

1. Login Form

```
<?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/editText"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"

        android:layout_marginStart="20dp"
        android:layout_marginTop="108dp"
        android:ems="10"
        android:inputType="textPersonName"
        android:text = "Enter Username"

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

    <EditText
        android:id="@+id/editText1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="20dp"
        android:layout_marginTop="208dp"

        android:ems="10"
        android:inputType="textPassword"
        android:text=" Enter Password"
        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="Sign Up"

        android:layout_marginStart="20dp"
        android:layout_marginTop="290dp"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"/>

    <TextView
        android:id="@+id/textView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:fontFamily="sans-serif-medium"
        android:text="Login Form"
        android:textSize="34sp"
        android:layout_marginStart="115dp"
        android:layout_marginTop="20dp"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"/>

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

2. UI Layouts -grid

```
<?xml version="1.0" encoding="utf-8"?>

<RelativeLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity"
    android:background="@color/black">

    <TextView
        android:id="@+id/tex1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:fontFamily="sans-serif-smallcaps"
        android:layout_margin="10dp"
        android:text="Grid Layout"
        android:textColor="#905066"
        android:textSize="54dp">

    </TextView>

    <GridLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:columnCount="2"
        android:layout_marginTop="20dp"
        android:layout_below="@id/tex1">

        <ImageButton
            android:id="@+id/button2"
            android:layout_width="195dp"
            android:layout_height="150dp"
            android:layout_row="1"
            android:layout_marginRight="6dp"
            android:layout_column="0"
            android:layout_marginLeft="5dp"
            android:scaleType="fitXY"
            android:src="@drawable/mer1"
            android:text="Mercedes">

        </ImageButton>

        <ImageButton
            android:id="@+id/button2"
            android:layout_width="195dp"
            android:layout_height="150dp"
            android:layout_row="1"
            android:layout_column="1"
            android:layout_marginLeft="5dp"
            android:scaleType="fitXY"
            android:src="@drawable/mer"
            android:text="Mercedes">

        </ImageButton>
```

```
<Button
    android:id="@+id/button1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_row="0"
    android:layout_rowWeight="1"
    android:layout_column="0"
    android:layout_columnWeight="1"
    android:layout_gravity="fill"
    android:layout_margin="10dp"
    android:fontFamily="sans-serif-medium"
    android:text="Mercedes"
    android:textColor="#9C27B0"
    app:backgroundTint="#CFB9D2" />
```

```
<Button
    android:id="@+id/button2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="fill"
    android:layout_rowWeight="1"
    android:layout_columnWeight="1"
    android:layout_row="0"
    android:layout_column="1"
    android:text="Audi"
    android:fontFamily="sans-serif-medium"
    android:layout_margin="10dp"
    android:textColor="#9C27B0"
    app:backgroundTint="#CFB9D2" />
```

```
<Button
    android:id="@+id/button3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_row="2"
    android:layout_rowWeight="1"
    android:layout_column="0"
    android:layout_columnWeight="1"
    android:layout_gravity="fill"
    android:layout_margin="10dp"
    android:fontFamily="sans-serif-medium"
    android:text="Rolls Royce"
    app:backgroundTint="#AD637C" />
```

```
<Button
    android:id="@+id/button4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_row="2"
    android:layout_rowWeight="1"
    android:layout_column="1"
    android:layout_columnWeight="1"
    android:layout_gravity="fill"
    android:layout_margin="10dp"
    android:fontFamily="sans-serif-medium"
    android:text="Lamborghini"
    android:textColor="#FFFFFF"

    app:backgroundTint="#AD637C" />
```

```
<Button
    android:id="@+id/button5"
    android:layout_width="wrap_content"
```

```

        android:layout_height="wrap_content"
        android:layout_gravity="fill"
        android:layout_rowWeight="1"
        android:layout_columnWeight="1"
        android:layout_row="3"
        android:layout_column="0"
        android:text="Ferrari"
        android:layout_margin="10dp"
        android:fontFamily="sans-serif-medium"
        android:textColor="#9C27B0"
        app:backgroundTint="#CFB9D2"/>

        <Button
            android:id="@+id/button6"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_gravity="fill"
            android:layout_rowWeight="1"
            android:layout_columnWeight="1"
            android:layout_row="3"
            android:layout_column="1"
            android:text="BMW"
            android:layout_margin="10dp"
            android:textColor="#9C27B0"
            android:fontFamily="sans-serif-medium"
            app:backgroundTint="#CFB9D2"/>

    </GridLayout>

</RelativeLayout>

```

3. Table Layout

```

4. <?xml version="1.0" encoding="utf-8"?>

<RelativeLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="#CF9E9E"
    tools:context=".MainActivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginLeft="85dp"
        android:layout_marginTop="10dp"
        android:fontFamily="@font/abril_fatface"
        android:padding="10dp"
        android:text="Table Layout"
        android:textColor="@color/teal_200"
        android:textSize="40dp" />

    <TableLayout
        android:id="@+id/TableLayout"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"

```

```

        android:layout_marginStart="10dp"
        android:layout_marginTop="50dp"
        android:layout_marginEnd="10dp"
        android:layout_marginBottom="10dp">

        <TableRow
            android:layout_height="wrap_content"
            android:layout_marginTop='20dp'>

        </TableRow>

        <TableRow
            android:layout_width="154dp"
            android:layout_marginTop='20dp'>

        </TableRow>

        <TableRow android:layout_marginTop='20dp'>

            <TextView
                android:layout_width="match_parent"
                android:layout_height="match_parent"
                android:fontFamily="cursive"
                android:padding="10dp"
                android:text="First Name :"
                android:textColor="@color/black"
                android:textSize="30dp" />

            <EditText
                android:layout_width="match_parent"
                android:layout_height="match_parent"
                android:layout_marginRight="20dp"
                android:ems="20" />
        </TableRow>

        <TableRow android:layout_marginTop='20dp'>

            <TextView
                android:layout_width="match_parent"
                android:layout_height="match_parent"
                android:fontFamily="cursive"
                android:padding="10dp"
                android:text="Last Name :"
                android:textColor="@color/black"
                android:textSize="30dp" />

