

## Program 1: Visitng card

### mainactivity.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
xmlns:android="http://schemas.android.com/apk/res/
android"

xmlns:app="http://schemas.android.com/apk/res-auto
"

xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
android:orientation="vertical"
tools:context=".MainActivity">
    <RelativeLayout
        android:layout_width="match_parent"
        android:layout_height="150dp">
        <TextView
            android:id="@+id/textView10"
            android:layout_width="211dp"
            android:layout_height="61dp"
            android:layout_alignParentStart="true"
            android:layout_alignParentTop="true"
            android:layout_alignParentEnd="true"
            android:layout_alignParentBottom="true"
            android:layout_marginStart="91dp"
            android:layout_marginTop="50dp"
            android:layout_marginEnd="109dp"
            android:layout_marginBottom="39dp"
            android:text="CISCO"
            android:textColor="#E30953"
            android:textSize="24sp" />
        <ImageView
```

```
        android:id="@+id/imageView3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentEnd="true"
        android:layout_marginEnd="3dp"
        app:srcCompat="@drawable/flower" />
</RelativeLayout>
<View
    android:id="@+id/view5"
    android:layout_width="match_parent"
    android:layout_height="2dp"
    android:background="@color/black" />
<TextView
    android:id="@+id/textView11"
    android:layout_width="match_parent"
    android:layout_height="45dp"
    android:text="Name"
    android:textAlignment="center"
    android:textColor="#0A28D1"
    android:textSize="16sp"
    tools:textAlignment="center" />
<TextView
    android:id="@+id/textView12"
    android:layout_width="match_parent"
    android:layout_height="44dp"
    android:text="Job title"
    android:textAlignment="center"
    android:textColor="#102FDF"
    android:textSize="16sp" />
<View
    android:id="@+id/view6"
    android:layout_width="match_parent"
    android:layout_height="2dp"
    android:background="@color/black" />
```

