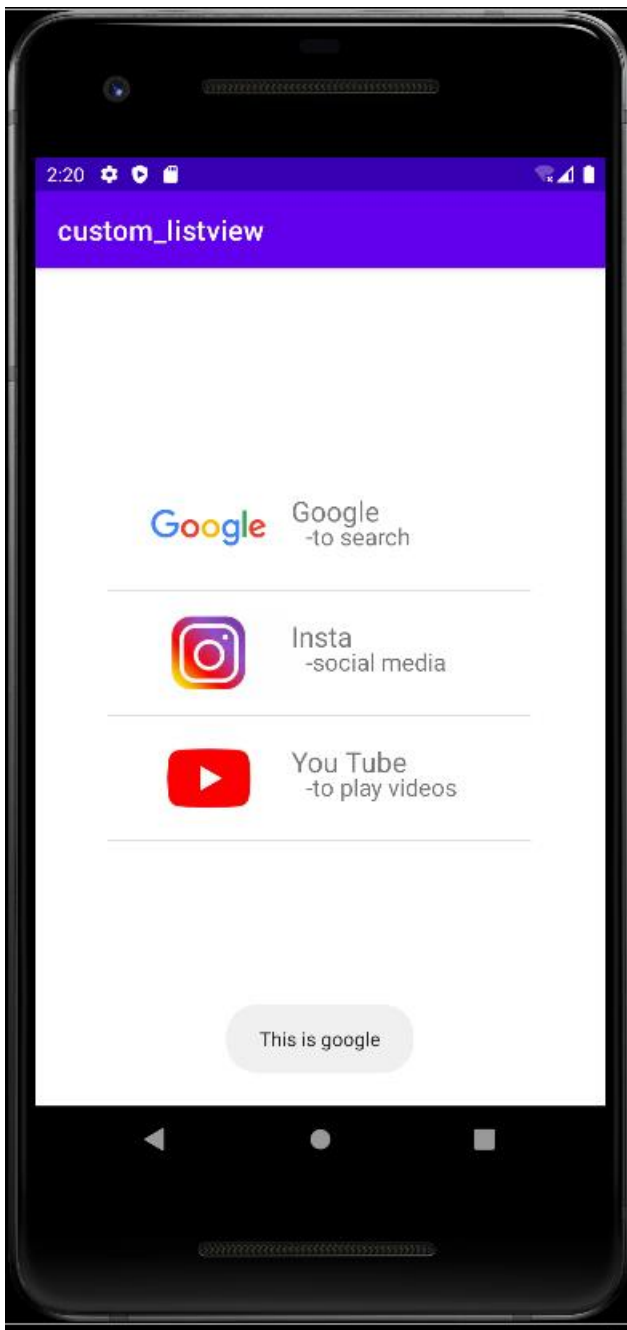
    public View getView(int position, View v, ViewGroup parent)
    {
        View
row=context.getLayoutInflater().inflate(R.layout.activity_mylist,null,true);
        TextView title_text=(TextView) row.findViewById(R.id.title1);
        ImageView img=(ImageView) row.findViewById(R.id.icon);
        TextView sub_title=(TextView) row.findViewById(R.id.title2);

        title_text.setText(maintitle[position]);
        img.setImageResource(imgid[position]);
        sub_title.setText(subtitle[position]);

        return row;
    }
}

```





ALERT DIALOG

Activity main.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/textView"
        android:layout_width="311dp"
        android:layout_height="94dp"
        android:text="Click the button to get alert msg"
        android:textSize="20sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.63"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.153" />

    <Button
        android:id="@+id/button"
        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="0.526"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.431" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.java

```
package com.example.alertdialog;

import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;

import android.content.DialogInterface;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;

import java.util.Locale;

public class MainActivity extends AppCompatActivity {

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

        Button b1=(Button) findViewById(R.id.button);
```

```

AlertDialog.Builder b=new AlertDialog.Builder(this);
b.setIcon(R.drawable.pic);
b.setTitle("This is the Alert Box");
b.setMessage("Are you sure you want to go to next activity ?.");

b.setPositiveButton("OK", new DialogInterface.OnClickListener() {
    @Override
    public void onClick(DialogInterface dialogInterface, int i) {

        Intent in=new Intent(getApplicationContext(),second_activity.class);
        startActivity(in);
        finish();

    }

});

b.setNegativeButton("Cancel", new DialogInterface.OnClickListener() {
    @Override
    public void onClick(DialogInterface dialogInterface, int i) {

        dialogInterface.dismiss();

    }

});

b1.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        AlertDialog alt=b.create();
        alt.show();
    }

});

}

}

```

activity_second.xml

```

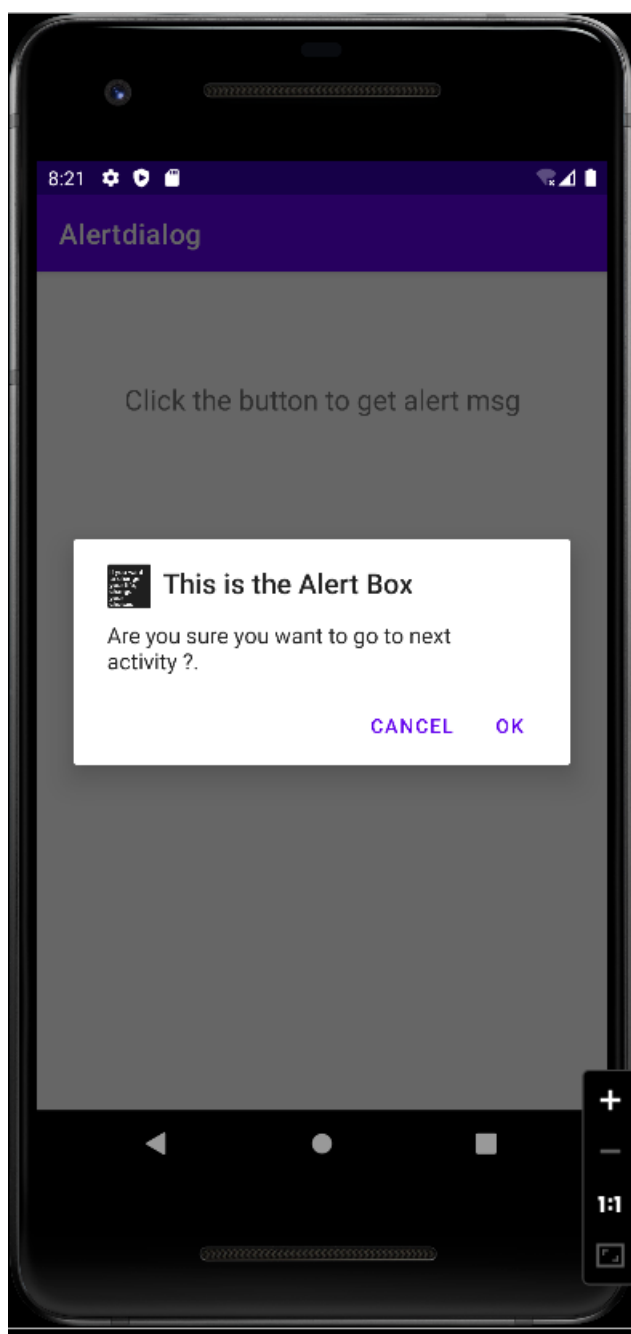
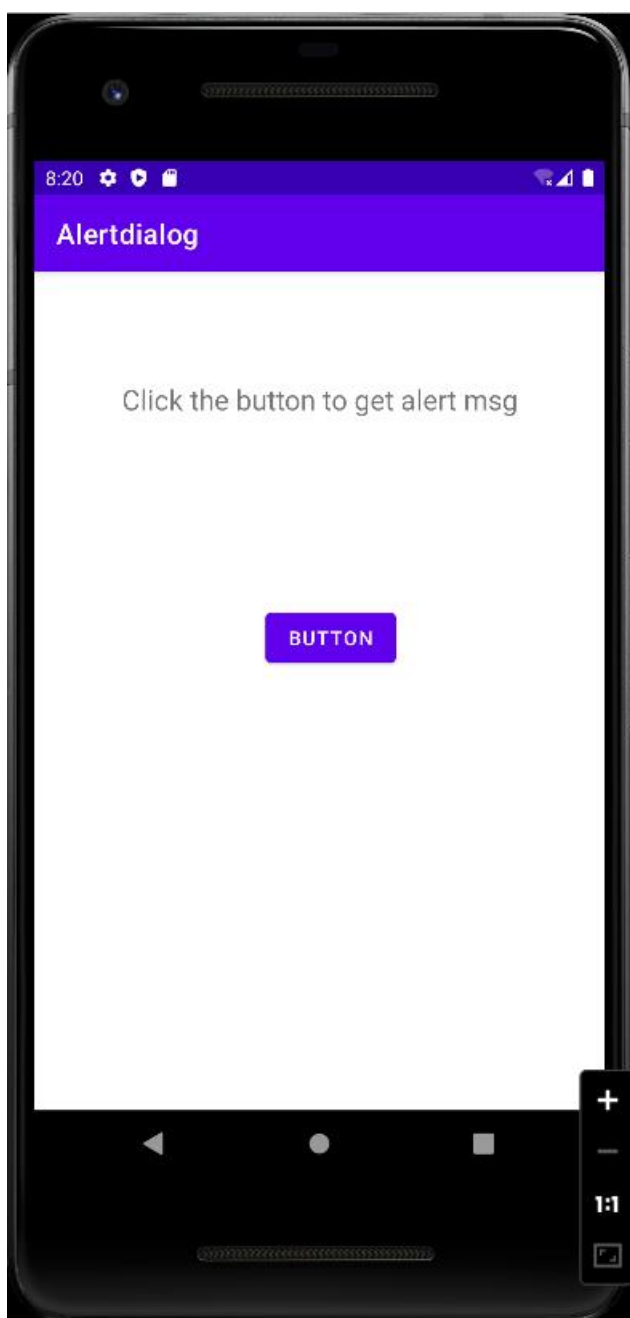
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"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

    <TextView
        android:id="@+id/textView2"
        android:layout_width="261dp"
        android:layout_height="101dp"
        android:text="This is second activity"
        android:textSize="20sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.467"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>

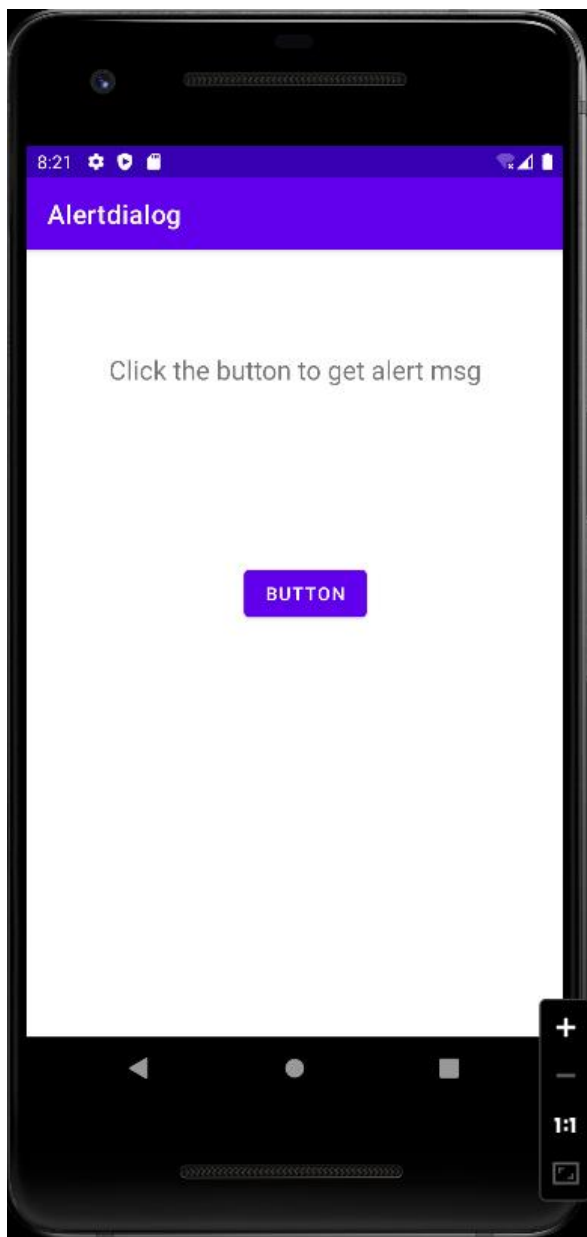
```


Second activity.java

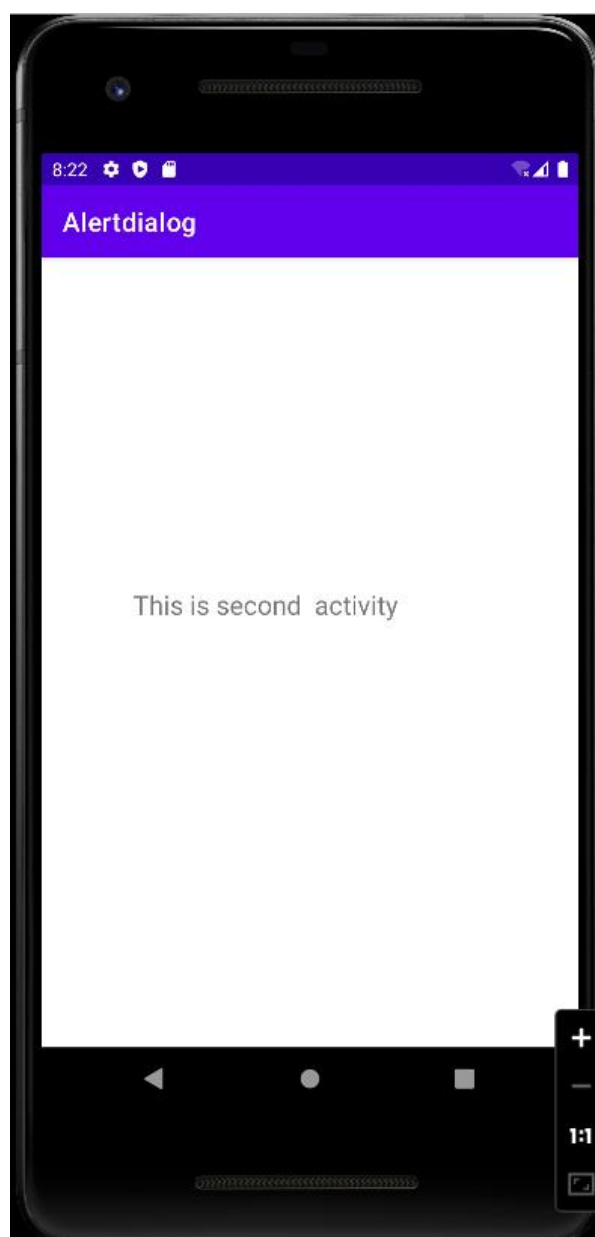
```
package com.example.alertdialog;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
  
public class second_activity extends AppCompatActivity {  
  
    @Override  
    protected void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.activity_second);  
  
    }  
}
```



Clicking cancel :



Clicking ok :



CUSTOM ALERT DIALOG

Activity main.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/textView"
        android:layout_width="285dp"
        android:layout_height="51dp"
        android:text="Custom Dialog"
        android:textAlignment="center"
        android:textSize="20sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.3" />

    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Button"
        android:onClick="disp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.498"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.465" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.java

```
package com.example.customdialog;

import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.Button;

public class MainActivity extends AppCompatActivity {

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

        Button b1=(Button)findViewById(R.id.button);
        b1.setOnClickListener(new View.OnClickListener() {
```

```

        @Override
        public void onClick(View view) {
            AlertDialog.Builder build=new AlertDialog.Builder(MainActivity.this);
            ViewGroup vg=findViewById(android.R.id.content);
            View v1=
LayoutInflater.from(view.getContext()).inflate(R.layout.activity_rating,vg,false);
            build.setView(v1);
            AlertDialog alt=build.create();
            alt.show();