            <EditText
                android:layout_width="match_parent"
                android:layout_height="match_parent"
                android:layout_marginRight="30dp"
                android:ems="20" />
        </TableRow>

        <TableRow android:layout_marginTop='20dp'>

            <TextView
                android:id="@+id/textview"
                android:layout_width="match_parent"
                android:layout_height="match_parent"
                android:fontFamily="cursive"
                android:padding="10dp"
                android:text="Gender :"
                android:textColor="@color/black"

```

```

        android:textSize="30dp" />

<RadioGroup android:orientation="horizontal">

    <RadioButton
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:checked="true"
        android:text="Male"
        android:textColor="@color/teal_200"
        android:textSize="25dp" />

    <RadioButton
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:checked="false"
        android:text="Female"
        android:textColor="@color/teal_200"
        android:textSize="25dp" />

</RadioGroup>
</TableRow>

<TableRow android:layout_marginTop='20dp'>

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:fontFamily="cursive"
        android:padding="10dp"
        android:text="Favourities"
        android:textColor="@color/black"
        android:textSize="30dp" />

    <GridLayout
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:columnCount="2">

        <CheckBox
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Indian"
            android:textSize="15dp" />

        <CheckBox
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:checked="true"
            android:text="Mexican"
            android:textSize="15dp" />

        <CheckBox
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:checked="true"
            android:text="Chinese"
            android:textSize="15dp" />

        <CheckBox
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"

```

```

        android:text="Italian"
        android:textSize="15dp" />

        <CheckBox
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:checked="true"
            android:text="Continental"
            android:textSize="15dp" />

        <CheckBox
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:checked="true"
            android:text="Spanish"
            android:textSize="15dp" />
    </GridLayout>
</TableRow>
</TableLayout>
<Button
    android:id="@+id/submit"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@id/TableLayout"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="10dp"
    android:text="Submit"
    android:textSize="20dp" />

</RelativeLayout>

```

MainActivity:

```

package com.example.tablelayout;

import androidx.appcompat.app.AppCompatActivity;

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

public class MainActivity extends AppCompatActivity {
    Button submit;

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

        submit = findViewById(R.id.submit);

        submit.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Intent iNext = new Intent(MainActivity.this, SecondActivity.class);
                startActivity(iNext);
            }
        });
    }
}

```



```

        android:layout_height="wrap_content"
        android:checked="true"
        android:text="Male"
        android:textColor="@color/teal_200"
        android:textSize="25dp" />

        <RadioButton
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:checked="false"
            android:text="Female"
            android:textColor="@color/teal_200"
            android:textSize="25dp" />

    </RadioGroup>
</TableRow>

<TableRow android:layout_marginTop='20dp'>

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:fontFamily="cursive"
        android:padding="10dp"
        android:text="Favourities"
        android:textColor="@color/black"
        android:textSize="30dp" />

    <GridLayout
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:columnCount="2">

        <CheckBox
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Indian"
            android:textSize="15dp" />

        <CheckBox
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:checked="true"
            android:text="Mexican"
            android:textSize="15dp" />

        <CheckBox
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:checked="true"
            android:text="Chinese"
            android:textSize="15dp" />

        <CheckBox
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Italian"
            android:textSize="15dp" />

        <CheckBox

```

```

        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:checked="true"
        android:text="Continental"
        android:textSize="15dp" />

        <CheckBox
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:checked="true"
            android:text="Spanish"
            android:textSize="15dp" />
    </GridLayout>
</TableRow>

</TableLayout>

<Button
    android:id="@+id/back"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@id/TableLayout"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="10dp"
    android:text="Back"
    android:textSize="20dp" />

</RelativeLayout>

```

Second Java:

```

package com.example.tablelayout;

import androidx.appcompat.app.AppCompatActivity;

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

public class SecondActivity extends AppCompatActivity {
    Button back;

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

        back = findViewById(R.id.back);
        back.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Intent iback=new Intent(SecondActivity.this,MainActivity.class);
                startActivity(iback);
            }
        });
    }
}

```

5. Simple Calculator

```
6. <?xml version="1.0" encoding="utf-8"?>
  <RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="@color/black"
    android:hapticFeedbackEnabled="false"
    tools:context=".MainActivity">

    <TextView
      android:id="@+id/Cal"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:layout_centerHorizontal="true"
      android:layout_marginStart="30dp"
      android:layout_marginTop="30dp"
      android:layout_marginEnd="30dp"
      android:layout_marginBottom="20dp"
      android:fontFamily="@font/abril_fatface"
      android:text="Calculator"
      android:textColor="#A44767"
      android:textSize="40dp">

    </TextView>

    <EditText
      android:id="@+id/editText"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:textColor="@color/white"
      android:layout_marginLeft="50dp"
      android:layout_marginTop="200dp"
      android:layout_marginBottom="20dp"
      android:backgroundTint="@color/white"
      android:ems="15">

    </EditText>

    <GridLayout
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:layout_below="@id/editText"
      android:layout_marginStart="20dp"
      android:layout_marginTop="20dp"
      android:layout_marginEnd="20dp"
      android:layout_marginBottom="20dp"
      android:columnCount="4"
      android:rowCount="4">

      <Button
        android:id="@+id/clear"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_margin="2dp"
        android:fontFamily="sans-serif-black"
        android:text="AC"
        android:textColor="#FAFAFA"
        android:textSize="25dp"
        app:backgroundTint="#5B2236" />
```

```
<Button
    android:id="@+id/percent"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="2dp"
    android:fontFamily="sans-serif-black"
    android:text="%"
    android:textColor="#FAFAFA"
    android:textSize="25dp"
    app:backgroundTint="#5B2236" />
```

```
<Button
    android:id="@+id/dot"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="2dp"
    android:fontFamily="sans-serif-black"
    android:text="."
    android:textColor="#FAFAFA"
    android:textSize="25dp"
    app:backgroundTint="#5B2236" />
```