```

<TextView
    android:id="@+id/textView13"
    android:layout_width="match_parent"
    android:layout_height="47dp"
    android:text="phone number"
    android:textAlignment="center"
    android:textColor="#1030E1"
    android:textSize="16sp" />
<TextView
    android:id="@+id/textView14"
    android:layout_width="match_parent"
    android:layout_height="50dp"
    android:text="address"
    android:textAlignment="center"
    android:textColor="#0E2AC8"
    android:textSize="16sp" />
<TextView
    android:id="@+id/textView15"
    android:layout_width="match_parent"
    android:layout_height="57dp"
    android:text="email"
    android:textAlignment="center"
    android:textColor="#0B2ADA"
    android:textSize="16sp" />
</LinearLayout>

```

## Program 2: Simple Calculator

### 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="328dp"
    android:layout_height="62dp"
    android:text="Simple Calculator"
    android:textAlignment="center"
    android:textColor="#F44336"
    android:textSize="34sp"

app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.493"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.023" />
<TextView
    android:id="@+id/textView2"
    android:layout_width="111dp"
    android:layout_height="49dp"
    android:layout_marginStart="4dp"
    android:text="Result"
    android:textColor="#009688"
    android:textSize="34sp"

app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
```

```
    app:layout_constraintVertical_bias="0.149" />
<EditText
    android:id="@+id/txtResult"
    android:layout_width="248dp"
    android:layout_height="47dp"
    android:ems="10"
    android:inputType="textPersonName"
```

```
app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.901"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.135" />
```

```
<Button
    android:id="@+id/btn_1"
    android:layout_width="78dp"
    android:layout_height="56dp"
    android:text="1"
    android:textSize="20sp"
```

```
app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.048"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.269" />
```

```
<Button
    android:id="@+id/btn_2"
    android:layout_width="78dp"
    android:layout_height="56dp"
    android:text="2"
    android:textSize="20sp"
```

```
app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.351"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.269" />
```

```
<Button
```

```
    android:id="@+id/btn_3"
    android:layout_width="78dp"
    android:layout_height="56dp"
    android:text="3"
    android:textSize="20sp"
```

```
app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.651"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.269" />
```

```
<Button
```

```
    android:id="@+id/btn_4"
    android:layout_width="78dp"
    android:layout_height="56dp"
    android:text="4"
    android:textSize="20sp"
```

```
app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.948"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.269" />
```

```
<Button
```

```
android:id="@+id/btn_5"  
android:layout_width="78dp"  
android:layout_height="56dp"  
android:text="5"  
android:textSize="20sp"
```

```
app:layout_constraintBottom_toBottomOf="parent"  
app:layout_constraintEnd_toEndOf="parent"  
app:layout_constraintHorizontal_bias="0.048"  
app:layout_constraintStart_toStartOf="parent"  
app:layout_constraintTop_toTopOf="parent"  
app:layout_constraintVertical_bias="0.401" />
```

```
<Button
```

```
android:id="@+id/btn_6"  
android:layout_width="78dp"  
android:layout_height="56dp"  
android:text="6"  
android:textSize="20sp"
```

```
app:layout_constraintBottom_toBottomOf="parent"  
app:layout_constraintEnd_toEndOf="parent"  
app:layout_constraintHorizontal_bias="0.351"  
app:layout_constraintStart_toStartOf="parent"  
app:layout_constraintTop_toTopOf="parent"  
app:layout_constraintVertical_bias="0.401" />
```

```
<Button
```

```
android:id="@+id/btn_7"  
android:layout_width="78dp"  
android:layout_height="56dp"  
android:text="7"  
android:textSize="20sp"
```

```
app:layout_constraintBottom_toBottomOf="parent"  
app:layout_constraintEnd_toEndOf="parent"
```

```
    app:layout_constraintHorizontal_bias="0.651"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.401" />
```

```
<Button
```

```
    android:id="@+id/btn_8"
    android:layout_width="78dp"
    android:layout_height="56dp"
    android:text="8"
    android:textSize="20sp"
```

```
app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.948"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.401" />
```

```
<Button
```

```
    android:id="@+id/btn_9"
    android:layout_width="78dp"
    android:layout_height="56dp"
    android:text="9"
    android:textSize="20sp"
```

```
app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.048"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.52" />
```

```
<Button
```

```
    android:id="@+id/btn_0"
    android:layout_width="78dp"
    android:layout_height="56dp"
```



```
android:text="0"  
android:textSize="20sp"
```

```
app:layout_constraintBottom_toBottomOf="parent"  
app:layout_constraintEnd_toEndOf="parent"  
app:layout_constraintHorizontal_bias="0.351"  
app:layout_constraintStart_toStartOf="parent"  
app:layout_constraintTop_toTopOf="parent"  
app:layout_constraintVertical_bias="0.52" />
```

```
<Button
```

```
android:id="@+id/btn_clear"  
android:layout_width="78dp"  
android:layout_height="56dp"  
android:text="C"  
android:textSize="20sp"
```

```
app:layout_constraintBottom_toBottomOf="parent"  
app:layout_constraintEnd_toEndOf="parent"  
app:layout_constraintHorizontal_bias="0.948"  
app:layout_constraintStart_toStartOf="parent"  
app:layout_constraintTop_toTopOf="parent"  
app:layout_constraintVertical_bias="0.746" />
```

```
<Button
```

```
android:id="@+id/btn_equal"  
android:layout_width="78dp"  
android:layout_height="56dp"  
android:text="="  
android:textSize="20sp"
```

```
app:layout_constraintBottom_toBottomOf="parent"  
app:layout_constraintEnd_toEndOf="parent"  
app:layout_constraintHorizontal_bias="0.951"  
app:layout_constraintStart_toStartOf="parent"  
app:layout_constraintTop_toTopOf="parent"
```

```
    app:layout_constraintVertical_bias="0.637" />
<Button
    android:id="@+id/btn_dot"
    android:layout_width="79dp"
    android:layout_height="54dp"
    android:text="."
    android:textSize="24sp"
```

```
app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.653"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.635" />
```

```
<Button
    android:id="@+id/btn_plus"
    android:layout_width="78dp"
    android:layout_height="56dp"
    android:text="+"
    android:textSize="20sp"
```

```
app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.654"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.52" />
```

```
<Button
    android:id="@+id/btn_minus"
    android:layout_width="78dp"
    android:layout_height="56dp"
    android:text="-"
    android:textSize="20sp"
```

```
app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.948"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.52" />
```

```
<Button
```

```
    android:id="@+id/btn_multi"
    android:layout_width="78dp"
    android:layout_height="56dp"
    android:text="*"
    android:textSize="20sp"
```

```
app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.048"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.637" />
```

```
<Button
```

```
    android:id="@+id/btn_div"
    android:layout_width="78dp"
    android:layout_height="56dp"
    android:text="/"
    android:textSize="20sp"
```

```
app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.351"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.637" />
```