        }
    });
}
}

```

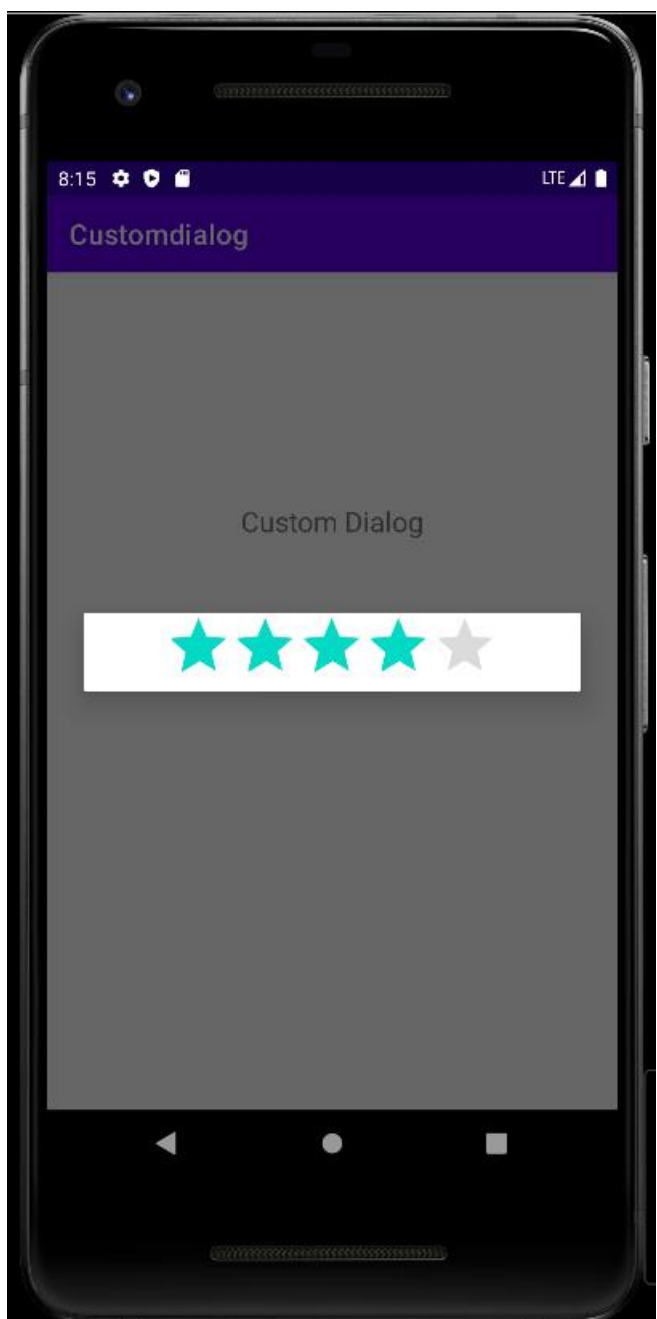
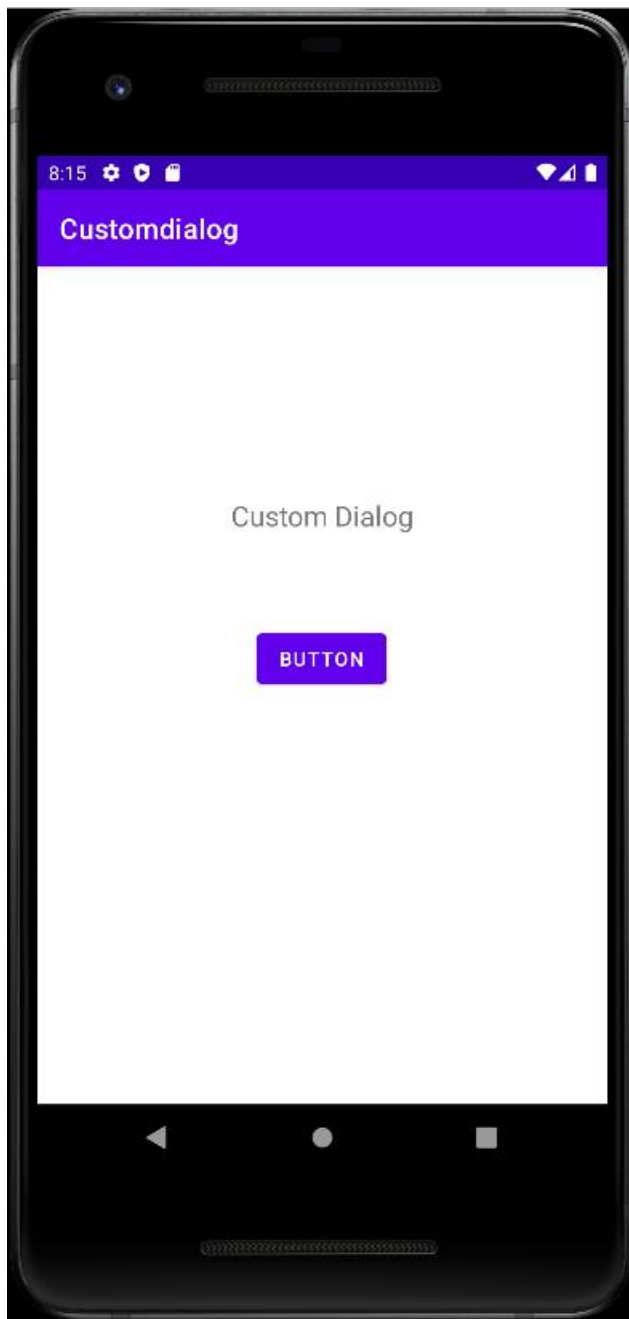
activity_rating.xml

```

<?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=".rating">

    <RatingBar
        android:id="@+id/ratingBar"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        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" />
</androidx.constraintlayout.widget.ConstraintLayout>

```



EXPLICIT INTENT USING BUNDLE (SUM OF TWO NUMBERS; RESULT IN SECOND ACTIVITY)

Activity main.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">

    <EditText
        android:id="@+id/n1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPersonName"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.925"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.307" />

    <EditText
        android:id="@+id/n2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPersonName"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.92"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.415" />

    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="sum"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.498"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.56" />

    <TextView
        android:id="@+id/textView"
        android:layout_width="111dp"
        android:layout_height="38dp"
        android:text="Number 1"
        android:textAlignment="center"
        android:textSize="18dp"
        android:textStyle="bold"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
```

```

        app:layout_constraintHorizontal_bias="0.09"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.307" />

<TextView
    android:id="@+id/textView2"
    android:layout_width="110dp"
    android:layout_height="40dp"
    android:text="Number 2"
    android:textAlignment="center"
    android:textSize="18dp"
    android:textStyle="bold"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.093"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.412" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

MainActivity.java

```

package com.example.intent_using_bundle;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;

public class MainActivity extends AppCompatActivity {

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

        Button b1=(Button)findViewById(R.id.button);

        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Intent i=new Intent(MainActivity.this,second_activity.class);
                EditText a=(EditText) findViewById(R.id.n1);
                EditText b=(EditText) findViewById(R.id.n2);

                int x=Integer.parseInt(a.getText().toString());
                int y=Integer.parseInt(b.getText().toString());
                Bundle bun=new Bundle();
                bun.putInt("num1",x);
                bun.putInt("num2",y);

                i.putExtras(bun);
                startActivity(i);

            }
        });
    }
}

```

activity_second.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=".second_activity">

    <TextView
        android:id="@+id/result"
        android:layout_width="273dp"
        android:layout_height="72dp"
        android:text="TextView"
        android:textAlignment="textStart"
        android:textSize="18dp"
        android:textStyle="bold"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

Second activity.java

```
package com.example.intent_using_bundle;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.widget.TextView;

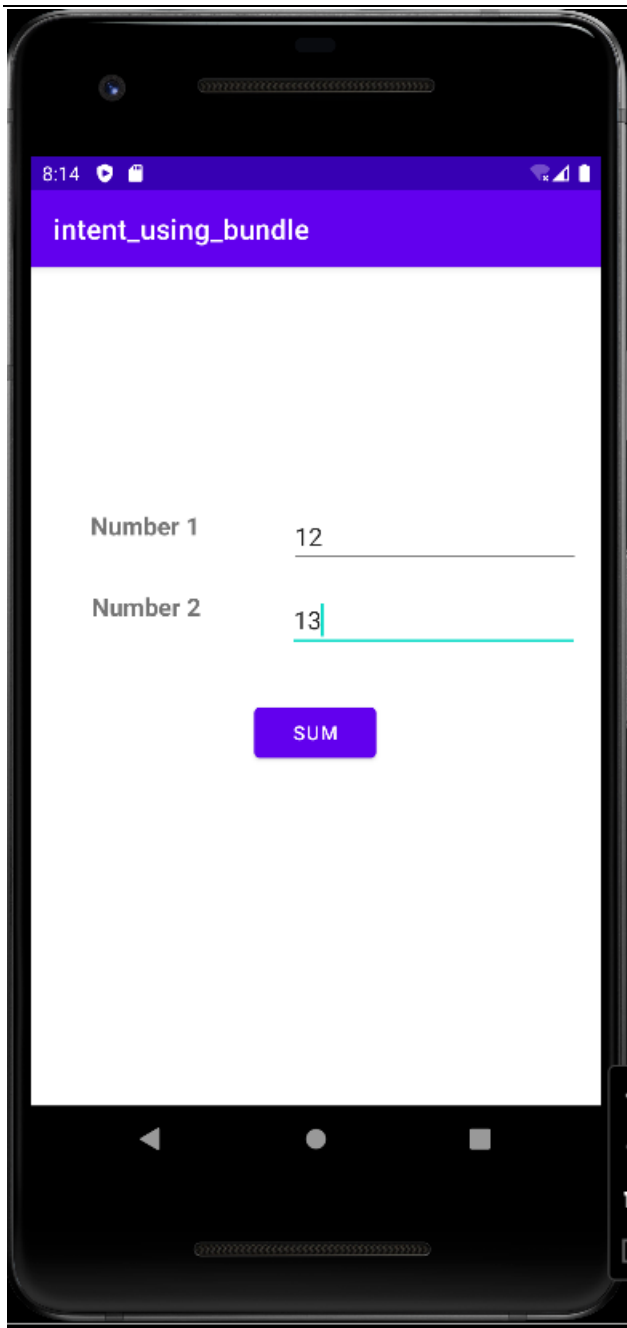
public class second_activity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_second);

        Bundle bun=getIntent().getExtras();
        int x=bun.getInt("num1");
        int y=bun.getInt("num2");

        int sum=x+y;

        TextView r=(TextView) findViewById(R.id.result);
        r.setText("The sum of "+x+" and "+y+" is "+String.valueOf(sum));
    }
}
```

SUM OF TWO NUMBERS (USING EXPLICIT INTENT; WITHOUT BUNDLE)

(RESULT IN NEW ACTIVITY)

Activity main.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">

    <EditText
        android:id="@+id/n1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPersonName"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.925"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.307" />

    <EditText
        android:id="@+id/n2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPersonName"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.92"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.415" />

    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="sum"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.498"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.56" />

    <TextView
        android:id="@+id/textView"
        android:layout_width="111dp"
        android:layout_height="38dp"
        android:text="Number 1"
        android:textAlignment="center"
```

```

        android:textSize="18dp"
        android:textStyle="bold"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.09"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.307" />

<TextView
    android:id="@+id/textView2"
    android:layout_width="110dp"
    android:layout_height="40dp"
    android:text="Number 2"
    android:textAlignment="center"
    android:textSize="18dp"
    android:textStyle="bold"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.093"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.412" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

Mainactivity.java

```

package com.example.intent_without_bundle;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;

public class MainActivity extends AppCompatActivity {

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

        Button b1=(Button) findViewById(R.id.button);
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                EditText e1=(EditText) findViewById(R.id.n1);
                EditText e2=(EditText) findViewById(R.id.n2);
                Intent i=new Intent(MainActivity.this,second_activity.class);
                String x=e1.getText().toString();
                String y=e2.getText().toString();
                i.putExtra("num1",x);
                i.putExtra("num2",y);
                startActivity(i);
            }
        });
    }
}

```

activity_second.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=".second_activity">

    <TextView
        android:id="@+id/result"
        android:layout_width="273dp"
        android:layout_height="72dp"
        android:text="TextView"
        android:textAlignment="textStart"
        android:textSize="18dp"
        android:textStyle="bold"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

Second activity.java

```
package com.example.intent_without_bundle;

import androidx.appcompat.app.AppCompatActivity;

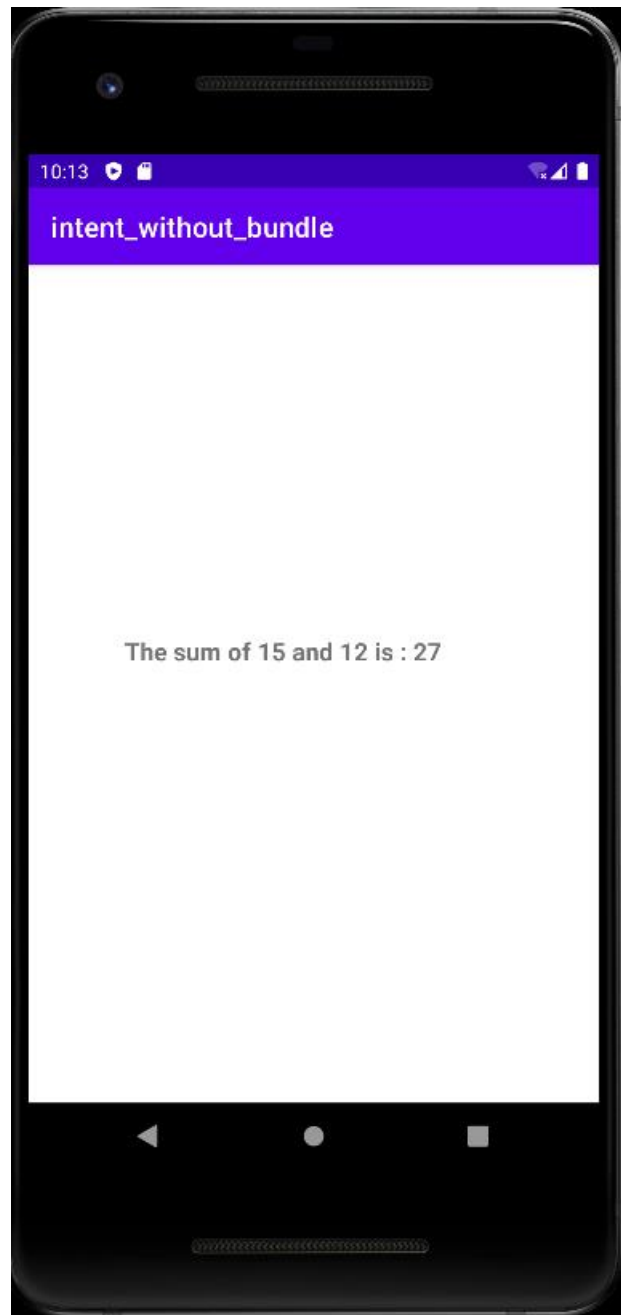
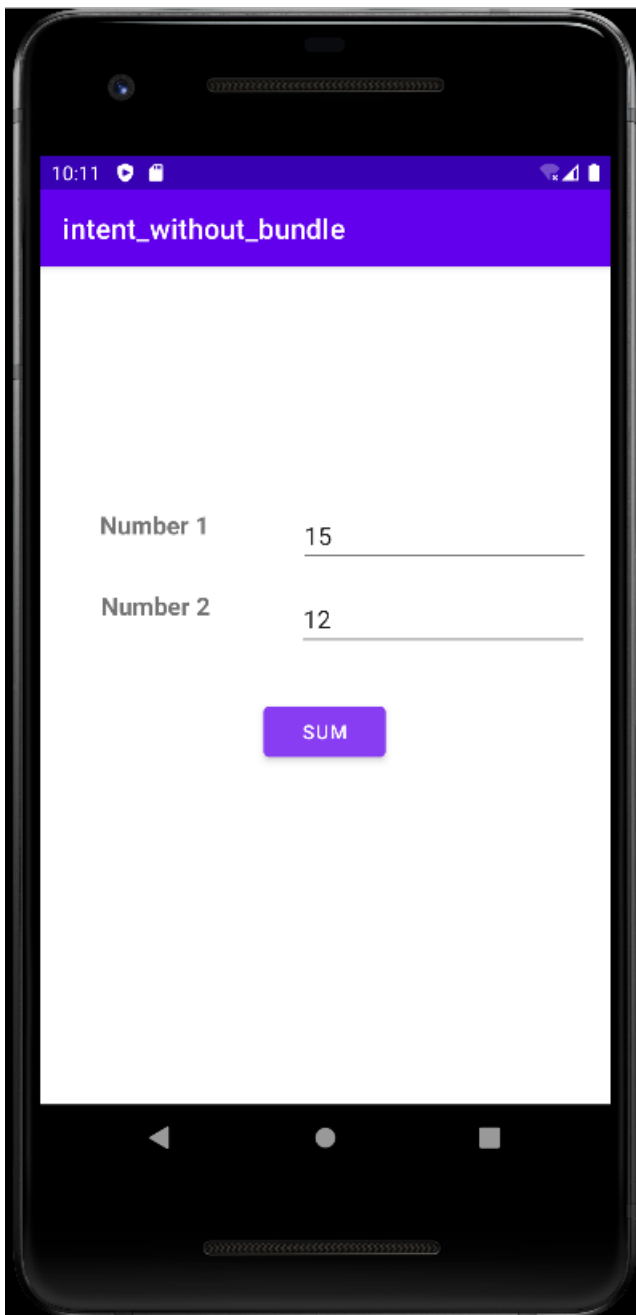
import android.content.Intent;
import android.os.Bundle;
import android.widget.EditText;
import android.widget.TextView;

public class second_activity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_second);