```
<Button
    android:id="@+id/btnmul"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="2dp"
    android:fontFamily="sans-serif-black"
    android:text="x"
    android:textColor="#FAFAFA"
    android:textSize="25dp"
    app:backgroundTint="#D1775B" />
```

```
<Button
    android:id="@+id/num1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="2dp"
    android:fontFamily="sans-serif-black"
    android:text="1"
    android:textColor="#FAFAFA"
    android:textSize="25dp"
    app:backgroundTint="#C2597C" />
```

```
<Button
    android:id="@+id/num2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="2dp"
    android:fontFamily="sans-serif-black"
    android:text="2"
    android:textColor="#FAFAFA"
    android:textSize="25dp"
    app:backgroundTint="#C2597C" />
```

```
<Button
    android:id="@+id/num3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="2dp"
    android:fontFamily="sans-serif-black"
```

```
        android:text="3"
        android:textColor="#FAFAFA"
        android:textSize="25dp"
        app:backgroundTint="#C2597C" />
```

```
<Button
    android:id="@+id/btndiv"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="2dp"
    android:fontFamily="sans-serif-black"
    android:text="÷"
    android:textColor="#FAFAFA"
    android:textSize="25dp"
    app:backgroundTint="#D1775B" />
```

```
<Button
    android:id="@+id/num4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="2dp"
    android:fontFamily="sans-serif-black"
    android:text="4"
    android:textColor="#FAFAFA"
    android:textSize="25dp"
    app:backgroundTint="#C2597C" />
```

```
<Button
    android:id="@+id/num5"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="2dp"
    android:fontFamily="sans-serif-black"
    android:text="5"
    android:textColor="#FAFAFA"
    android:textSize="25dp"
    app:backgroundTint="#C2597C" />
```

```
<Button
    android:id="@+id/num6"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="2dp"
    android:fontFamily="sans-serif-black"
    android:text="6"
    android:textColor="#FAFAFA"
    android:textSize="25dp"
    app:backgroundTint="#C2597C" />
```

```
<Button
    android:id="@+id/btnadd"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="2dp"
    android:fontFamily="sans-serif-black"
    android:text="+"
    android:textColor="#FAFAFA"
    android:textSize="25dp"
    app:backgroundTint="#D1775B" />
```

```
<Button
    android:id="@+id/num7"
    android:layout_width="wrap_content"
```

```
        android:layout_height="wrap_content"
        android:layout_margin="2dp"
        android:fontFamily="sans-serif-black"
        android:text="7"
        android:textColor="#FAFAFA"
        android:textSize="25dp"
        app:backgroundTint="#C2597C" />
```

```
<Button
    android:id="@+id/num8"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="2dp"
    android:fontFamily="sans-serif-black"
    android:text="8"
    android:textColor="#FAFAFA"
    android:textSize="25dp"
    app:backgroundTint="#C2597C" />
```

```
<Button
    android:id="@+id/num9"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="2dp"
    android:fontFamily="sans-serif-black"
    android:text="9"
    android:textColor="#FAFAFA"
    android:textSize="25dp"
    app:backgroundTint="#C2597C" />
```

```
<Button
    android:id="@+id/btnsub"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="2dp"
    android:fontFamily="sans-serif-black"
    android:text="-"
    android:textColor="#FAFAFA"
    android:textSize="25dp"
    app:backgroundTint="#D1775B" />
```

```
<Button
    android:id="@+id/blank1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="2dp"
    android:background="#050505"
    android:fontFamily="sans-serif-black"
    android:text=""
    android:textColor="#FAFAFA"
    android:textSize="25dp"
    app:backgroundTint="#000000" />
```

```
<Button
    android:id="@+id/num0"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="2dp"
    android:fontFamily="sans-serif-black"
    android:text="0"
    android:textColor="#FAFAFA"
    android:textSize="25dp"
    app:backgroundTint="#C2597C" />
```

```

        <Button
            android:id="@+id/blank"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_margin="2dp"
            android:background="#050505"
            android:fontFamily="sans-serif-black"
            android:text=""
            android:textColor="#FAFAFA"
            android:textSize="25dp"
            app:backgroundTint="#050505" />

        <Button
            android:id="@+id/equalto"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_margin="2dp"
            android:fontFamily="sans-serif-black"
            android:text=""
            android:textColor="#FAFAFA"
            android:textSize="25dp"
            app:backgroundTint="#D1775B" />

    </GridLayout>

</RelativeLayout>

```

Java:

```

package com.example.calculator;

import androidx.appcompat.app.AppCompatActivity;

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

public class MainActivity extends AppCompatActivity
{
    Button btn1,btn2,btn3,btn4,btn5,btn6,btn7,btn8,btn9,btn0;
    Button add,mul,div,equalto,percent,clear,dot;

    EditText editText;

    String opr;
    Float num1,num2;

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

        btn1 = (Button) findViewById(R.id.num1);
        btn2 = (Button) findViewById(R.id.num2);
        btn3 = (Button) findViewById(R.id.num3);
        btn4 = (Button) findViewById(R.id.num4);
        btn5 = (Button) findViewById(R.id.num5);
        btn6 = (Button) findViewById(R.id.num6);
    }
}

```

```
btn7 = (Button) findViewById(R.id.num7);
btn8 = (Button) findViewById(R.id.num8);
btn9 = (Button) findViewById(R.id.num9);
btn0 = (Button) findViewById(R.id.num0);

editText = (EditText) findViewById(R.id.editText);

add = (Button) findViewById(R.id.btnadd);
sub = (Button) findViewById(R.id.btnsub);
mul = (Button) findViewById(R.id.btnmul);
div = (Button) findViewById(R.id.btndiv);

equalto = (Button) findViewById(R.id.equalto);
percent = (Button) findViewById(R.id.percent);
clear = (Button) findViewById(R.id.clear);
dot = (Button) findViewById(R.id.dot);
```