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

### mainactivity.java

```
package com.example.cal;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;
import java.text.CollationElementIterator;
import java.util.regex.Pattern;
public class MainActivity extends
AppCompatActivity implements View.OnClickListener
{
    Button btnzero, btnone, btntwo, btnthree,
    btnfour, btnfive, btnsix, btnseven, btneight,
    bttnine;
    Button btnadd, btnmul, btnsub, btndiv;
    Button btnclear, btnequal, btndot;
    EditText txtResult;
    @Override
    protected void onCreate(Bundle
savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        btnone=(Button) findViewById(R.id.btn_1);
        btnone.setOnClickListener(this);
        btntwo=(Button) findViewById(R.id.btn_2);
        btntwo.setOnClickListener(this);
        btnthree=(Button) findViewById(R.id.btn_3);
        btnthree.setOnClickListener(this);
```

```
    btnfour=(Button) findViewById(R.id.btn_4);
    btnfour.setOnClickListener(this);
    btnfive=(Button) findViewById(R.id.btn_5);
    btnfive.setOnClickListener(this);
    btnsix=(Button) findViewById(R.id.btn_6);
    btnsix.setOnClickListener(this);
    btnseven=(Button) findViewById(R.id.btn_7);
    btnseven.setOnClickListener(this);
    btneight=(Button) findViewById(R.id.btn_8);
    btneight.setOnClickListener(this);
    btnnine=(Button) findViewById(R.id.btn_9);
    btnnine.setOnClickListener(this);
    btnzero=(Button) findViewById(R.id.btn_0);
    btnzero.setOnClickListener(this);
    btnadd=(Button) findViewById(R.id.btn_plus);
    btnadd.setOnClickListener(this);
    btnsub=(Button) findViewById(R.id.btn_minus);
    btnsub.setOnClickListener(this);
    btnmul=(Button) findViewById(R.id.btn_multi);
    btnmul.setOnClickListener(this);
    btndiv=(Button) findViewById(R.id.btn_div);
    btndiv.setOnClickListener(this);
    btndot=(Button) findViewById(R.id.btn_dot);
    btndot.setOnClickListener(this);
    btnequal=(Button)
findViewById(R.id.btn_equal);
    btnequal.setOnClickListener(this);
    btnclear=(Button)
findViewById(R.id.btn_clear);
    btnclear.setOnClickListener(this);
    txtResult=(EditText)
findViewById(R.id.txtResult);
    txtResult.setText("");
}
```

```
@Override
public void onClick(View view) {
    if(view.equals(btnone))
        txtResult.append("1");
    if(view.equals(btntwo))
        txtResult.append("2");
    if(view.equals(btnthree))
        txtResult.append("3");
    if(view.equals(btnfour))
        txtResult.append("4");
    if(view.equals(btnfive))
        txtResult.append("5");
    if(view.equals(btnsix))
        txtResult.append("6");
    if(view.equals(btnseven))
        txtResult.append("7");
    if(view.equals(btneight))
        txtResult.append("8");
    if(view.equals(btnnine))
        txtResult.append("9");
    if(view.equals(btnzero))
        txtResult.append("0");
    if(view.equals(btnadd))
        txtResult.append("+");
    if(view.equals(btnsub))
        txtResult.append("-");
    if(view.equals(btndiv))
        txtResult.append("/");
    if(view.equals(btnmul))
        txtResult.append("*");
    if(view.equals(btndot))
        txtResult.append(".");
    if(view.equals(btnclear))
        txtResult.setText("");
}
```

```

        if(view.equals(btnequal))
        {
            try{
                String
data=txtResult.getText().toString();
                if(data.contains("/"))
                {
                    divide(data);
                }
                else if(data.contains("*")){
                    multiplication(data);
                }
                else if(data.contains("+")){
                    addition(data);
                }
                else if(data.contains("-")){
                    subtraction(data);
                }
            }
            catch (Exception e){
                displayInvalidMessage("Invalid Input");
            }
        }

    }

    private void displayInvalidMessage(String msg) {
        Toast.makeText(getBaseContext(),msg,
Toast.LENGTH_LONG).show();
    }

    private void subtraction(String data) {
        String[] operands=data.split(Pattern.quote(
"-"));
        if(operands.length==2)
        {

```

```

        double
operand1=Double.parseDouble(operands[0]);
        double
operand2=Double.parseDouble(operands[1]);
        double result=operand1-operand2;
        txtResult.setText(String.valueOf(result));
    }
    else
    {
        displayInvalidMessage("invalid input");
    }
}
private void addition(String data) {
    String[] operands=data.split(Pattern.quote(
"+"));
    if(operands.length==2)
    {
        double
operand1=Double.parseDouble(operands[0]);
        double
operand2=Double.parseDouble(operands[1]);
        double result=operand1+operand2;
        txtResult.setText(String.valueOf(result));
    }
    else
    {
        displayInvalidMessage("Invalid Input");
    }
}
private void multiplication(String data) {
    String[] operands=data.split(Pattern.quote(
"*"));
    if(operands.length==2)
    {