        Intent ii=getIntent();
        String a=ii.getStringExtra("num1");
        String b=ii.getStringExtra("num2");

        int l=Integer.parseInt(a);
        int m=Integer.parseInt(b);
        int sum=l+m;
        TextView r=(TextView) findViewById(R.id.result);
        r.setText("The sum of "+a+" and "+b+" is : "+String.valueOf(sum));
    }
}
```



IMPLICIT INTENT

Activity main.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">

    <Button
        android:id="@+id/button"
        android:layout_width="377dp"
        android:layout_height="61dp"
        android:text="Open Google"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.231" />

    <Button
        android:id="@+id/button2"
        android:layout_width="377dp"
        android:layout_height="61dp"
        android:text="Dial : 9361317280"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.529"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.355" />

    <Button
        android:id="@+id/button3"
        android:layout_width="377dp"
        android:layout_height="61dp"
        android:text="Location To Taj Mahal"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.47"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.486" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.java

```
package com.example.implicit_intent;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;

import java.util.Locale;
```

```

public class MainActivity extends AppCompatActivity {

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

        Button b1=(Button) findViewById(R.id.button);
        Button b2=(Button) findViewById(R.id.button2);
        Button b3=(Button) findViewById(R.id.button3);

        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Uri url= Uri.parse("https://www.google.com");
                Intent it=new Intent(Intent.ACTION_VIEW,url);
                startActivity(it);
            }
        });

        b2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Uri ph=Uri.parse("tel:9361317280");
                Intent it=new Intent(Intent.ACTION_DIAL,ph);
                startActivity(it);
            }
        });

        b3.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                String
uri=String.format(Locale.ENGLISH,"https://maps.google.com/maps?q=loc:%f,%f",27.173891,7
8.042068);
                Uri loc=Uri.parse(uri);
                Intent it=new Intent(Intent.ACTION_VIEW,loc);
                startActivity(it);
            }
        });
    }
}

```

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">

    <uses-permission android:name="android.permission.INTERNET"
    />
    <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:supportRtl="true"
        android:theme="@style/Theme.Implicit_intent"
    >

```

```
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>
```

OPEN CAMERA, TAKE PICTURE AND SET THE IMAGE

IN IMAGEVIEW

Activity_main.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">

    <Button
        android:id="@+id/button"
        android:layout_width="253dp"
        android:layout_height="58dp"
        android:text="Open Camera"
        android:onClick="getImage"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.187" />

    <ImageView
        android:id="@+id/imageView"
        android:layout_width="262dp"
        android:layout_height="284dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.499"
        tools:srcCompat="@tools:sample/avatars" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.java

```
package com.example.image_capture;

import androidx.annotation.Nullable;
import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.graphics.Bitmap;
import android.os.Bundle;
import android.provider.MediaStore;
import android.view.View;
import android.widget.ImageView;

public class MainActivity extends AppCompatActivity {

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

```
public void getImage(View v)
{
    Intent in=new Intent(MediaStore.ACTION_IMAGE_CAPTURE);
    startActivityForResult(in,100);
}

@Override
protected void onActivityResult(int requestCode, int resultCode, @Nullable Intent
data) {
    super.onActivityResult(requestCode, resultCode, data);

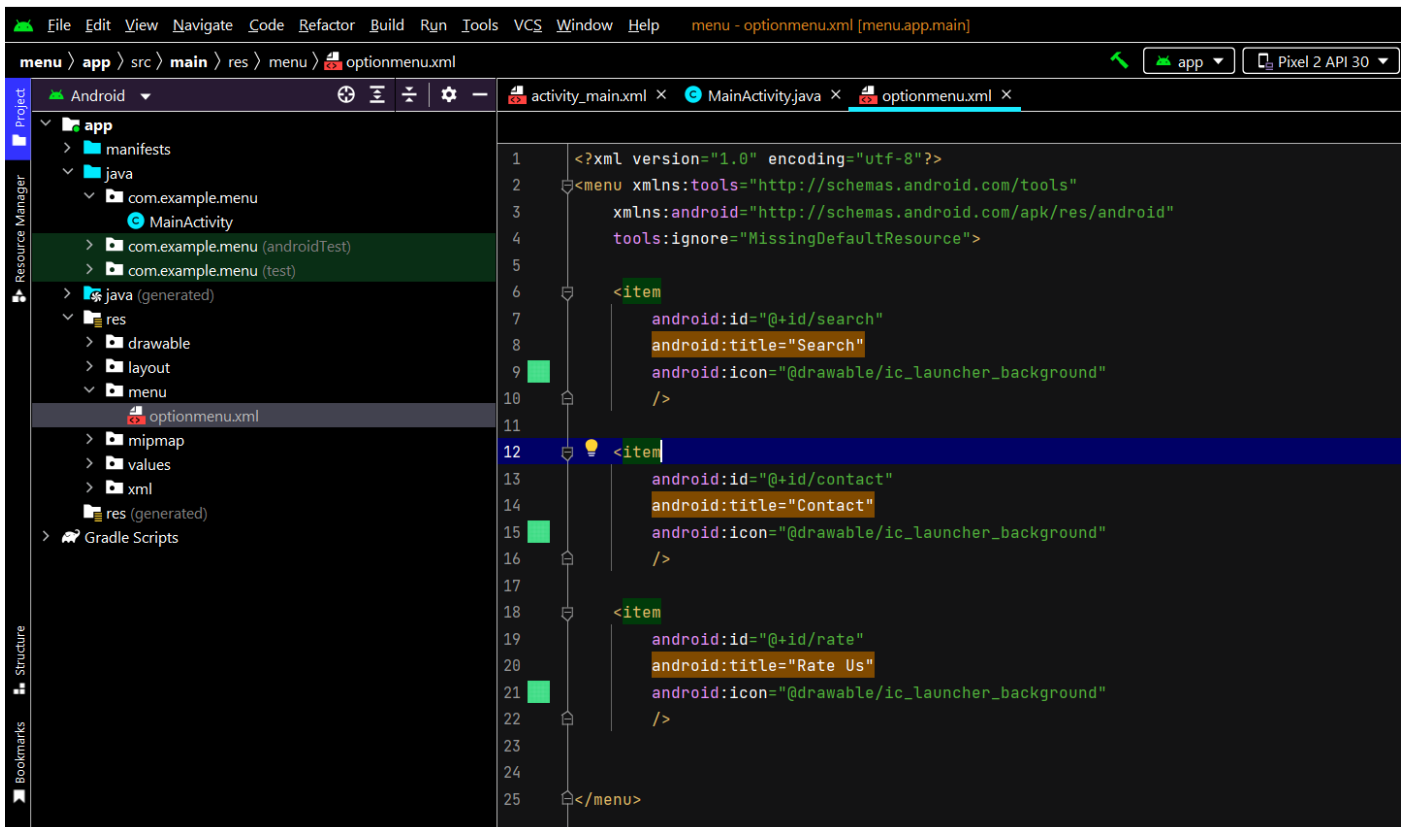
    ImageView img=(ImageView) findViewById(R.id.imageView);
    Bitmap img1=(Bitmap) data.getExtras().get("data");
    img.setImageBitmap(img1);
}
}
```

MENUS

Three types of menus

1. Options menu (3 dots)
2. Context Menu (long press)
3. Popup menu (on click)

1. Options Menu



Activity main.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="260dp"
    android:layout_height="53dp"
    android:text="Options Menu"
    android:textAlignment="center"
    android:textSize="20sp"
    android:textStyle="bold"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
```

```

        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

MainActivity.java

```

package com.example.menu;

import androidx.annotation.NonNull;
import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.Menu;
import android.view.MenuItem;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

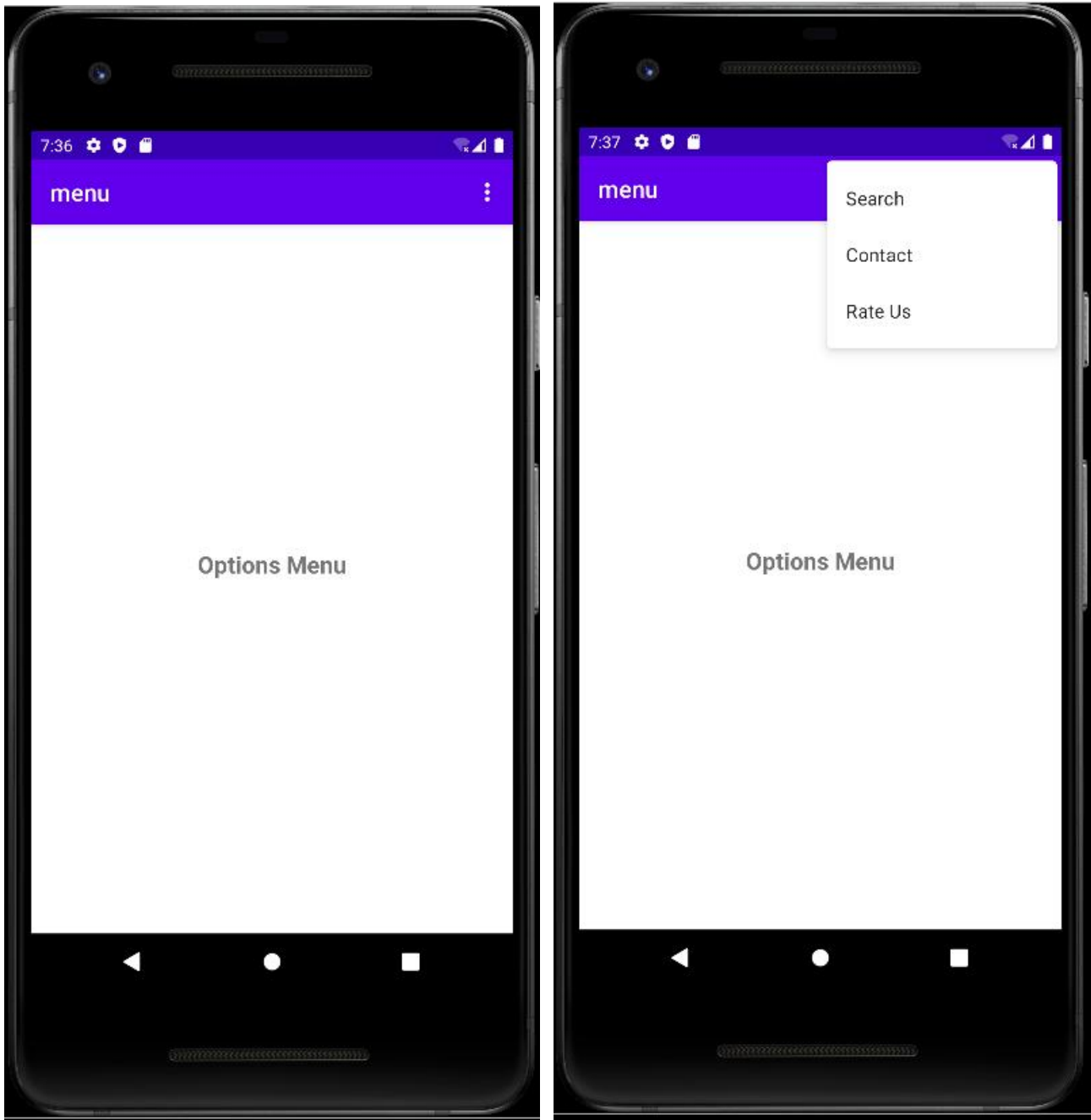
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }

    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        super.onCreateOptionsMenu(menu);
        getMenuInflater().inflate(R.menu.optionmenu, menu);
        return true;
    }

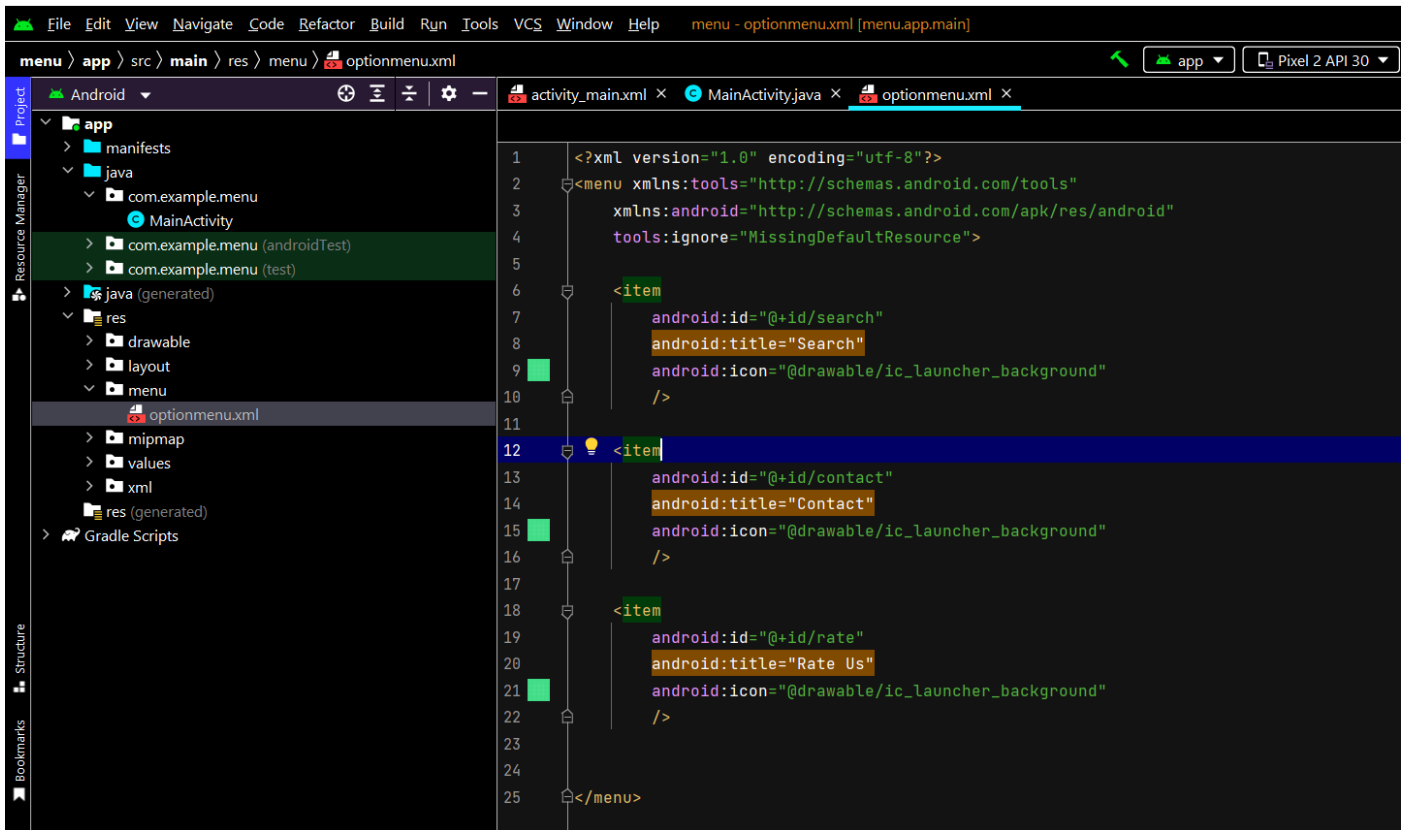
    @Override
    public boolean onOptionsItemSelected(@NonNull MenuItem item) {
        super.onOptionsItemSelected(item);

        switch (item.getItemId())
        {
            case R.id.contact:
                Toast.makeText(getApplicationContext(), "Contact
Page", Toast.LENGTH_LONG).show();
                break;
            case R.id.search:
                Toast.makeText(getApplicationContext(), "Search
Here", Toast.LENGTH_LONG).show();
                break;
            case R.id.rate:
                Toast.makeText(getApplicationContext(), "Rate
us", Toast.LENGTH_LONG).show();
                break;
        }
        return true;
    }
}

```



2. Context Menu



Activity main.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">

    <Button
        android:id="@+id/button"
        android:layout_width="139dp"
        android:layout_height="63dp"
        android:text="Context Menu"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.466"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.273" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

MainActivity.java