```
// Edittext on click
```

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

    }
});
```

```
// All 10 button on click
```

```
btn1.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        editText.setText(editText.getText()+"1");
    }
});
```

```
btn2.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        editText.setText(editText.getText()+"2");
    }
});
```

```
btn3.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        editText.setText(editText.getText()+"3");
    }
});
```

```
btn4.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        editText.setText(editText.getText()+"4");
    }
});
```

```
btn5.setOnClickListener(new View.OnClickListener() {
```



```

        @Override
        public void onClick(View view) {
            editText.setText(editText.getText()+"5");
        }
    });

    btn6.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            editText.setText(editText.getText()+"6");
        }
    });

    btn7.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            editText.setText(editText.getText()+"7");
        }
    });

    btn8.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            editText.setText(editText.getText()+"8");
        }
    });

    btn9.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            editText.setText(editText.getText()+"9");
        }
    });

    btn0.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            editText.setText(editText.getText()+"0");
        }
    });

    dot.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            editText.setText(editText.getText()+".");
        }
    });

    // Add, sub, mul, div button on click

    add.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            num1 = Float.parseFloat(editText.getText()+"");
            opr ="add";

```

```

        editText.setText(null);

    }

});

sub.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        num1 = Float.parseFloat(editText.getText()+"");
        opr ="sub";
        editText.setText(null);

    }

});

mul.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        num1 = Float.parseFloat(editText.getText()+"");
        opr ="mul";
        editText.setText(null);

    }

});

div.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        num1 = Float.parseFloat(editText.getText()+"");
        opr ="div";
        editText.setText(null);

    }

});

// Percent, equalto, clear button

percent.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        num1 = Float.parseFloat(editText.getText()+"");
        opr ="per";
        editText.setText(null);

    }

});

equalto.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        num2 = Float.parseFloat(editText.getText()+"");
        if(opr=="add")
        {
            editText.setText(num1+num2+"");
        }

        if(opr=="sub")
        {
            editText.setText(num1-num2+"");
        }

    }

});

```

```

        if(opr=="mul")
        {
            editText.setText(num1*num2+"");
        }

        if(opr=="div")
        {
            editText.setText(num1/num2+"");
        }

        if(opr=="per")
        {
            editText.setText(num1/100+"");
        }

    }

});

clear.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        editText.setText(null);
    }
});

}
}

```

7. Inten – Explicit & Implicit

First activity:

```

<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="#9D4563"
    tools:context=".MainActivity">

    <TextView
        android:id="@+id/tex1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="15dp"
        android:fontFamily="@font/abril_fatface"
        android:text="Barbeque Nation"
        android:textColor="@color/white"
        android:textSize="35dp">

    </TextView>

    <TextView
        android:id="@+id/tex2"

```

```
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="100dp"
    android:fontFamily="@font/allerta"
    android:text="Book Table "
    android:textColor="@color/white"
    android:textSize="35dp">
```

```
</TextView>
```

```
<GridLayout
    android:id="@+id/grid"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:layout_below="@id/tex1"
    android:layout_marginTop="120dp"
    android:layout_marginRight="20dp"
    android:layout_marginLeft="20dp"
    android:layout_marginBottom="20dp"
    android:columnCount="2">
```

```
<EditText
    android:id="@+id/EditText1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_column="0"
    android:layout_centerHorizontal="true"
    android:ems="30"
    android:fontFamily="@font/almendra"
    android:hint="First Name:"
    android:textColor="@color/white"
    android:textColorHint="@color/white"
    android:textSize="20dp"
    app:layout_constraintTop_toTopOf="parent" />
```

```
<EditText
    android:id="@+id/EditText2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_column="0"
    android:fontFamily="@font/almendra"
    android:textColorHint="@color/white"
    android:textSize="20dp"
    android:layout_centerHorizontal="true"
    android:ems="30"
    android:hint="Last Name:"
    android:textColor="@color/white"
    app:layout_constraintTop_toTopOf="parent" />
```

```
<EditText
    android:id="@+id/EditText6"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_column="0"
    android:fontFamily="@font/almendra"
    android:textColorHint="@color/white"
    android:textSize="20dp"
    android:layout_centerHorizontal="true"
    android:ems="30"
    android:hint="Email:"
    android:textColor="@color/white"
```

```

        app:layout_constraintTop_toTopOf="parent" />

<EditText
    android:id="@+id/EditText3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_column="0"
    android:layout_centerHorizontal="true"
    android:fontFamily="@font/almendra"
    android:textColorHint="@color/white"
    android:textSize="20dp"
    android:ems="30"
    android:hint="No. of Pax: "
    android:textColor="@color/white"
    app:layout_constraintTop_toTopOf="parent" />

<EditText
    android:id="@+id/EditText4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_column="0"
    android:fontFamily="@font/almendra"
    android:textColorHint="@color/white"
    android:textSize="20dp"
    android:layout_centerHorizontal="true"
    android:ems="30"
    android:hint="City: "
    android:textColor="@color/white"
    app:layout_constraintTop_toTopOf="parent" />

<EditText
    android:id="@+id/EditText5"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_column="0"
    android:fontFamily="@font/almendra"
    android:textColorHint="@color/white"
    android:textSize="20dp"
    android:layout_centerHorizontal="true"
    android:ems="30"
    android:hint="Cuisine Price: "
    android:textColor="@color/white"
    app:layout_constraintTop_toTopOf="parent" />

</GridLayout>

<Button
    android:id="@+id/next"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="480dp"
    android:text="Next"
    android:textColor="@color/white"
    android:textSize="25dp"
    app:backgroundTint="#64253A"
    tools:ignore="NotSibling">

```

```

</Button>

<Button
    android:id="@+id/launch"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="550dp"
    android:text="Launch Web Page"
    android:textColor="@color/white"
    android:textSize="25dp"
    app:backgroundTint="#64253A"
    tools:ignore="NotSibling">

</Button>

</RelativeLayout>

```

MainActivit.java:

```

package com.example.intent;

import androidx.appcompat.app.AppCompatActivity;

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

public class MainActivity extends AppCompatActivity {
    Button next, launch;
    EditText name, uname, email, uid, bookt, bookp;

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

        next = findViewById(R.id.next);
        name = findViewById(R.id.EditText1);
        uname = findViewById(R.id.EditText2);
        uid = findViewById(R.id.EditText3);
        bookt = findViewById(R.id.EditText4);
        bookp = findViewById(R.id.EditText5);
        email = findViewById(R.id.EditText6);
        launch = findViewById(R.id.launch);

        next.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                String pname = name.getText().toString();
                String username = uname.getText().toString();
                String em = email.getText().toString();
                Integer id = Integer.parseInt(uid.getText().toString());
                String bt = bookt.getText().toString();
            }
        });
    }
}

```

```

        Float bpr = Float.parseFloat(bookp.getText().toString());

        Intent inext = new Intent(MainActivity.this, SecondActivity.class);
        inext.putExtra("name", pname);
        inext.putExtra("uname", username);
        inext.putExtra("email", em);
        inext.putExtra("uid", id);
        inext.putExtra("bookt", bt);
        inext.putExtra("bookp", bpr);
        startActivity(inext);
    }
});

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

```

Second Activity:

```

<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="#5DAF60"
    tools:context=".MainActivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="15dp"
        android:fontFamily="@font/abril_fatface"
        android:text="Submit page"
        android:textColor="@color/black"
        android:textSize="40dp">

    </TextView>

    <GridLayout
        android:id="@+id/grid"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:layout_marginTop="120dp"
        android:layout_marginRight="20dp"
        android:layout_marginLeft="20dp"
        android:layout_marginBottom="20dp"
        android:columnCount="1">

        <TextView
            android:id="@+id/Text1"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_column="0"

```

```

        android:layout_centerHorizontal="true"
        android:layout_margin="10dp"
        android:fontFamily="sans-serif-medium"
        android:text="First Name: "
        android:textSize="20dp"
        app:layout_constraintTop_toTopOf="parent" />

<TextView
    android:id="@+id/Text2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_centerHorizontal="true"
    android:fontFamily="sans-serif-medium"
    android:layout_column="0"
    android:text="Last Name: "
    android:textSize="20dp"
    android:layout_margin="10dp"
    app:layout_constraintTop_toTopOf="parent" />

<TextView
    android:id="@+id/Text6"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_centerHorizontal="true"
    android:fontFamily="sans-serif-medium"
    android:layout_column="0"
    android:text="Phone No. : "
    android:textSize="20dp"
    android:layout_margin="10dp"
    app:layout_constraintTop_toTopOf="parent" />

<TextView
    android:id="@+id/Text3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_centerHorizontal="true"
    android:fontFamily="sans-serif-medium"
    android:layout_column="0"
    android:text="No. of Pax: "
    android:textSize="20dp"
    android:layout_margin="10dp"
    app:layout_constraintTop_toTopOf="parent" />

<TextView
    android:id="@+id/Text4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_centerHorizontal="true"
    android:fontFamily="sans-serif-medium"
    android:layout_column="0"
    android:text="City: "
    android:layout_margin="10dp"
    android:textSize="20dp"
    app:layout_constraintTop_toTopOf="parent" />

<TextView
    android:id="@+id/Text5"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_centerHorizontal="true"
    android:fontFamily="sans-serif-medium"
    android:layout_column="0"
    android:text="Cuisine Price: "

```



```

        android:layout_margin="10dp"
        android:textSize="20dp"
        app:layout_constraintTop_toTopOf="parent" />

</GridLayout>

<Button
    android:id="@+id/back"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="420dp"
    android:text="Back"
    android:textSize="20dp"
    app:backgroundTint="#64253A">

</Button>

</RelativeLayout>

```

SecondActivity.java:

```

package com.example.intent;

import androidx.appcompat.app.AppCompatActivity;

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

public class SecondActivity extends AppCompatActivity {
    Button back;
    TextView txtname,txtusername,txtema,txtuid,txtbook,txtprice;

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

        txtname = findViewById(R.id.Text1);
        txtusername = findViewById(R.id.Text2);
        txtema = findViewById(R.id.Text6);
        txtuid = findViewById(R.id.Text3);
        txtbook = findViewById(R.id.Text4);
        txtprice = findViewById(R.id.Text5);

        String pname = getIntent().getStringExtra("name");
        String username = getIntent().getStringExtra("uname");
        String em = getIntent().getStringExtra("email");
        Integer id = getIntent().getIntExtra("uid",0);
        String bt = getIntent().getStringExtra("bookt");
        Float bpr = getIntent().getFloatExtra("bookp",0);

        txtname.setText("Name: " + pname);
        txtusername.setText("Username: " +username);
        txtema.setText("Email ID : "+em);
    }
}

```

```

txtuid.setText("No. of Pax: " + id);
txtbook.setText("City: " + bt);
txtprice.setText("Cuisine Price: " + bpr);

back = findViewById(R.id.back);

back.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        Intent iback = new Intent(SecondActivity.this, MainActivity.class);

        startActivity(iback);
    }
});
}
}

```

8. Broadcast Receiver

```

<?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"
    android:background="#FFFFFFE"
    tools:context=".MainActivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_margin="10dp"
        android:background="#66A668"
        android:fontFamily="@font/almendra"
        android:text="Battery Status window"
        android:textColor="@color/white"
        android:textSize="40dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>

```

MainJava:

```

package com.example.broadcastreceiver;

import androidx.appcompat.app.AppCompatActivity;

import android.content.BroadcastReceiver;
import android.content.IntentFilter;
import android.os.Bundle;

public class MainActivity extends AppCompatActivity {

```

```

BroadcastReceiver br;

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

    br = new BatteryReceiver();
    IntentFilter iFilter = new
IntentFilter("android.intent.action.BATTERY_CHANGED");
    registerReceiver(br, iFilter);
}
}

```

Broadcast Receiver:

```

package com.example.broadcastreceiver;

import android.content.BroadcastReceiver;
import android.content.Context;
import android.content.Intent;
import android.widget.Toast;

public class BatteryReceiver extends BroadcastReceiver {
    @Override
    public void onReceive(Context context, Intent intent) {
        Toast.makeText(context, "Broadcast Message Received",
Toast.LENGTH_SHORT).show();
    }
}