```

package com.example.contextmenu;

import androidx.annotation.NonNull;
import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.ContextMenu;

```

```

import android.view.MenuItem;
import android.view.View;
import android.widget.Button;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

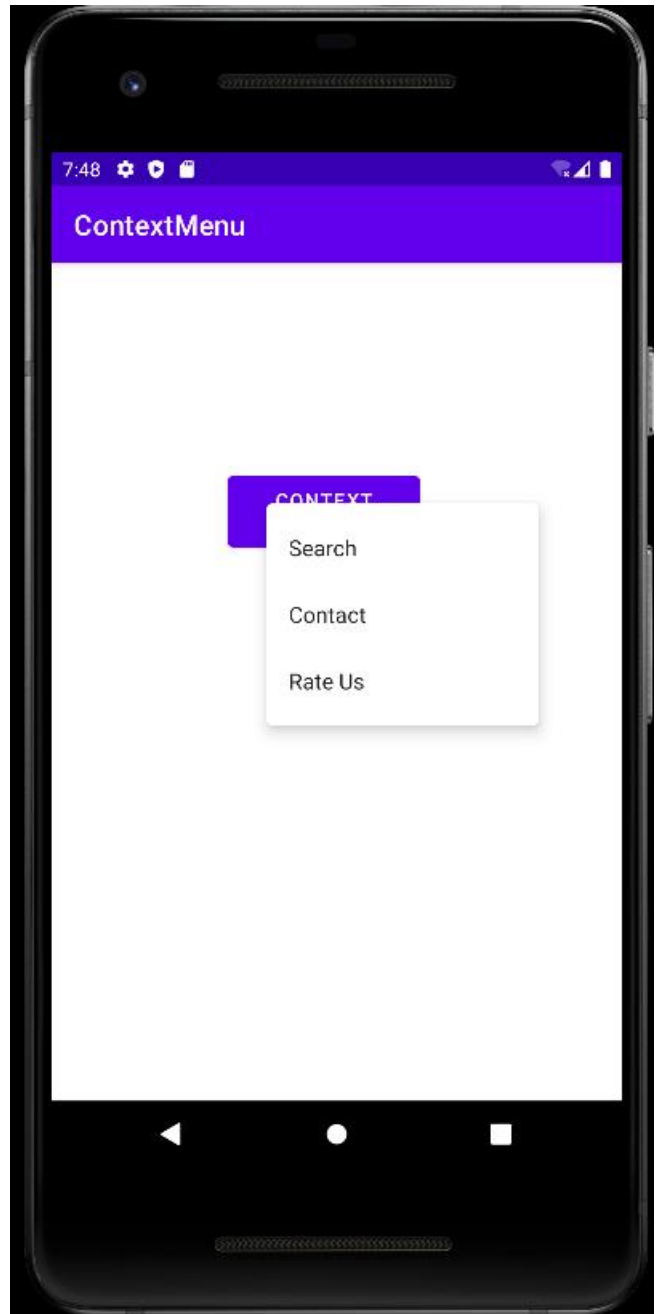
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        Button b1=(Button)findViewById(R.id.button);
        registerForContextMenu(b1);
    }

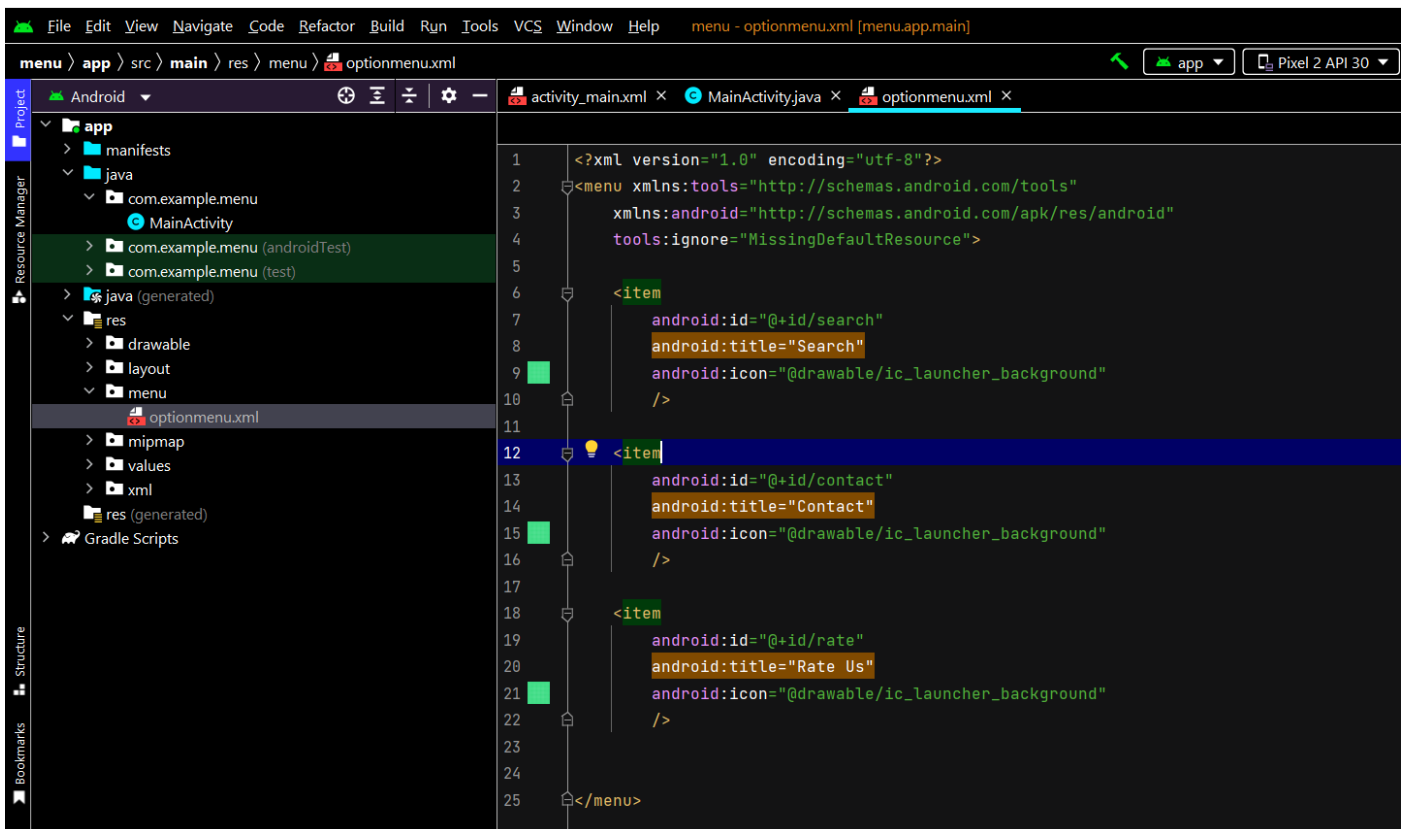
    @Override
    public void onCreateContextMenu(ContextMenu menu, View v,
ContextMenu.ContextMenuInfo menuInfo) {
        super.onCreateContextMenu(menu, v, menuInfo);
        getMenuInflater().inflate(R.menu.contextmenu,menu);
    }

    @Override
    public boolean onOptionsItemSelected(@NonNull MenuItem item) {
        super.onOptionsItemSelected(item);
        switch (item.getItemId())
        {
            case R.id.contact:
                Toast.makeText(getApplicationContext(),"Contact
Page",Toast.LENGTH_LONG).show();
                break;
            case R.id.search:
                Toast.makeText(getApplicationContext(),"Search
Here",Toast.LENGTH_LONG).show();
                break;
            case R.id.rate:
                Toast.makeText(getApplicationContext(),"Rate
us",Toast.LENGTH_LONG).show();
                break;
        }
        return true;
    }
}

```



3. PopUp Menu



Activity main.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">

    <Button
        android:id="@+id/button"
        android:layout_width="174dp"
        android:layout_height="58dp"
        android:text="Popup menu"
        android:textSize="18sp"
        android:onClick="popup"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.498"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.java

```

package com.example.pop_menu;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.MenuItem;
import android.view.View;
import android.widget.Button;
import android.widget.PopupMenu;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

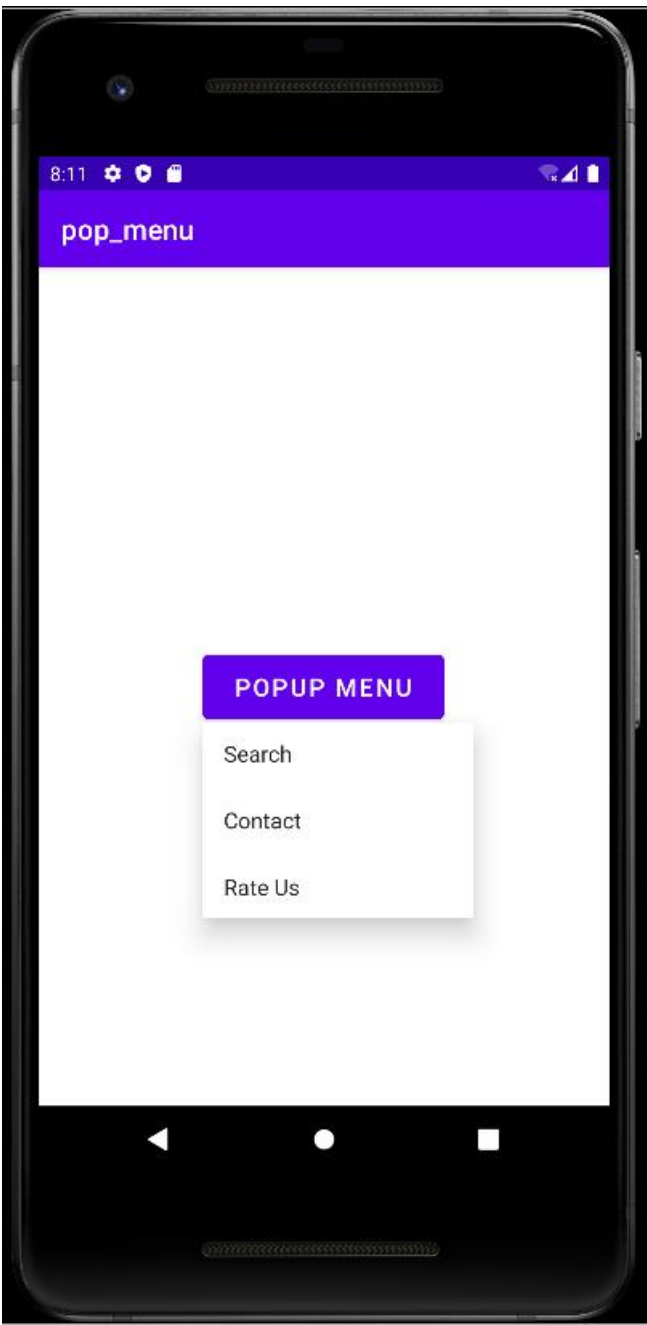
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

    }

    public void popup(View v)
    {
        Button b1=(Button)findViewById(R.id.button);
        PopupMenu popmenu=new PopupMenu(this,b1);
        popmenu.getMenuInflater().inflate(R.menu.popupmenu,popmenu.getMenu());
        popmenu.setOnMenuItemClickListener(new PopupMenu.OnMenuItemClickListener() {
            @Override
            public boolean onMenuItemClick(MenuItem menuItem) {
                switch (menuItem.getItemId())
                {
                    case R.id.contact:
                        Toast.makeText(getApplicationContext(),"Contact
Page",Toast.LENGTH_LONG).show();
                        break;
                    case R.id.search:
                        Toast.makeText(getApplicationContext(),"Search
Here",Toast.LENGTH_LONG).show();
                        break;
                    case R.id.rate:
                        Toast.makeText(getApplicationContext(),"Rate
us",Toast.LENGTH_LONG).show();
                        break;

                }
                return true;
            }
        });
        popmenu.show();
    }
}

```



FRAGMENT WITH LISTVIEW

Activity main.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">

    <ListView
        android:id="@+id/list"
        android:layout_width="414dp"
        android:layout_height="144dp"
        android:entries="@array/listelem"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.2"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.0" />

    <FrameLayout
        android:layout_width="409dp"
        android:layout_height="585dp"
        android:id="@+id/fl"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="1.0">

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

Strings.xml

```
<resources>
    <string name="app_name">MyFragment</string>
    <!-- TODO: Remove or change this placeholder text -->
    <string name="hello_blank_fragment">Hello blank fragment</string>
    <string-array name="listelem">
        <item>India</item>
        <item>China</item>
        <item>Japan</item>
    </string-array>
</resources>
```

MainActivity.java

```
package com.example.myfragment;

import androidx.appcompat.app.AppCompatActivity;
import androidx.fragment.app.FragmentManager;
import androidx.fragment.app.FragmentTransaction;

import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.ArrayAdapter;
import android.widget.FrameLayout;
import android.widget.ListView;

import java.util.List;

public class MainActivity extends AppCompatActivity {

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

        String[] arr={"India","China","Japan"};

        ArrayAdapter<String> adp=new ArrayAdapter<>(getApplicationContext(),
android.R.layout.simple_list_item_1,arr);

        ListView list=(ListView) findViewById(R.id.list);
        FrameLayout fl=(FrameLayout) findViewById(R.id.fl);
        list.setAdapter(adp);

        list.setOnItemClickListener(new AdapterView.OnItemClickListener() {
            @Override
            public void onItemClick(AdapterView<?> adapterView, View view, int i, long
1) {

                String str=(String) list.getItemAtPosition(i);

                switch(str)
                {
                    case "India":
                        FragmentManager fm1=getSupportFragmentManager();
                        FragmentTransaction ft1=fm1.beginTransaction();
                        ft1.replace(R.id.fl,new IndiaFragment());
                        ft1.commit();
                        break;

                    case "China":
                        FragmentManager fm2=getSupportFragmentManager();
                        FragmentTransaction ft2=fm2.beginTransaction();
                        ft2.replace(R.id.fl,new ChinaFragment());
                        ft2.commit();
                        break;

                    case "Japan":
                        FragmentManager fm3=getSupportFragmentManager();
                        FragmentTransaction ft3=fm3.beginTransaction();
                        ft3.replace(R.id.fl,new JapanFragment());
                        ft3.commit();
                        break;

                }
            }
        });
    }
}
```

```

    }
    });
}
}

```

fragment india.xml

```

<?xml version="1.0" encoding="utf-8"?>
<FrameLayout 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"
    tools:context=".IndiaFragment">

    <!-- TODO: Update blank fragment layout -->
    <TextView
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:text="Capital of India is New Delhi"
        android:textAlignment="center"
        android:textSize="24sp" />

</FrameLayout>

```

IndiaFragment.java

```

package com.example.myfragment;

import android.os.Bundle;

import androidx.fragment.app.Fragment;

import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;

/**
 * A simple {@link Fragment} subclass.
 * Use the {@link IndiaFragment#newInstance} factory method to
 * create an instance of this fragment.
 */
public class IndiaFragment extends Fragment {

    // TODO: Rename parameter arguments, choose names that match
    // the fragment initialization parameters, e.g. ARG_ITEM_NUMBER
    private static final String ARG_PARAM1 = "param1";
    private static final String ARG_PARAM2 = "param2";

    // TODO: Rename and change types of parameters
    private String mParam1;
    private String mParam2;

    public IndiaFragment() {
        // Required empty public constructor
    }

    /**
     * Use this factory method to create a new instance of
     * this fragment using the provided parameters.
     *
     * @param param1 Parameter 1.
     * @param param2 Parameter 2.
     */
}

```