```

9. Audio App

```

<?xml version="1.0" encoding="utf-8"?>

<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="#695292"
    tools:context=".MainActivity">

    <ImageView
        android:id="@+id/image"
        android:layout_width="300dp"
        android:layout_height="150dp"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="100dp"
        android:background="@drawable/logo"
        tools:ignore="MissingConstraints"></ImageView>

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"

```

```

        android:fontFamily="@font/aladin"
        android:text="Music App"
        android:textColor="@color/white"
        android:textSize="75dp" />

<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="290dp"
    android:fontFamily="@font/alata"
    android:text="Why This Kolaveri Di"
    android:textColor="@color/white"
    android:textSize="35dp" />

<ImageView
    android:id="@+id/image1"
    android:layout_width="300dp"
    android:layout_height="150dp"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="350dp"
    android:background="@drawable/kol"
    tools:ignore="MissingConstraints"></ImageView>

<LinearLayout
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@id/image1"
    android:layout_margin="20dp"
    android:layout_marginTop="50dp"
    tools:ignore="MissingConstraints">

    <Button
        android:id="@+id/Play"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_margin="20dp"
        android:text="Play">

    </Button>

    <Button
        android:id="@+id/Pause"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_margin="20dp"
        android:text="Pause">

    </Button>

    <Button
        android:id="@+id/Stop"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_margin="20dp"
        android:text="Stop">

    </Button>

</LinearLayout>

</RelativeLayout>

```

Java:

```
package com.example.audioplayer;

import androidx.appcompat.app.AppCompatActivity;

import android.media.MediaPlayer;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;

public class MainActivity extends AppCompatActivity {
    Button play,pause,stop;
    MediaPlayer mp;

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

        play= findViewById(R.id.Play);
        pause=findViewById(R.id.Pause);
        stop=findViewById(R.id.Stop);

        mp = MediaPlayer.create(this,R.raw.kolaveri);

        play.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) { mp.start();
            }
        });
        pause.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) { mp.pause();
            }
        });
        stop.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) { mp.stop();
            }
        });
    }
}
```

10.Video App

Activity.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity"
    android:background="@color/white">

    <TextView
        android:id="@+id/text"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="20dp"
        android:layout_marginBottom="20dp"
        android:fontFamily="@font/abril_fatface"
        android:text="KGF Police Station Scene"
        android:textColor="#A43D60"
        android:textSize="30dp" />

    <VideoView

        android:layout_width="match_parent"
        android:layout_height="400dp"
        android:layout_margin="10dp"
        android:id="@+id/videoview"
        android:layout_below="@id/text">

    </VideoView>

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="500dp"
        android:fontFamily="@font/alata"
        android:text="Video Player"
        android:textColor="#A43D60"
        android:textSize="35dp" />
</RelativeLayout>
```

Java:

```
package com.example.videoplayer;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.widget.MediaController;
import android.widget.VideoView;
```

```

public class MainActivity extends AppCompatActivity {
    VideoView vv;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        vv=findViewById(R.id.videoview);

        String vPath ="android.resource://" +getPackageName()+"/raw/kgf";
        vv.setVideoPath(vPath);
        vv.start();
        MediaController media=new MediaController(this);
        vv.setMediaController(media);
    }
}

```

11.Call & send an SMS

```

<?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.SEND_SMS"/>
    <uses-permission android:name="android.permission.CALL_PHONE"/>

```

Activity.xml

```

<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="#A8385E"
    tools:context=".MainActivity">

    <TextView
        android:id="@+id/tex1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="15dp"
        android:fontFamily="@font/abril_fatface"
        android:text="Send SMS Message "
        android:textColor="@color/white"
        android:textSize="40dp">

    </TextView>

    <EditText
        android:id="@+id/phone"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:layout_marginLeft="20dp"
        android:layout_marginRight="20dp"
        android:layout_marginTop="150dp">

```

```

        android:ems="30"
        android:hint="Phone No:"
        android:textColorHint="@color/white"
        android:textColor="@color/white"
        android:textSize="25dp"
        app:layout_constraintTop_toTopOf="parent" />

<EditText
    android:id="@+id/message"
    android:layout_width="wrap_content"
    android:layout_height="100dp"
    android:layout_centerHorizontal="true"
    android:layout_marginLeft="20dp"
    android:layout_marginRight="20dp"
    android:layout_marginTop="250dp"
    android:ems="30"
    android:hint="Text Message Here"
    android:inputType="textLongMessage"
    android:textColor="@color/white"
    android:textColorHint="@color/white"
    android:textSize="25dp"
    app:layout_constraintTop_toTopOf="parent" />

<Button
    android:id="@+id/btn1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@id/message"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="45dp"
    android:textColor="@color/black"
    android:textSize="20dp"
    android:text="Send SMS"
    app:backgroundTint="#539956">

</Button>

<Button
    android:id="@+id/btn2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@id/btn1"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="10dp"
    android:textColor="@color/black"
    android:textSize="20dp"
    android:text="Make a Call"
    app:backgroundTint="#539956">

</Button>

</RelativeLayout>

```

Java:

```

package com.example.sendsms;

import androidx.appcompat.app.AppCompatActivity;

```



```

import android.Manifest;
import android.annotation.SuppressLint;
import android.content.Intent;
import android.content.pm.PackageManager;
import android.net.Uri;
import android.os.Build;
import android.os.Bundle;
import android.telephony.SmsManager;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

    Button b1,b2;
    EditText phn,msg;

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

        b1 = findViewById(R.id.btn1);
        b2 = findViewById(R.id.btn2);
        phn = findViewById(R.id.phone);
        msg = findViewById(R.id.message);

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

                String phoneNo = phn.getText().toString().trim();
                String message = msg.getText().toString().trim();

                if(Build.VERSION.SDK_INT >= Build.VERSION_CODES.M)
                {
                    if (checkSelfPermission(Manifest.permission.SEND_SMS) ==
PackageManager.PERMISSION_GRANTED)
                    {
                        SmsManager smsManager = SmsManager.getDefault();
                        smsManager.sendTextMessage(phoneNo,null,message,null,null);
                        Toast.makeText(MainActivity.this, "Message Sent",
Toast.LENGTH_SHORT).show();
                    }
                    else
                    {
                        String[] permission = {Manifest.permission.SEND_SMS};
                        requestPermissions(permission,1);
                    }
                }
            }
        });

        b2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {

                String phoneNo_call = phn.getText().toString().trim();

                if(Build.VERSION.SDK_INT >= Build.VERSION_CODES.M)
                {

```

```

        if (checkSelfPermission(Manifest.permission.CALL_PHONE) ==
PackageManager.PERMISSION_GRANTED)
        {
            Intent i = new Intent(Intent.ACTION_CALL);
            i.setData(Uri.parse("tel: " +phoneNo_call));
            startActivity(i);
        }
        else
        {
            String[] permission = {Manifest.permission.CALL_PHONE};
            requestPermissions(permission,1);
        }
    }
}
});
}
}

```

12.Convert Text to speech

```

<?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" />

```

Activity.xml:

```

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

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="20dp"
        android:fontFamily="@font/abril_fatface"
        android:text="Text To Speech"
        android:textSize="50dp"
        android:textColor="@color/black"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <EditText
        android:id="@+id/Edit1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="120dp"
        android:layout_marginRight="20dp"
        android:layout_marginLeft="20dp"
        android:textSize="20dp"

```

```

        android:ems="30"
        android:hint="Enter Text"/>

<Button
    android:id="@+id/button1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Click to Convert Text"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="200dp"
    android:textSize="15dp"/>

<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Speed"
    android:layout_marginTop="260dp"
    android:layout_marginLeft="20dp"
    android:textSize="28dp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
<SeekBar
    android:id="@+id/seek"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="300dp"
    android:progress="50" />

<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Pitch"
    android:layout_marginTop="340dp"
    android:layout_marginLeft="20dp"
    android:textSize="28dp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
<SeekBar
    android:id="@+id/seek1"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="380dp"
    android:progress="50" />
</RelativeLayout>

```

Java:

```

package com.example.texttospeech;

import androidx.appcompat.app.AppCompatActivity;

```

```

import android.os.Build;
import android.os.Bundle;
import android.speech.tts.TextToSpeech;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.SeekBar;

import java.util.Locale;

public class MainActivity extends AppCompatActivity {
    EditText e1;
    Button b1;
    TextToSpeech ts;

    SeekBar sk,sk1;

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

        e1=findViewById(R.id.Edit1);

        b1=findViewById(R.id.button1);

        sk=findViewById(R.id.seek);
        sk1 = findViewById(R.id.seek1);

        ts = new TextToSpeech(getApplicationContext(), new
TextToSpeech.OnInitListener() {
            @Override
            public void onInit(int i) {
                ts.setLanguage(Locale.getDefault());
            }
        });

        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                String text=e1.getText().toString();

                if (Build.VERSION.SDK_INT >= Build.VERSION_CODES.LOLLIPOP) {
                    ts.speak(text,TextToSpeech.QUEUE_FLUSH,null,null);
                }
            }
        });
        sk.setOnSeekBarChangeListener(new SeekBar.OnSeekBarChangeListener() {
            @Override
            public void onProgressChanged(SeekBar seekBar, int progress, boolean
fromUser) {
                float speechRate = (float) progress / 100.0f;
                ts.setSpeechRate(speechRate);
            }

            @Override
            public void onStartTrackingTouch(SeekBar seekBar) {}
        });
    }
}

```

```

        @Override
        public void onStopTrackingTouch(SeekBar seekBar) {}
    });

    sk1.setOnSeekBarChangeListener(new SeekBar.OnSeekBarChangeListener() {
        @Override
        public void onProgressChanged(SeekBar seekBar, int progress, boolean
fromUser) {
            float speechRate = (float) progress / 100.0f;
            ts.setPitch(speechRate);

        }

        @Override
        public void onStartTrackingTouch(SeekBar seekBar) {}

        @Override
        public void onStopTrackingTouch(SeekBar seekBar) {}
    });
}
@Override
protected void onDestroy() {
    if (ts != null) {
        ts.stop();
        ts.shutdown();
    }
    super.onDestroy();
}
}

```

13. Nearby location

```

<?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.ACCESS_COARSE_LOCATION"/>
    <uses-permission android:name="android.permission.ACCESS_FINE_LOCATION"/>
    <uses-permission android:name="android.permission.INTERNET"/>

```

Activit.xml

```

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

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="25dp"

```

```

        android:fontFamily="@font/abril_fatface"
        android:text="Muskan Maps"
        android:textColor="#D82F2F"
        android:textColorLink="#A24545"
        android:textSize="50dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="150dp"
    android:fontFamily="sans-serif"
    android:text="Click Here to find the Location"
    android:textColor="#59BF5D"
    android:textColorLink="#4CAF50"
    android:textSize="25dp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    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:layout_marginTop="250dp"
    android:text="Location"
    android:layout_centerHorizontal="true"/>

<ImageView
    android:layout_width="262dp"
    android:layout_height="333dp"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="300dp"
    android:maxLength="10dp"
    android:src="@drawable/mm" />

</RelativeLayout>

```

Java:

```

package com.example.nearlocation;

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;

public class MainActivity extends AppCompatActivity {

    Button btn1;

    @Override
    protected void onCreate(Bundle savedInstanceState) {

```

```

        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        btn1 = findViewById(R.id.button);

        btn1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Uri uri=
Uri.parse("geo:https://www.google.com/maps?q="+Uri.encode("19.8799° N, 75.3557° E"));
                Intent i=new Intent(Intent.ACTION_VIEW,uri);
                i.setPackage("com.google.android.apps.maps");
                startActivity(i);
            }
        });
    }
}

```

14. Database

Activity.xml

```

15. <?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"
        android:background="#D17D9A"
        tools:context=".MainActivity">

        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_centerHorizontal="true"
            android:layout_marginTop="25dp"
            android:text="Database"
            android:textColor="@color/white"
            android:textColorLink="#A24545"
            android:textSize="60dp" />