```

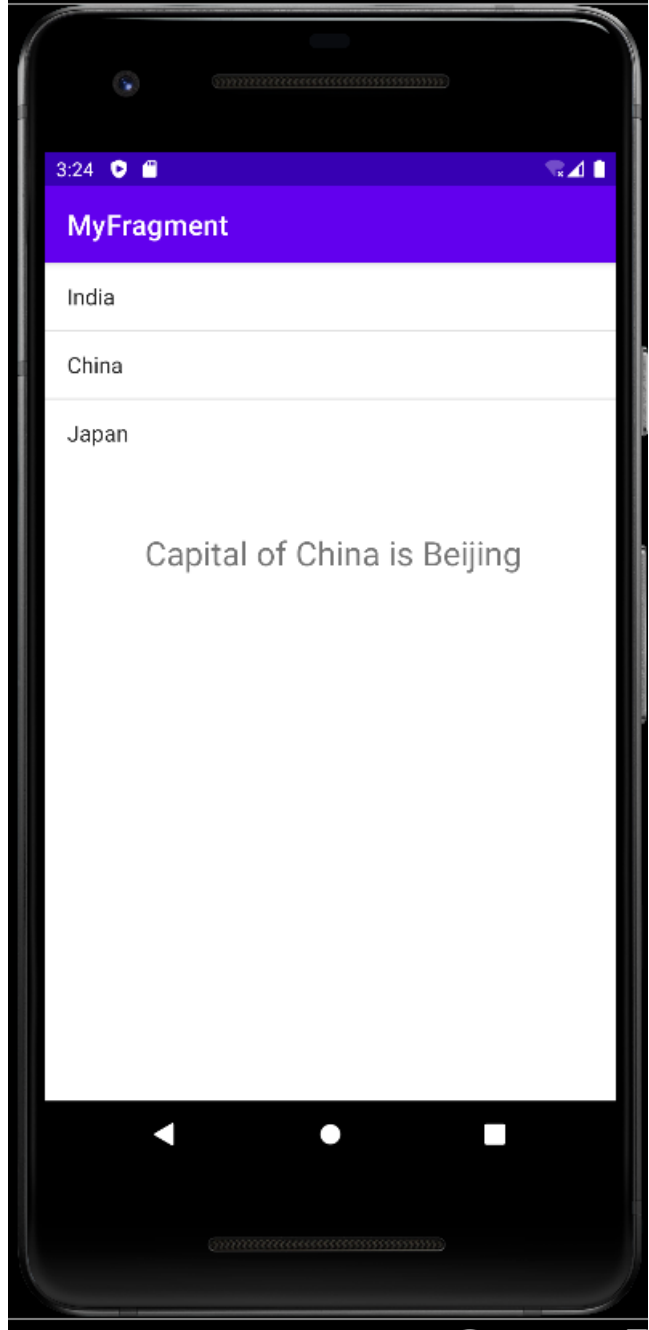
    * @return A new instance of fragment IndiaFragment.
    */
    // TODO: Rename and change types and number of parameters
    public static IndiaFragment newInstance(String param1, String param2) {
        IndiaFragment fragment = new IndiaFragment();
        Bundle args = new Bundle();
        args.putString(ARG_PARAM1, param1);
        args.putString(ARG_PARAM2, param2);
        fragment.setArguments(args);
        return fragment;
    }

    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        if (getArguments() != null) {
            mParam1 = getArguments().getString(ARG_PARAM1);
            mParam2 = getArguments().getString(ARG_PARAM2);
        }
    }

    @Override
    public View onCreateView(LayoutInflater inflater, ViewGroup container,
                             Bundle savedInstanceState) {
        // Inflate the layout for this fragment
        return inflater.inflate(R.layout.fragment_india, container, false);
    }
}

```

Similarly create fragments for china and Japan.



TABLAYOUT

Activity_main.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">

    <com.google.android.material.tabs.TabLayout
        android:id="@+id/tab"
        android:layout_width="match_parent"
        android:layout_height="100dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.0"
        tools:ignore="MissingConstraints" />

    <androidx.viewpager.widget.ViewPager
        android:id="@+id/viewPager2"
        android:layout_width="411dp"
        android:layout_height="631dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="1.0" />

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

MainActivity.java

```
package com.example.tablayout_view;

import androidx.appcompat.app.AppCompatActivity;
import androidx.viewpager.widget.ViewPager;

import android.os.Bundle;

import com.google.android.material.tabs.TabLayout;

public class MainActivity extends AppCompatActivity {

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

        TabLayout tab=(TabLayout) findViewById(R.id.tab);
        ViewPager vp=(ViewPager) findViewById(R.id.viewPager2);
        tab.addTab(tab.newTab().setText("Chats"));
        tab.addTab(tab.newTab().setText("Status"));
        tab.addTab(tab.newTab().setText("Calls"));
    }
}
```

```

        final WhatsappAdapter adp=new
WhatsappAdapter(this,getSupportFragmentManager(),tab.getTabCount());

        vp.setAdapter(adp);

        vp.addOnPageChangeListener(new TabLayout.TabLayoutOnPageChangeListener(tab));

        tab.addOnTabSelectedListener(new TabLayout.OnTabSelectedListener() {
            @Override
            public void onTabSelected(TabLayout.Tab tab) {
                vp.setCurrentItem(tab.getPosition());
            }

            @Override
            public void onTabUnselected(TabLayout.Tab tab) {

            }

            @Override
            public void onTabReselected(TabLayout.Tab tab) {

            }
        });
    }
}

```

WhatsappAdapter.java

```

package com.example.tablayout_view;

import android.content.Context;
import android.view.View;

import androidx.annotation.NonNull;
import androidx.fragment.app.Fragment;
import androidx.fragment.app.FragmentManager;
import androidx.fragment.app.FragmentPagerAdapter;
import androidx.viewpager.widget.PagerAdapter;

public class WhatsappAdapter extends FragmentPagerAdapter {
    Context context;
    int count;
    public WhatsappAdapter(MainActivity mainActivity, FragmentManager
supportFragmentManager, int tabCount) {
        super(supportFragmentManager);
        this.context=mainActivity;
        this.count=tabCount;
    }

    @Override
    public int getCount() {
        return count;
    }

    @NonNull
    @Override
    public Fragment getItem(int position) {
        switch(position)
        {
            case 0:
                ChatFragment chat=new ChatFragment();

```

```

        return chat;

    case 1:
        StatusFragment status=new StatusFragment();
        return status;

    case 2:
        CallFragment call=new CallFragment();
        return call;

    default:
        return null;
    }
}
}

```

CallFragment.java

```

package com.example.tablayout_view;

import android.os.Bundle;

import androidx.fragment.app.Fragment;

import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;

/**
 * A simple {@link Fragment} subclass.
 * Use the {@link CallFragment#newInstance} factory method to
 * create an instance of this fragment.
 */
public class CallFragment extends Fragment {

    // TODO: Rename parameter arguments, choose names that match
    // the fragment initialization parameters, e.g. ARG_ITEM_NUMBER
    private static final String ARG_PARAM1 = "param1";
    private static final String ARG_PARAM2 = "param2";

    // TODO: Rename and change types of parameters
    private String mParam1;
    private String mParam2;

    public CallFragment() {
        // Required empty public constructor
    }

    /**
     * Use this factory method to create a new instance of
     * this fragment using the provided parameters.
     *
     * @param param1 Parameter 1.
     * @param param2 Parameter 2.
     * @return A new instance of fragment CallFragment.
     */
    // TODO: Rename and change types and number of parameters
    public static CallFragment newInstance(String param1, String param2) {
        CallFragment fragment = new CallFragment();
        Bundle args = new Bundle();
        args.putString(ARG_PARAM1, param1);
    }
}

```

```

        args.putString(ARG_PARAM2, param2);
        fragment.setArguments(args);
        return fragment;
    }

    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        if (getArguments() != null) {
            mParam1 = getArguments().getString(ARG_PARAM1);
            mParam2 = getArguments().getString(ARG_PARAM2);
        }
    }

    @Override
    public View onCreateView(LayoutInflater inflater, ViewGroup container,
                             Bundle savedInstanceState) {
        // Inflate the layout for this fragment
        return inflater.inflate(R.layout.fragment_call, container, false);
    }
}

```

Fragment_call.xml

```

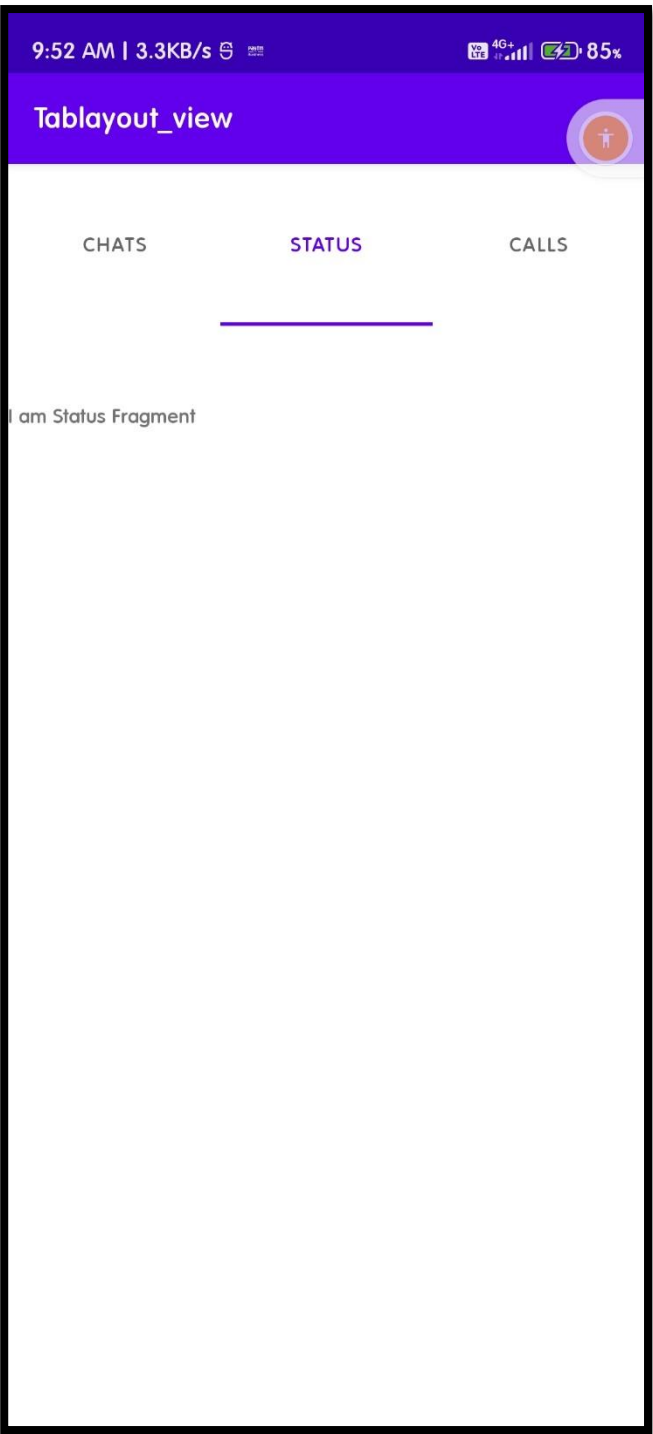
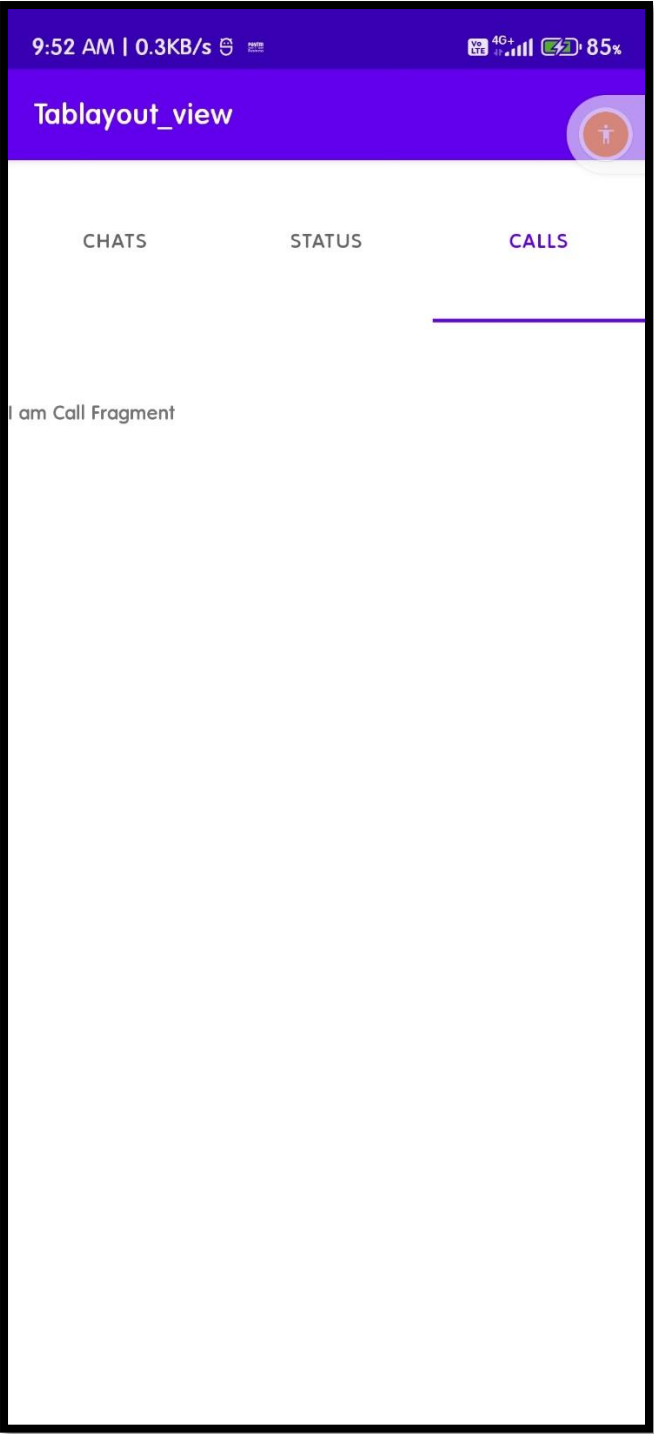
<?xml version="1.0" encoding="utf-8"?>
<FrameLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".CallFragment">

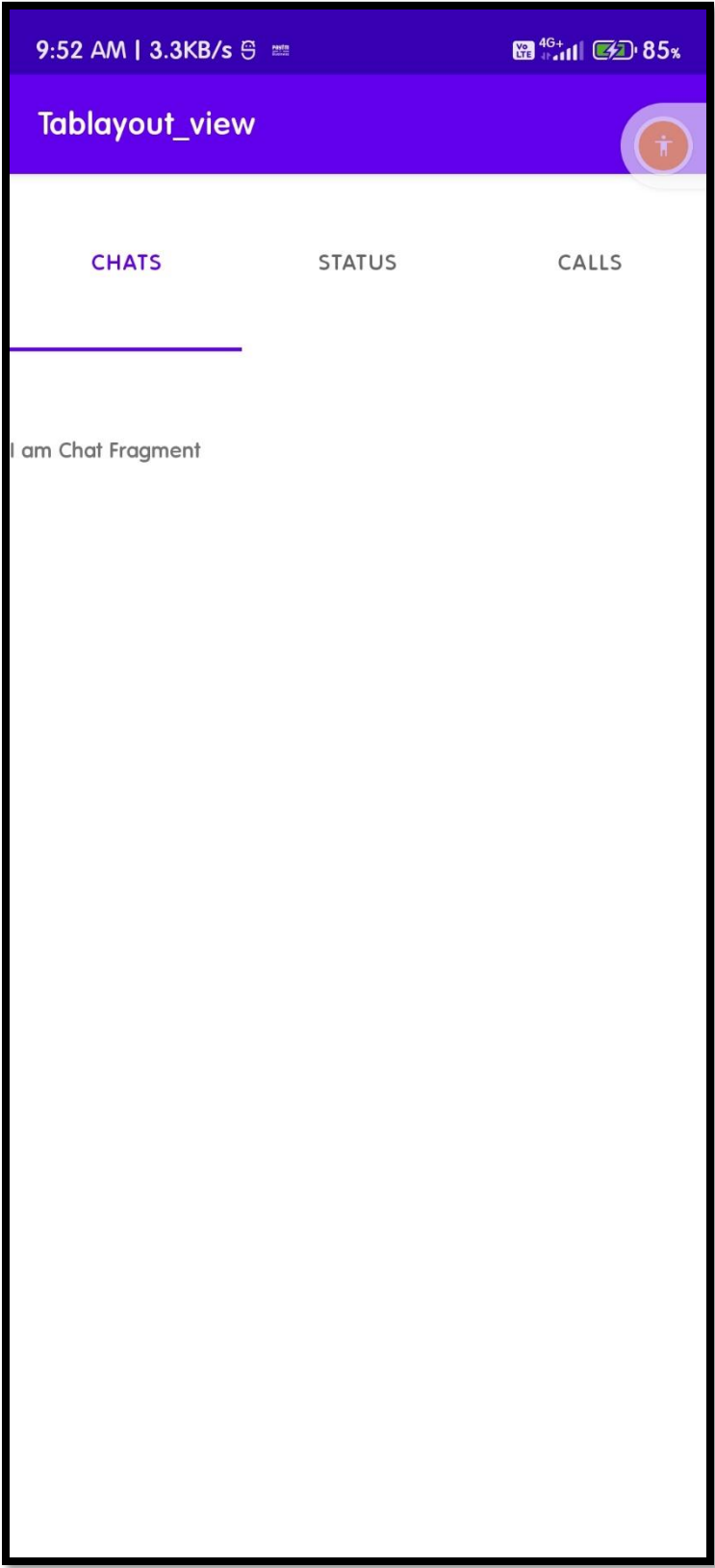
    <!-- TODO: Update blank fragment layout -->
    <TextView
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:text="I am Call Fragment" />

</FrameLayout>

```

// similarly for status and chat fragments





MYSQL

(Add, delete, display, display all)

Activity main.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/display_txt2"
        android:layout_width="374dp"
        android:layout_height="wrap_content"
        android:textAlignment="center"
        android:textSize="18sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.567"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.756" />

    <TextView
        android:id="@+id/display_txt"
        android:layout_width="374dp"
        android:layout_height="wrap_content"
        android:textAlignment="center"
        android:textSize="18sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.432"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.513" />

    <Button
        android:id="@+id/add"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:onClick="Add_Details"
        android:text="Add to Database"
        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="0.275" />

    <Button
        android:id="@+id/delete"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:onClick="Delete_Details"
        android:text="Delete"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.202"
```

```

        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.439" />

<Button
    android:id="@+id/display"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:onClick="Display_Details"
    android:text="Display"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.729"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.439" />

<TextView
    android:id="@+id/textView"
    android:layout_width="143dp"
    android:layout_height="38dp"
    android:text="Regno : "
    android:textAlignment="center"
    android:textSize="18sp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.018"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.033" />

<TextView
    android:id="@+id/textView3"
    android:layout_width="143dp"
    android:layout_height="38dp"
    android:text="Name : "
    android:textAlignment="center"
    android:textSize="18sp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.018"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.108" />

<TextView
    android:id="@+id/textView4"
    android:layout_width="143dp"
    android:layout_height="38dp"
    android:text="Department : "
    android:textAlignment="center"
    android:textSize="18sp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.018"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.189" />

<TextView
    android:id="@+id/textView5"
    android:layout_width="189dp"
    android:layout_height="51dp"
    android:text="Enter Regno \n To Delete or Display"
    android:textAlignment="center"

```



```

        android:textSize="18sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.022"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.366" />

<EditText
    android:id="@+id/regno"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="textPersonName"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.83"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.023" />

<EditText
    android:id="@+id/name"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="textPersonName"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.83"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.109" />

<EditText
    android:id="@+id/dep"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="textPersonName"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.83"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.19" />

<EditText
    android:id="@+id/regno2"
    android:layout_width="171dp"
    android:layout_height="48dp"
    android:ems="10"
    android:inputType="textPersonName"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.912"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.364" />

<Button
    android:id="@+id/display_all"
    android:layout_width="209dp"
    android:layout_height="56dp"
    android:onClick="Display_all"

```

```

        android:text="Display All Data"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.455"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.976" />

```

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

MainActivity.java

```

package com.example.mysql;

import androidx.appcompat.app.AppCompatActivity;

import android.database.Cursor;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

    EditText regno;
    EditText name;
    EditText dep;
    EditText regno2;
    Button add,delete,display;
    sqlhelper sqlhelper;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        regno=(EditText) findViewById(R.id.regno);
        name=(EditText) findViewById(R.id.name);
        dep=(EditText) findViewById(R.id.dep);
        regno2=(EditText) findViewById(R.id.regno2);

        add=(Button) findViewById(R.id.add);
        delete=(Button) findViewById(R.id.delete);
        display=(Button) findViewById(R.id.display);

        sqlhelper=new sqlhelper(MainActivity.this);
    }

    public void Add_Details(View v)
    {
        int regno_a=Integer.parseInt(regno.getText().toString());
        String name_a=name.getText().toString();
        String dep_a=dep.getText().toString();

        sqlhelper.add_details(regno_a,name_a,dep_a);
        Toast.makeText(getApplicationContext(),"Added
Sucessfully",Toast.LENGTH_SHORT).show();
    }

    public void Display_Details(View v)
    {
        int regno_a=Integer.parseInt(regno2.getText().toString());

```

```

Cursor cursor=sqlhelper.get_student(regno_a);

TextView disp_txt=(TextView) findViewById(R.id.display_txt);
StringBuilder flag=new StringBuilder();
while(cursor.moveToNext())
{
    flag.append("Regno : ");
    flag.append(cursor.getString(0));

    flag.append("\nName : ");
    flag.append(cursor.getString(1));

    flag.append("\nDepartment : ");
    flag.append(cursor.getString(2));
}

disp_txt.setText(flag);
TextView disp_txt1=(TextView) findViewById(R.id.display_txt2);
disp_txt1.setText("");
}

public void Display_all(View v){
    Cursor cursor=sqlhelper.get_all_details();
    StringBuilder flag1=new StringBuilder();
    cursor.moveToFirst();
    if((cursor!=null) && (cursor.getCount()>0)){
        do{
            flag1.append("Regno : ");
            flag1.append(cursor.getString(0));

            flag1.append("\nName : ");
            flag1.append(cursor.getString(1));

            flag1.append("\nDepartment : ");
            flag1.append(cursor.getString(2));

            flag1.append("\n\n");
        }while(cursor.moveToNext());
    }
    TextView disp_txt=(TextView) findViewById(R.id.display_txt);
    disp_txt.setText("");
    TextView disp_txt1=(TextView) findViewById(R.id.display_txt2);
    disp_txt1.setText(flag1);
}

public void Delete_Details(View v){
    int regno_a=Integer.parseInt(regno2.getText().toString());
    sqlhelper.delete_student(regno_a);

    Toast.makeText(getApplicationContext(),"Deleted
Sucessfully",Toast.LENGTH_SHORT).show();
}
}

```

sqlhelper.java

```

package com.example.mysql;

import android.content.ContentValues;
import android.content.Context;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;

```

```

import android.database.sqlite.SQLiteOpenHelper;
import android.widget.Toast;

import androidx.annotation.Nullable;

public class sqlhelper extends SQLiteOpenHelper {
    Context context;
    public sqlhelper(Context context) {

        super(context, "Student_datadase.sqlite", null, 1);
        this.context=context;
    }

    @Override
    public void onCreate(SQLiteDatabase sqLiteDatabase) {
        String query="CREATE TABLE Student_table (regno integer PRIMARY KEY, name
varchar, department varchar)";
        sqLiteDatabase.execSQL(query);
    }

    @Override
    public void onUpgrade(SQLiteDatabase sqLiteDatabase, int i, int i1) {
        sqLiteDatabase.execSQL("DROP TABLE IF EXISTS Student_table");
    }

    public void add_details(int regno,String name,String dep)
    {
        SQLiteDatabase db=this.getWritableDatabase();
        String query="INSERT INTO Student_table
values("+regno+", '"+name+"', '"+dep+"'");";
        db.execSQL(query);
        db.close();
    }

    public Cursor get_student(int regno)
    {
        SQLiteDatabase db=this.getWritableDatabase();
        Cursor cursor=db.rawQuery("SELECT * FROM Student_table where
regno="+regno+";",null);
        return cursor;
    }

    public void delete_student(int regno){
        SQLiteDatabase db=this.getWritableDatabase();
        String query="DELETE from Student_table where regno="+regno+";";
        db.execSQL(query);
    }

    public Cursor get_all_details(){
        SQLiteDatabase db=this.getWritableDatabase();
        Cursor cursor=db.rawQuery("SELECT * FROM Student_table",null);
        return cursor;
    }
}

```

1.OnActivityResult (Intent)

Activity main.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="252dp"
        android:layout_height="58dp"
        android:text="Modulo of Two Numbers"
        android:textAlignment="center"
        android:textSize="20sp"
        android:textStyle="bold"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.496"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.176" />

    <EditText
        android:id="@+id/str1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:ems="10"
        android:hint="Num 1"
        android:inputType="textPersonName"
        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="0.287" />

    <EditText
        android:id="@+id/str2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:ems="10"
        android:hint="Num 2"
        android:inputType="textPersonName"
        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="0.374" />
```

```

<Button
    android:id="@+id/button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Find"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.498"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.525" />

<TextView
    android:id="@+id/result"
    android:layout_width="232dp"
    android:layout_height="45dp"
    android:textSize="16sp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.467"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.813" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

MainActivity.java

```

package com.example.startactivityforresult;

import androidx.annotation.Nullable;
import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity {

    String a,b;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        Button b1=(Button) findViewById(R.id.button);

        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                EditText n1=(EditText) findViewById(R.id.str1);
                EditText n2=(EditText) findViewById(R.id.str2);
            }
        });
    }
}

```

```

        a=n1.getText().toString();
        b=n2.getText().toString();

        Intent i=new Intent(MainActivity.this,second_activity.class);
        Bundle bun=new Bundle();
        bun.putString("n1",String.valueOf(a));
        bun.putString("n2",String.valueOf(b));

        i.putExtras(bun);

        startActivityForResult(i,2);
    }
    });
}

@Override
protected void onActivityResult(int requestCode, int resultCode, @Nullable Intent data) {
    super.onActivityResult(requestCode, resultCode, data);
    if(requestCode==2)
    {
        int c=data.getIntExtra("res",0);
        TextView result=(TextView)findViewById(R.id.result);
        result.setText(a+" % "+b+" = "+c);
    }
}
}

```

Activity_second.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=".second_activity">

    <TextView
        android:id="@+id/textView2"
        android:layout_width="214dp"
        android:layout_height="53dp"
        android:text="Second Screen"
        android:textAlignment="center"
        android:textSize="20sp"
        android:textStyle="bold"
        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="0.201" />

    <TextView

```

```

        android:id="@+id/textView3"
        android:layout_width="234dp"
        android:layout_height="84dp"
        android:text="Modulo Found... Click button to View result.."
        android:textAlignment="center"
        android:textSize="20sp"
        android:textStyle="bold"
        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="0.365" />

<Button
    android:id="@+id/confirm"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Result.."
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.498"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.481" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

Second activity.java

```

package com.example.startactivityforresult;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;

public class second_activity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_second);

        Bundle b=getIntent().getExtras();
        String str1=b.getString("n1");
        String str2=b.getString("n2");

        Button b1=(Button)findViewById(R.id.confirm);
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {

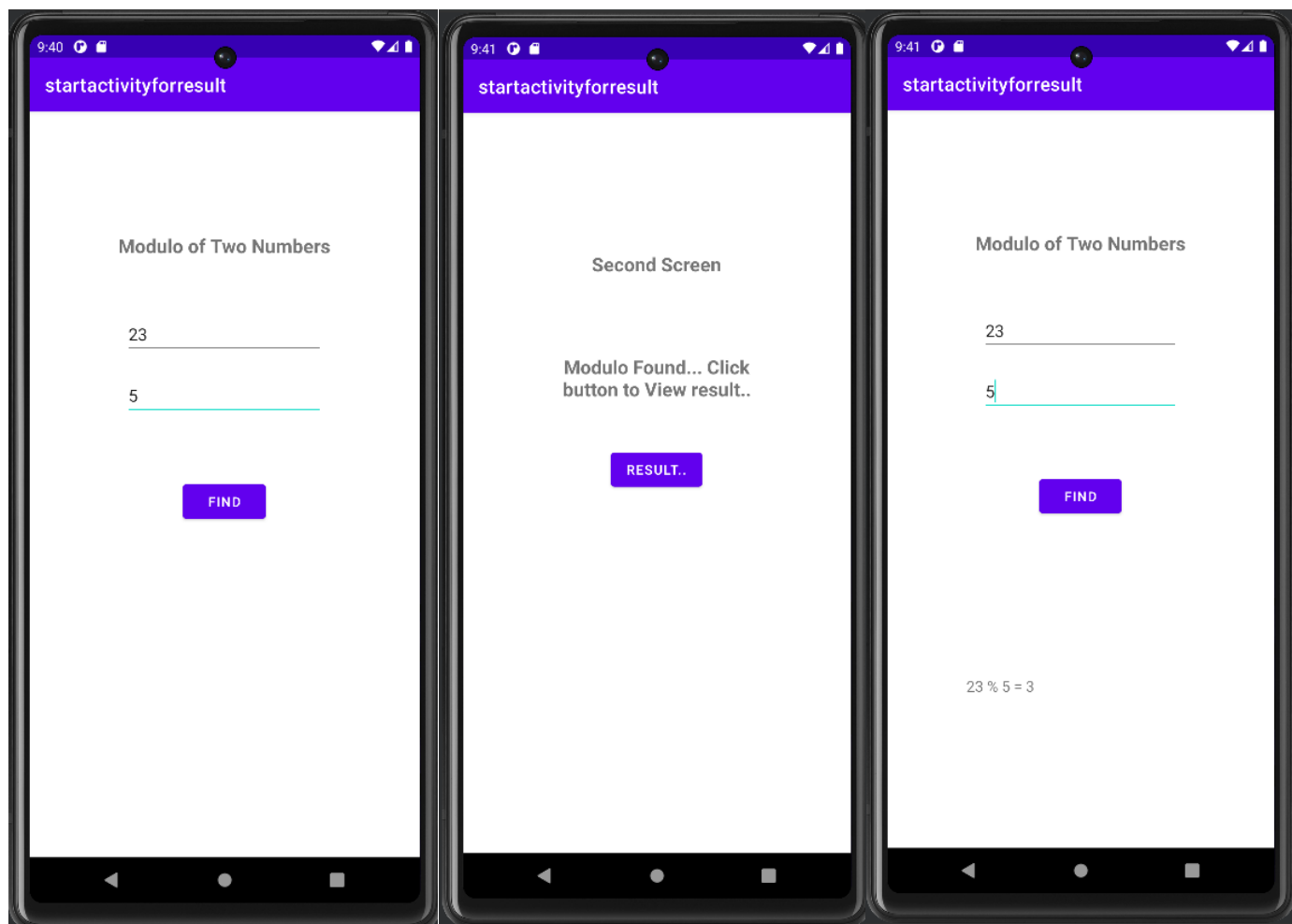
```



```

        int c=Integer.parseInt(str1) % Integer.parseInt(str2);
        Intent i=new Intent();
        i.putExtra("res",c);
        setResult(2,i);
        finish();
    }
});
}
}