        <EditText
            android:id="@+id/rollno"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_centerHorizontal="true"
            android:layout_marginTop="180dp"
            android:textColor="@color/white"
            android:ems="15"
            android:hint="Roll No: "
            android:inputType="number"
            android:textColorHint="@color/black"
            android:textSize="20dp" />
    </RelativeLayout>

```

```
<EditText
    android:id="@+id/name"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_centerHorizontal="true"
    android:layout_marginStart="2dp"
    android:layout_marginTop="260dp"
    android:textColor="@color/white"
    android:ems="15"
    android:hint="Name: "
    android:textColorHint="@color/black"
    android:textSize="20dp" />
```

```
<Button
    android:id="@+id/button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@id/name"
    android:layout_marginLeft="60dp"
    android:layout_marginTop="60dp"
    android:layout_marginBottom="264dp"
    android:backgroundTint="#FFFFFF"
    android:textColor="@color/black"
    android:text="Insert"
    android:textSize="18dp" />
```

```
<Button
    android:id="@+id/button2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@id/name"
    android:layout_marginLeft="250dp"
    android:layout_marginTop="60dp"
    android:text="Select"
    android:backgroundTint="#FFFFFF"
    android:textColor="@color/black"
    android:textSize="18dp" />
```

```
<Button
    android:id="@+id/button3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@id/name"
    android:layout_marginLeft="60dp"
    android:layout_marginTop="150dp"
    android:text="Update"
    android:backgroundTint="#FFFFFF"
    android:textColor="@color/black"
    android:textSize="18dp" />
```

```
<Button
    android:id="@+id/button4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@id/name"
    android:layout_marginLeft="250dp"
    android:layout_marginTop="150dp"
    android:text="Delete"
    android:backgroundTint="#FFFFFF"
    android:textColor="@color/black"
    android:textSize="18dp" />
```

```
</RelativeLayout>
```


MainActivity.java:

```
package com.example.database;

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.Toast;

public class MainActivity extends AppCompatActivity {
    EditText rno,ename;
    Button insert,select,update,delete;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);
        rno = findViewById(R.id.rollno);
        ename = findViewById(R.id.name);
        insert = findViewById(R.id.button);
        select = findViewById(R.id.button2);
        update = findViewById(R.id.button3);
        delete = findViewById(R.id.button4);
        MyDatabase myDatabase = new MyDatabase(this);

        insert.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                int rollno = Integer.parseInt(rno.getText().toString());
                String name = ename.getText().toString();
                myDatabase.openDB();
                myDatabase.insertData(rollno,name);
                Toast.makeText(getApplicationContext(), "Data Inserted",
Toast.LENGTH_SHORT).show();
                myDatabase.closeDB();
            }
        });
        select.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                myDatabase.openDB();
                Cursor result = myDatabase.selectData();
                if(result.getCount()==0)
                {
                    Toast.makeText(MainActivity.this, "Data not Found",
Toast.LENGTH_SHORT).show();
                }
                else{
                    StringBuffer buffer = new StringBuffer();
                    while(result.moveToNext())
                    {
                        buffer.append("Roll No = "+result.getString(0)+"\n");
                        buffer.append("Name = "+result.getString(1)+"\n");
                    }
                    Toast.makeText(getApplicationContext(), buffer,
Toast.LENGTH_SHORT).show();
                }
            }
        });
    }
}
```

```

        myDatabase.closeDB();
    }

    });
    update.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            myDatabase.openDB();
            int rollno = Integer.parseInt(rno.getText().toString());
            String name = ename.getText().toString();
            int isUpdated=myDatabase.updateData(rollno,name);
            if(isUpdated>0)
            {
                Toast.makeText(MainActivity.this, "Data Updated",
Toast.LENGTH_SHORT).show();
            }
            else
            {
                Toast.makeText(MainActivity.this, "Data not found",
Toast.LENGTH_SHORT).show();
            }
            myDatabase.closeDB();
        }
    });
    delete.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            int rollno = Integer.parseInt(rno.getText().toString());
            myDatabase.openDB();
            int delRows = myDatabase.deleteData(rollno);
            if(delRows>0)
            {
                Toast.makeText(MainActivity.this, "Data Deleted",
Toast.LENGTH_SHORT).show();
            }
            else
            {
                Toast.makeText(MainActivity.this, "Data not found",
Toast.LENGTH_SHORT).show();
            }
            myDatabase.closeDB();
        }
    });
}
}
}

```

MyDatabase:

```

package com.example.database;

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

import androidx.annotation.Nullable;

```

```

import java.util.Currency;

public class MyDatabase extends SQLiteOpenHelper {
    private static final String DATABASE_NAME="DB";
    private static final String TABLE_NAME="Student";
    SQLiteDatabase sqLiteDatabase;
    public MyDatabase(@Nullable Context context) {
        super(context, DATABASE_NAME, null,2);
    }

    @Override
    public void onCreate(SQLiteDatabase sqLiteDatabase) {
        sqLiteDatabase.execSQL("CREATE TABLE "+TABLE_NAME+"(rollno integer,name
text)");
    }

    public void openDB()
    {
        sqLiteDatabase = getWritableDatabase();
    }

    public void closeDB()
    {
        sqLiteDatabase.close();
    }

    public void insertData(int rollNo , String name)
    {
        ContentValues cv = new ContentValues();
        cv.put("RollNo",rollNo);
        cv.put("Name",name);
        sqLiteDatabase.insert(TABLE_NAME,null,cv);
    }

    public Cursor selectData()
    {
        Cursor cursor = sqLiteDatabase.rawQuery("select * from
"+TABLE_NAME,null,null);
        return cursor;
    }

    public int updateData(int no,String name)
    {
        ContentValues contentValues = new ContentValues();
        contentValues.put("RollNo",no);
        contentValues.put("Name",name);
        return sqLiteDatabase.update(TABLE_NAME,contentValues,"RollNo=?",new
String[]{String.valueOf(no)});
    }

    public int deleteData(int no)
    {
        return sqLiteDatabase.delete(TABLE_NAME,"RollNo=?",new
String[]{String.valueOf(no)});
    }

    @Override
    public void onUpgrade(SQLiteDatabase sqLiteDatabase, int i, int i1) {
    }
}

```