```



Scroll View

Activity main.xml

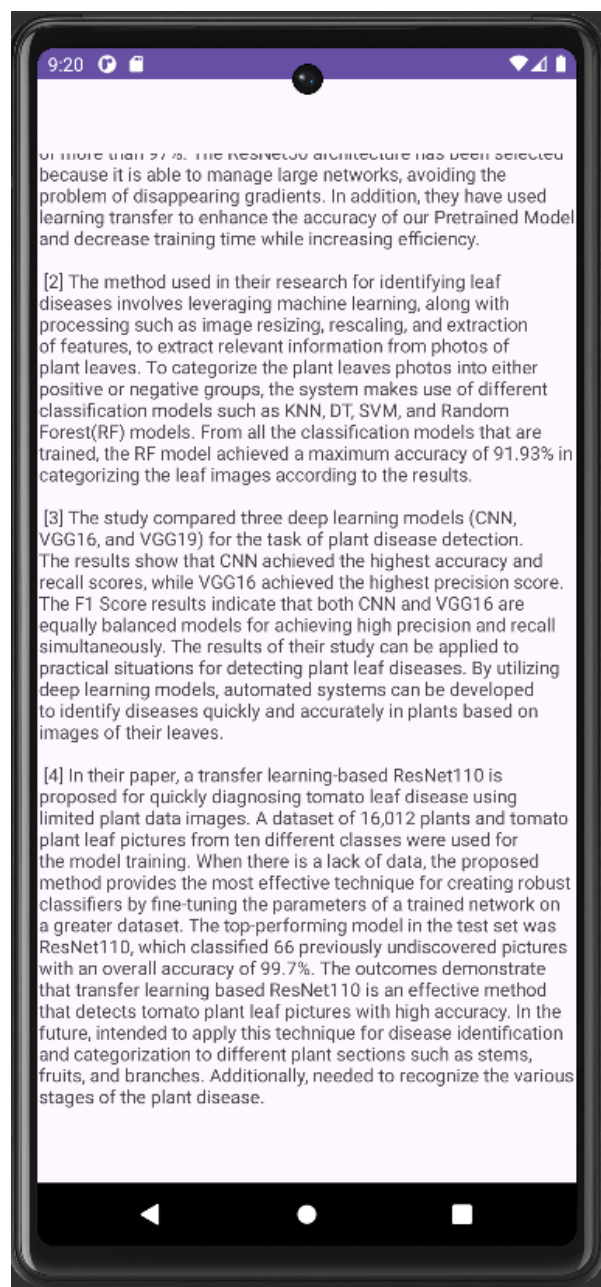
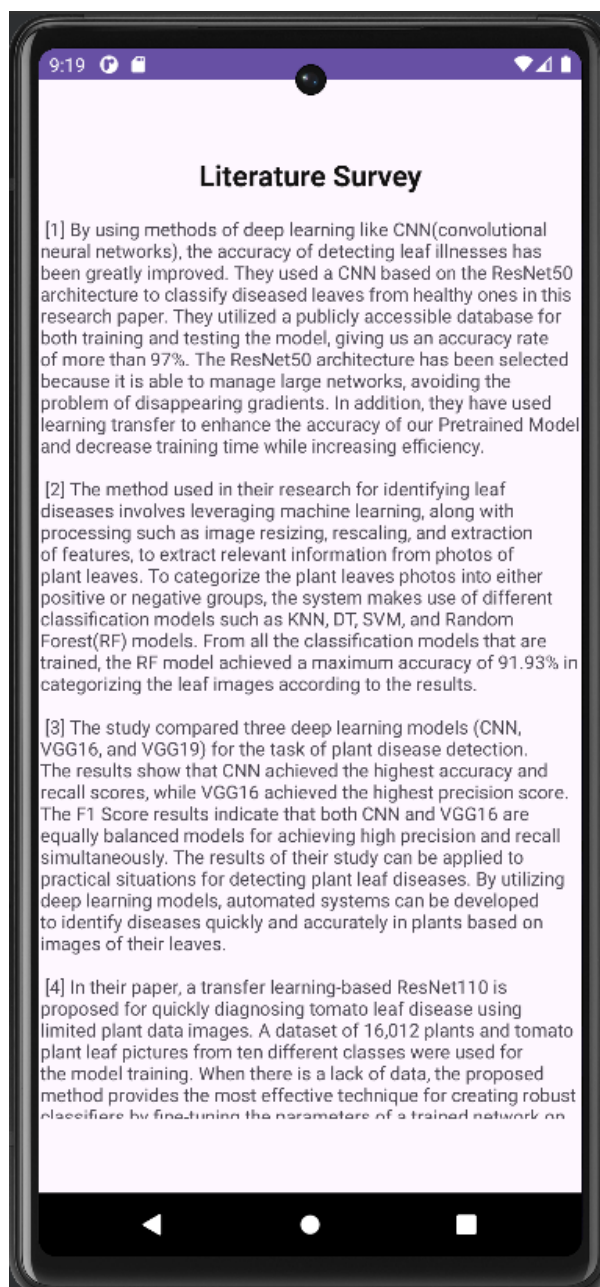
```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    android:layout_width="match_parent"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

    <ScrollView
        android:layout_width="409dp"
        android:layout_height="729dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent">

        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:orientation="vertical" >

            <TextView
                android:id="@+id/textView2"
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:text="Literature Survey"
                android:textAlignment="center"
                android:textColor="#121111"
                android:textSize="22sp"
                android:textStyle="bold" />

            <TextView
                android:id="@+id/textView"
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:text="@string/lit" />
        </LinearLayout>
    </ScrollView>
</androidx.constraintlayout.widget.ConstraintLayout>
```



Progress Bar

Activity main.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">

    <ProgressBar
        android:id="@+id/progressBar"
        style="?android:attr/progressBarStyle"
        android:layout_width="142dp"
        android:layout_height="98dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.535"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.469" />

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

MainActivity.java

```
package com.example.progressbar;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

public class MainActivity extends AppCompatActivity {

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



Splash Screen

Activity_main.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">

    <ImageView
        android:id="@+id/imageView2"
        android:layout_width="414dp"
        android:layout_height="726dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.666"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.4"
        app:srcCompat="@drawable/img" />

    <TextView
        android:id="@+id/textView2"
        android:layout_width="wrap_content"
        android:layout_height="71dp"
        android:fontFamily="cursive"
        android:text="Opening App"
        android:textAlignment="center"
        android:textColor="@android:color/black"
        android:textSize="35dp"
        android:textStyle="italic"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.498"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.268" />

    <ProgressBar
        android:id="@+id/progressBar"
        style="?android:attr/progressBarStyle"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:indeterminate="true"
        android:indeterminateDrawable="@drawable/progress"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.498"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.755" />

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

MainActivity.java

```
package com.example.splash_screen;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.os.Handler;
import android.view.WindowManager;

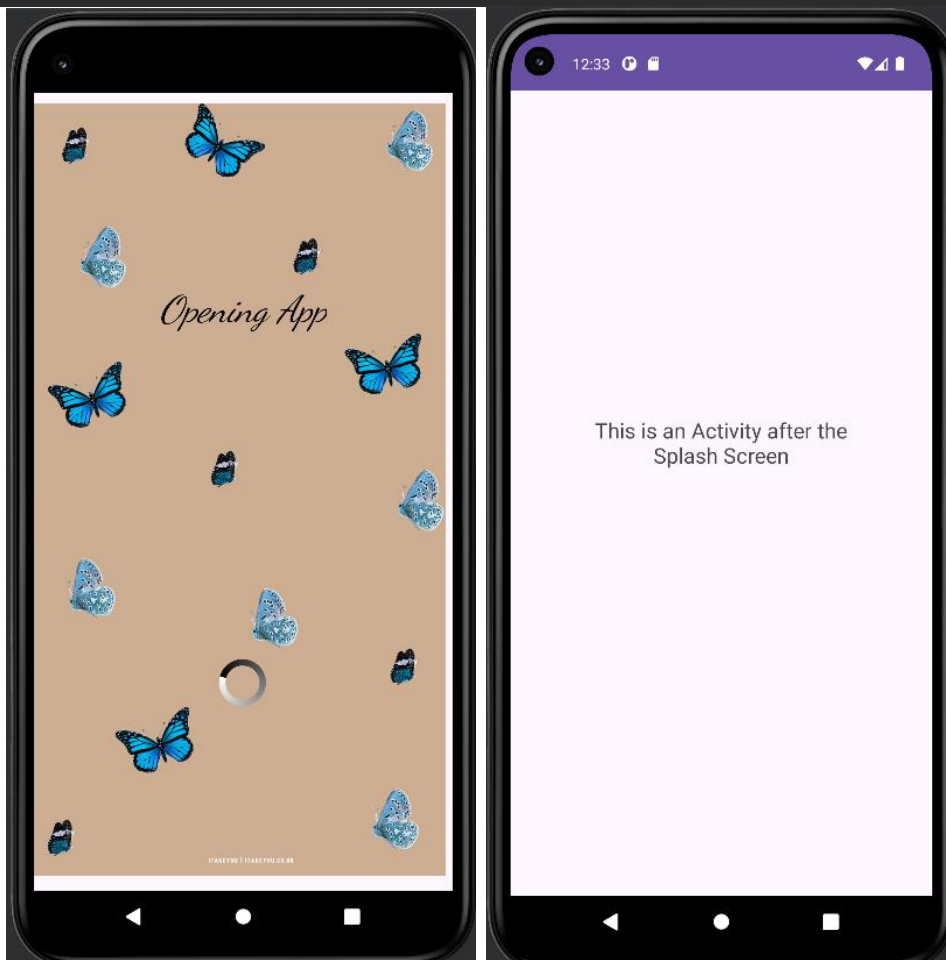
public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);

        getWindow().setFlags(WindowManager.LayoutParams.FLAG_FULLSCREEN,
            WindowManager.LayoutParams.FLAG_FULLSCREEN);

        setContentView(R.layout.activity_main);

        new Handler().postDelayed(new Runnable() {
            @Override
            public void run() {
                Intent i = new Intent(MainActivity.this, MainActivity2.class);
                startActivity(i);
                finish();
            }
        }, 10000);
    }
}
```



Counter App

Activity_main.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/textView"
        android:layout_width="201dp"
        android:layout_height="295dp"
        android:text="0"
        android:textAlignment="center"
        android:textColor="#050505"
        android:textSize="100sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.192" />

    <Button
        android:id="@+id/start"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="start"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.272"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.645" />

    <Button
        android:id="@+id/pause"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Pause"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.674"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.645" />

    <Button
        android:id="@+id/reset"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Reset"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.674"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.777" />

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



```

<Button
    android:id="@+id/resume"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Resume"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.272"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.777" />

</androidx.constraintlayout.widget.ConstraintLayout>

```

MainActivity.java

```

package com.example.counter;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.os.Handler;
import android.view.View;
import android.widget.Button;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity {

    int count=5;
    boolean running=false;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        TextView cnt=(TextView) findViewById(R.id.textView);
        Button start=(Button) findViewById(R.id.start);
        Button pause=(Button) findViewById(R.id.pause);
        Button resume=(Button) findViewById(R.id.resume);
        Button reset=(Button) findViewById(R.id.reset);

        Handler handler=new Handler();
        Runnable runnable=new Runnable() {
            @Override
            public void run() {
                count--;
                cnt.setText(String.valueOf(count));
                handler.postDelayed(this,1000);
            }
        };

        start.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                running=true;
                handler.postDelayed(runnable,1000);
            }
        });

        pause.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {

```

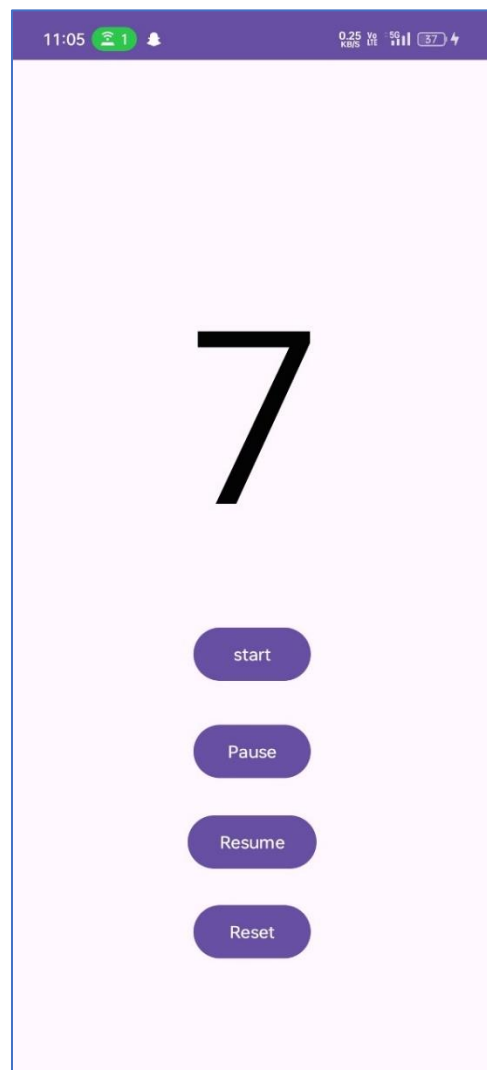
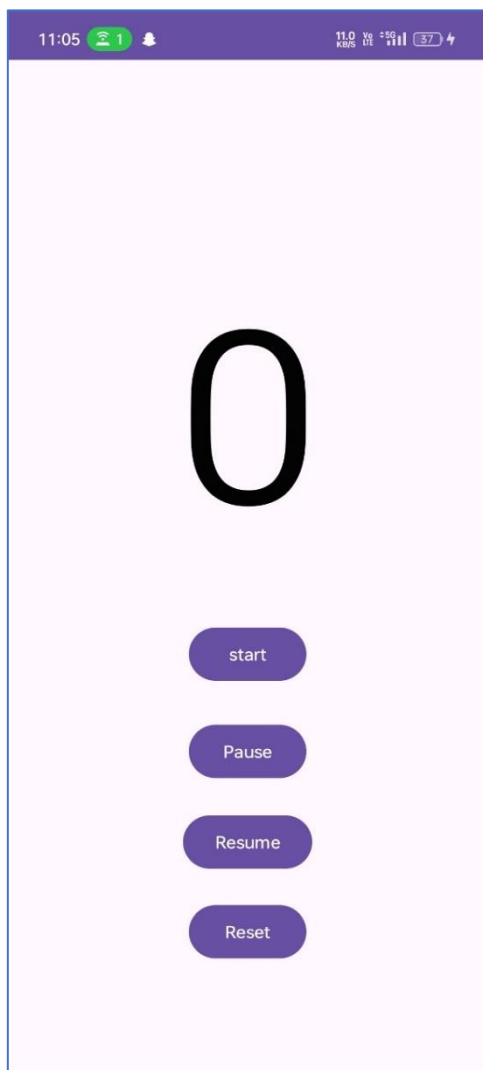
```

        running=false;
        handler.removeCallbacks(runnable);
    }
});

resume.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        running=true;
        handler.postDelayed(runnable,1000);
    }
});

reset.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        count=5;
        cnt.setText(String.valueOf(count));
        running=false;
        handler.removeCallbacks(runnable);
    }
});
}
}
}

```



RE-CYCLER VIEW

Activity_main.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">

    <androidx.recyclerview.widget.RecyclerView
        android:id="@+id/recycler"
        android:layout_width="409dp"
        android:layout_height="729dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

Create a `dimens.xml` file in values directory, and add the following code.

```
<?xml version="1.0" encoding="utf-8"?>
<resources>
    <dimen name="activity_horizontal_margin">16dp</dimen>
    <dimen name="activity_vertical_margin">16dp</dimen>
    <dimen name="ic_clear_margin">56dp</dimen>
</resources>
```

Create a custom layout `list_item.xml` file with following code.

```

<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:id="@+id/relativeLayout"
    android:layout_width="match_parent"
    android:layout_height="?android:attr/listPreferredItemHeightLarge"
    android:background="@drawable/border">

    <ImageView
        android:id="@+id/imageView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerVertical="true"
        android:layout_alignParentStart="true"
        android:layout_alignParentLeft="true"
        android:layout_marginStart="@dimen/activity_horizontal_margin"
        android:layout_marginEnd="@dimen/activity_horizontal_margin"
        android:contentDescription="Icon" />

    <TextView
        android:id="@+id/textView"
        android:layout_width="wrap_content"
        android:layout_height="match_parent"
        android:layout_toEndOf="@id/imageView"
        android:layout_toRightOf="@id/imageView"
        android:gravity="center_vertical"
        android:textSize="16sp"/>

</RelativeLayout>

```

Create a border.xml file in the drawable directory which is used to decorate the border of RecyclerView items.

```

<?xml version="1.0" encoding="utf-8"?>
<shape xmlns:android="http://schemas.android.com/apk/res/android"
    android:shape="rectangle">
    <solid android:color="#FFFFFF" />

```

```
<stroke
    android:width="1dp"
    android:color="#CCCCCC" />
</shape>
```

Create a `MyListData.java` class with the following code. This class is used as (POJO) class which sets the properties of the items.

```
package com.example.recyclerview;

public class MyListData{
    private String description;
    private int imgId;
    public MyListData(String description, int imgId) {
        this.description = description;
        this.imgId = imgId;
    }
    public String getDescription() {
        return description;
    }
    public void setDescription(String description) {
        this.description = description;
    }
    public int getImgId() {
        return imgId;
    }
    public void setImgId(int imgId) {
        this.imgId = imgId;
    }
}
```

Create a `MyListAdapter.java` class and add the following code. This class extends `RecyclerView.Adapter` class and override its unimplemented methods. The

onCreateViewHolder() methods inflates the *list_item.xml*. In the onBindViewHolder() method each data items are set to each row.

```
package com.example.recyclerview;

import androidx.recyclerview.widget.RecyclerView;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.ImageView;
import android.widget.RelativeLayout;
import android.widget.TextView;
import android.widget.Toast;

public class MyListAdapter extends
RecyclerView.Adapter<MyListAdapter.ViewHolder>{
    private MyListData[] listdata;

    // RecyclerView recyclerView;
    public MyListAdapter(MyListData[] listdata) {
        this.listdata = listdata;
    }
    @Override
    public ViewHolder onCreateViewHolder(ViewGroup parent, int viewType) {
        LayoutInflater inflater =
LayoutInflater.from(parent.getContext());
        View listItem= inflater.inflate(R.layout.list_item, parent,
false);
        ViewHolder viewHolder = new ViewHolder(listItem);
        return viewHolder;
    }

    @Override
    public void onBindViewHolder(ViewHolder holder, int position) {
        final MyListData myListData = listdata[position];
        holder.textView.setText(listdata[position].getDescription());
        holder.imageView.setImageResource(listdata[position].getImgId());
        holder.relativeLayout.setOnClickListener(new View.OnClickListener() {
            @Override
```

```

        public void onClick(View view) {
            Toast.makeText(view.getContext(), "click on item:
"+myListData.getDescription(), Toast.LENGTH_LONG).show();
        }
    });
}

@Override
public int getItemCount() {
    return listdata.length;
}

public static class ViewHolder extends RecyclerView.ViewHolder {
    public ImageView imageView;
    public TextView textView;
    public RelativeLayout relativeLayout;
    public ViewHolder(View itemView) {
        super(itemView);
        this.imageView = (ImageView) itemView.findViewById(R.id.imageView);
        this.textView = (TextView) itemView.findViewById(R.id.textView);
        relativeLayout =
(RelativeLayout) itemView.findViewById(R.id.relativeLayout);
    }
}
}

```

MainActivity.java

```

package com.example.recyclerview;

import androidx.appcompat.app.AppCompatActivity;
import androidx.recyclerview.widget.LinearLayoutManager;
import androidx.recyclerview.widget.RecyclerView;

import android.os.Bundle;

public class MainActivity extends AppCompatActivity {

    @Override

```

```

protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);

    MyListData[] myListData = new MyListData[] {
        new MyListData("Email", android.R.drawable.ic_dialog_email),
        new MyListData("Info", android.R.drawable.ic_dialog_info),
        new MyListData("Delete", android.R.drawable.ic_delete),
        new MyListData("Dialer", android.R.drawable.ic_dialog_dialer),
        new MyListData("Alert", android.R.drawable.ic_dialog_alert),
        new MyListData("Map", android.R.drawable.ic_dialog_map),
        new MyListData("Email", android.R.drawable.ic_dialog_email),
        new MyListData("Info", android.R.drawable.ic_dialog_info),
        new MyListData("Delete", android.R.drawable.ic_delete),
        new MyListData("Dialer", android.R.drawable.ic_dialog_dialer),
        new MyListData("Alert", android.R.drawable.ic_dialog_alert),
        new MyListData("Map", android.R.drawable.ic_dialog_map),
    };

    RecyclerView recyclerView = (RecyclerView) findViewById(R.id.recycler);
    MyListAdapter adapter = new MyListAdapter(myListData);
    recyclerView.setHasFixedSize(true);
    recyclerView.setLayoutManager(new LinearLayoutManager(this));
    recyclerView.setAdapter(adapter);
}
}

```


SQLite Database

Activity main.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/display_txt2"
        android:layout_width="374dp"
        android:layout_height="wrap_content"
        android:textAlignment="center"
        android:textSize="18sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.567"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.756" />

    <TextView
        android:id="@+id/display_txt"
        android:layout_width="374dp"
        android:layout_height="wrap_content"
        android:textAlignment="center"
        android:textSize="18sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.432"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.513" />

    <Button
```

```
    android:id="@+id/add"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:onClick="Add_Details"
    android:text="Add to Database"
    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="0.275" />
```

<Button

```
    android:id="@+id/delete"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:onClick="Delete_Details"
    android:text="Delete"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.202"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.439" />
```

<Button

```
    android:id="@+id/display"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:onClick="Display_Details"
    android:text="Display"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.729"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.439" />
```

<TextView

```
    android:id="@+id/textView"
```

```

    android:layout_width="143dp"
    android:layout_height="38dp"
    android:text="Regno : "
    android:textAlignment="center"
    android:textSize="18sp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.018"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.033" />

```

<TextView

```

    android:id="@+id/textView3"
    android:layout_width="143dp"
    android:layout_height="38dp"
    android:text="Name : "
    android:textAlignment="center"
    android:textSize="18sp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.018"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.108" />

```

<TextView

```

    android:id="@+id/textView4"
    android:layout_width="143dp"
    android:layout_height="38dp"
    android:text="Department : "
    android:textAlignment="center"
    android:textSize="18sp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.018"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.189" />

```

<TextView

```
    android:id="@+id/textView5"
    android:layout_width="189dp"
    android:layout_height="51dp"
    android:text="Enter Regno \n To Delete or Display"
    android:textAlignment="center"
    android:textSize="18sp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.022"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.366" />
```

<EditText

```
    android:id="@+id/regno"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="textPersonName"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.83"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.023" />
```

<EditText

```
    android:id="@+id/name"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="textPersonName"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.83"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.109" />
```

```

<EditText
    android:id="@+id/dep"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="textPersonName"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.83"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.19" />

```

```

<EditText
    android:id="@+id/regno2"
    android:layout_width="171dp"
    android:layout_height="48dp"
    android:ems="10"
    android:inputType="textPersonName"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.912"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.364" />

```

```

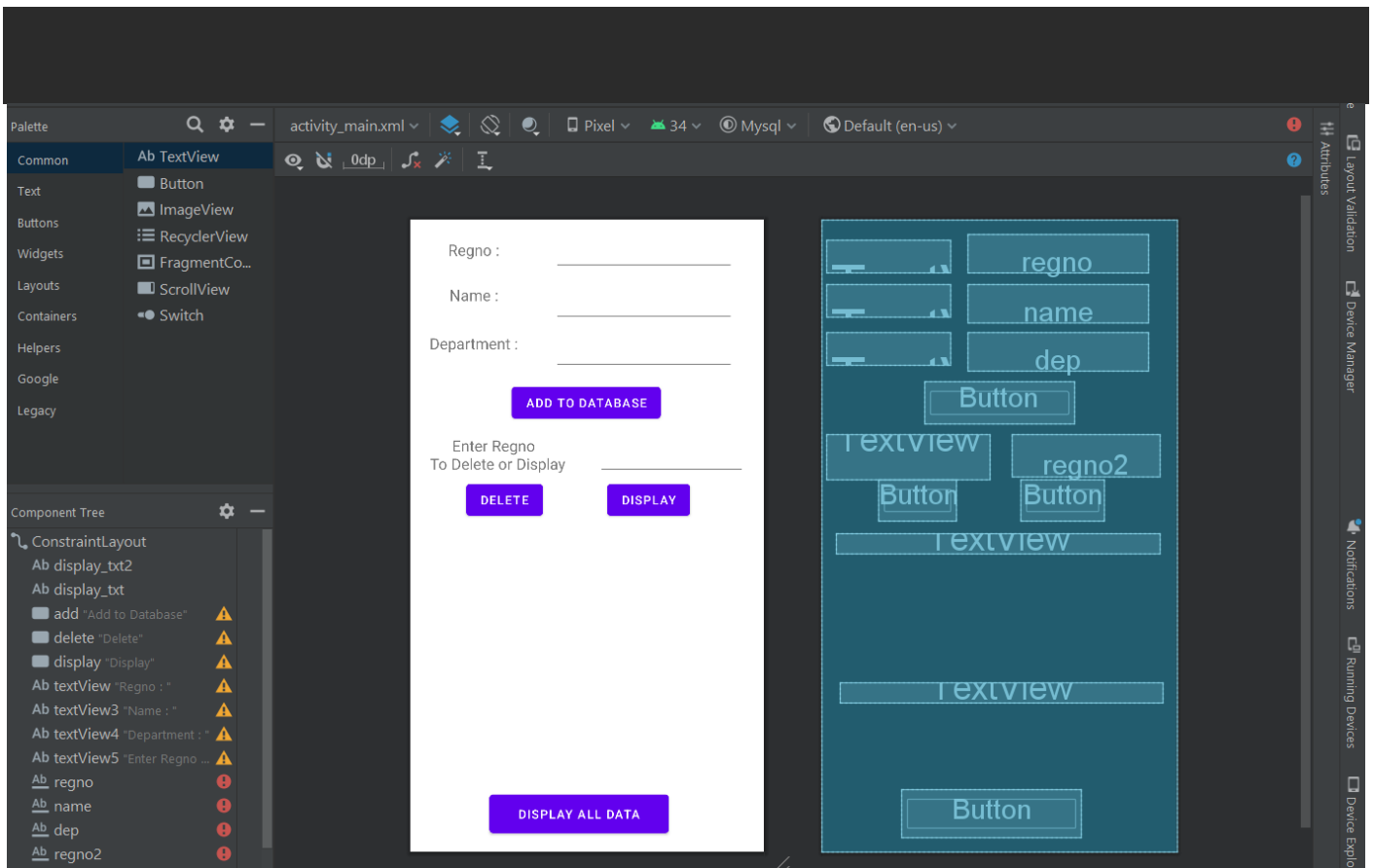
<Button
    android:id="@+id/display_all"
    android:layout_width="209dp"
    android:layout_height="56dp"
    android:onClick="Display_all"
    android:text="Display All Data"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.455"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.976" />

```

```

</androidx.constraintlayout.widget.ConstraintLayout>

```



MainActivity.java

```
package com.example.mysql;

import androidx.appcompat.app.AppCompatActivity;

import android.database.Cursor;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

    EditText regno;
    EditText name;
    EditText dep;
    EditText regno2;
```

```

Button add,delete,display;
sqlhelper sqlhelper;
@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);

    regno=(EditText) findViewById(R.id.regno);
    name=(EditText) findViewById(R.id.name);
    dep=(EditText) findViewById(R.id.dep);
    regno2=(EditText) findViewById(R.id.regno2);

    add=(Button) findViewById(R.id.add);
    delete=(Button) findViewById(R.id.delete);
    display=(Button) findViewById(R.id.display);

    sqlhelper=new sqlhelper(MainActivity.this);
}

public void Add_Details(View v)
{
    int regno_a=Integer.parseInt(regno.getText().toString());
    String name_a=name.getText().toString();
    String dep_a=dep.getText().toString();

    sqlhelper.add_details(regno_a,name_a,dep_a);
    Toast.makeText(getApplicationContext(),"Added
Sucessfully",Toast.LENGTH_SHORT).show();
}

public void Display_Details(View v)
{
    int regno_a=Integer.parseInt(regno2.getText().toString());
    Cursor cursor=sqlhelper.get_student(regno_a);

    TextView disp_txt=(TextView) findViewById(R.id.display_txt);
    StringBuilder flag=new StringBuilder();
    while(cursor.moveToNext())
    {
        flag.append("Regno : ");
    }
}

```

```

        flag.append(cursor.getString(0));

        flag.append("\nName : ");
        flag.append(cursor.getString(1));

        flag.append("\nDepartment : ");
        flag.append(cursor.getString(2));
    }

    disp_txt.setText(flag);
    TextView disp_txt1=(TextView) findViewById(R.id.display_txt2);
    disp_txt1.setText("");
}

public void Display_all(View v){
    Cursor cursor=sqlhelper.get_all_details();
    StringBuilder flag1=new StringBuilder();
    cursor.moveToFirst();
    if((cursor!=null) && (cursor.getCount()>0)){
        do{
            flag1.append("Regno : ");
            flag1.append(cursor.getString(0));

            flag1.append("\nName : ");
            flag1.append(cursor.getString(1));

            flag1.append("\nDepartment : ");
            flag1.append(cursor.getString(2));

            flag1.append("\n\n");
        }while(cursor.moveToNext());
    }
    TextView disp_txt=(TextView) findViewById(R.id.display_txt);
    disp_txt.setText("");
    TextView disp_txt1=(TextView) findViewById(R.id.display_txt2);
    disp_txt1.setText(flag1);
}

public void Delete_Details(View v){
    int regno_a=Integer.parseInt(regno2.getText().toString());

```



```

        sqlhelper.delete_student(regno_a);

        Toast.makeText(getApplicationContext(),"Deleted
Sucessfully",Toast.LENGTH_SHORT).show();
    }
}

```

sqlhelper.java

```

package com.example.mysql;

import android.content.Context;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;

public class sqlhelper extends SQLiteOpenHelper {
    Context context;

    public sqlhelper(Context context) {
        super(context, "Student_datadase.sqlite", null, 1);
        this.context=context;
    }

    @Override
    public void onCreate(SQLiteDatabase sqLiteDatabase) {
        String query="CREATE TABLE Student_table (regno integer PRIMARY KEY,
name varchar, department varchar)";
        sqLiteDatabase.execSQL(query);
    }

    @Override
    public void onUpgrade(SQLiteDatabase sqLiteDatabase, int i, int i1) {
        sqLiteDatabase.execSQL("DROP TABLE IF EXISTS Student_table");
    }

    public void add_details(int regno,String name,String dep)
    {
        SQLiteDatabase db=this.getWritableDatabase();
        String query="INSERT INTO Student_table

```

```

values (" + regno + " , ' " + name + " ' , ' " + dep + " ' ) ; " ;
        db.execSQL(query) ;
        db.close() ;
    }

    public Cursor get_student(int regno)
    {
        SQLiteDatabase db=this.getWritableDatabase() ;
        Cursor cursor=db.rawQuery("SELECT * FROM Student_table where
regno="+regno+" ;",null) ;
        return cursor;
    }

    public void delete_student(int regno){
        SQLiteDatabase db=this.getWritableDatabase() ;
        String query="DELETE from Student_table where regno="+regno+" ;";
        db.execSQL(query) ;
    }

    public Cursor get_all_details(){
        SQLiteDatabase db=this.getWritableDatabase() ;
        Cursor cursor=db.rawQuery("SELECT * FROM Student_table",null) ;
        return cursor;
    }
}

```

Countdown App:

XML:

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:id="@+id/layout"
    android:gravity="center"
    android:layout_height="match_parent"
    android:orientation="vertical">
    <TextView
        android:id="@+id/counttime"
        android:layout_width="match_parent"
        android:gravity="center"
        android:textSize="30sp"
        android:layout_height="wrap_content" />
</LinearLayout>
```

JAVA:

```
package com.example.countdownapp;

import android.annotation.TargetApi;
import android.os.Build;
import android.os.Bundle;
import android.os.CountDownTimer;
//import android.support.v7.app.AppCompatActivity;
import android.view.View;
import android.widget.Button;
import android.widget.RatingBar;
import android.widget.TextView;
import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;

import java.text.DecimalFormat;
import java.text.NumberFormat;

public class MainActivity extends AppCompatActivity {
    public int counter;
    @TargetApi(Build.VERSION_CODES.O)
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        final TextView counttime=findViewById(R.id.counttime);
        new CountDownTimer(10000,1000) {
            @Override
            public void onTick(long millisUntilFinished) {
                NumberFormat f = new DecimalFormat("00");
                long sec = (millisUntilFinished / 1000) % 60;
                counttime.setText(f.format(sec));
                counttime.setText(String.valueOf(counter));
                counter--;
            }
        }
    }
}
```

```

        @Override
        public void onFinish() {
            counttime.setText("Finished");
        }
    }.start();
}

```

Shared Preferences:

XML:

```

<?xml version="1.0" encoding="utf-8"?>
<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"
    tools:context=".MainActivity"
    tools:ignore="HardcodedText"
    android:background="#ACC4D6">

    <TextView
        android:id="@+id/textview"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="32dp"
        android:text="Shared Preferences"
        android:textColor="@android:color/black"
        android:textSize="24sp"
        android:textStyle="bold" />

    <!--EditText to take the data from the user and save the data in
    SharedPreferences-->

    <!--EditText to take the data from the user and save the data in
    SharedPreferences-->
    <EditText
        android:id="@+id/edit1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_below="@+id/textview"
        android:layout_marginStart="16dp"
        android:layout_marginTop="140dp"
        android:layout_marginEnd="16dp"
        android:hint="Enter your Name"
        android:padding="10dp" />

    <EditText
        android:id="@+id/edit2"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_below="@+id/edit1"
        android:layout_marginStart="16dp"
        android:layout_marginTop="47dp"
        android:layout_marginEnd="16dp"
        android:hint="Enter your Age"
        android:inputType="number"

```

```
        android:padding="10dp" />
</RelativeLayout>
```

JAVA:

```
package com.example.sharedpreferences;

import androidx.appcompat.app.AppCompatActivity;
import android.content.SharedPreferences;
import android.os.Bundle;
import android.widget.EditText;

public class MainActivity extends AppCompatActivity {
    private EditText name, age;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        name = findViewById(R.id.edit1);
        age = findViewById(R.id.edit2);
    }

    // Fetch the stored data in onResume() Because this is what will be
    // called when the app opens again
    @Override
    protected void onResume() {
        super.onResume();
        // Fetching the stored data from the SharedPreferences
        SharedPreferences sh = getSharedPreferences("MySharedPref",
MODE_PRIVATE);
        String s1 = sh.getString("name", "");
        int a = sh.getInt("age", 0);

        // Setting the fetched data in the EditTexts
        name.setText(s1);
        age.setText(String.valueOf(a));
    }

    // Store the data in the SharedPreferences in the onPause() method
    // When the user closes the application onPause() will be called and
    // data will be stored
    @Override
    protected void onPause() {
        super.onPause();
        // Creating a shared pref object with a file name "MySharedPref" in
        // private mode
        SharedPreferences sharedPreferences =
getSharedPreferences("MySharedPref", MODE_PRIVATE);
        SharedPreferences.Editor myEdit = sharedPreferences.edit();

        // write all the data entered by the user in SharedPreferences and
        // apply
        myEdit.putString("name", name.getText().toString());
        myEdit.putInt("age", Integer.parseInt(age.getText().toString()));
    }
}
```

```
        myEdit.apply();  
    }  
}
```