```



```

        double
operand1=Double.parseDouble(operands[0]);
        double
operand2=Double.parseDouble(operands[1]);
        double result=operand1*operand2;
        txtResult.setText(String.valueOf(result));
    }
    else
    {
        displayInvalidMessage("Invalid Input");
    }
}
private void divide(String data) {
    String[] operands=data.split(Pattern.quote(
"/"));
    if(operands.length==2)
    {
        double
operand1=Double.parseDouble(operands[0]);
        double
operand2=Double.parseDouble(operands[1]);
        double result=operand1/operand2;
        txtResult.setText(String.valueOf(result));
    }
    else
    {
        displayInvalidMessage("Invalid Input");
    }
}
}

```

### Program 3: SignIn And Login

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="wrap_content"
    android:layout_height="wrap_content"
    android:text="Signup Activity"
    android:textAllCaps="true"
    android:textColor="#F44336"
    android:textColorHighlight="#E91E63"
    android:textSize="34sp"
```

```
app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintHorizontal_bias="0.467"
    app:layout_constraintLeft_toLeftOf="parent"
    app:layout_constraintRight_toRightOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.096" />
```

```
<TextView
    android:id="@+id/textView"
    android:layout_width="139dp"
    android:layout_height="58dp"
    android:text="User Name"
    android:textColor="#2196F3"
    android:textSize="24sp"
```

```
app:layout_constraintBottom_toBottomOf="parent"
```

```
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.071"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.271" />
```

```
<TextView
```

```
    android:id="@+id/textView2"
    android:layout_width="131dp"
    android:layout_height="58dp"
    android:text="Password"
    android:textColor="#2196F3"
    android:textSize="24sp"
```

```
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.071"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.428" />
```

```
<EditText
```

```
    android:id="@+id/txt_username"
    android:layout_width="191dp"
    android:layout_height="77dp"
    android:ems="10"
    android:inputType="textPersonName"
```

```
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.866"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.245" />
```

```
<EditText
```

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

```
    android:layout_width="191dp"
    android:layout_height="64dp"
    android:ems="10"
    android:inputType="textPersonName"
```

```
app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.863"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.406" />
```

```
<Button
```

```
    android:id="@+id/btn_signin"
    android:layout_width="201dp"
    android:layout_height="84dp"
    android:text="Sign Up"
    android:textSize="34sp"
```

```
app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.613" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

activity\_login.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/textView3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="LogIn Activity"
    android:textAllCaps="true"
    android:textColor="#F44336"
    android:textColorHighlight="#E91E63"
    android:textSize="34sp"
```

```
app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintHorizontal_bias="0.467"
    app:layout_constraintLeft_toLeftOf="parent"
    app:layout_constraintRight_toRightOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.096" />
```

```
<TextView
    android:id="@+id/textView"
    android:layout_width="141dp"
    android:layout_height="51dp"
    android:text="User Name"
    android:textColor="#2196F3"
    android:textSize="24sp"
```

```
app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.071"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.271" />
```

```
<TextView
```

```
android:id="@+id/textView2"  
android:layout_width="139dp"  
android:layout_height="47dp"  
android:text="Password"  
android:textColor="#2196F3"  
android:textSize="24sp"
```

```
app:layout_constraintBottom_toBottomOf="parent"  
app:layout_constraintEnd_toEndOf="parent"  
app:layout_constraintHorizontal_bias="0.071"  
app:layout_constraintStart_toStartOf="parent"  
app:layout_constraintTop_toTopOf="parent"  
app:layout_constraintVertical_bias="0.428" />
```

```
<EditText
```

```
android:id="@+id/login_username"  
android:layout_width="185dp"  
android:layout_height="62dp"  
android:ems="10"  
android:inputType="textPersonName"
```

```
app:layout_constraintBottom_toBottomOf="parent"  
app:layout_constraintEnd_toEndOf="parent"  
app:layout_constraintHorizontal_bias="0.923"  
app:layout_constraintStart_toStartOf="parent"  
app:layout_constraintTop_toTopOf="parent"  
app:layout_constraintVertical_bias="0.267" />
```

```
<EditText
```

```
android:id="@+id/login_password"  
android:layout_width="189dp"  
android:layout_height="61dp"  
android:ems="10"  
android:inputType="textPersonName"
```

```
app:layout_constraintBottom_toBottomOf="parent"
```

```

        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.917"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.415" />
<Button
    android:id="@+id/btn_login"
    android:layout_width="201dp"
    android:layout_height="84dp"
    android:text="Sign In"
    android:textSize="34sp"

    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.59"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.666" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

### MainActivity.java

```

package com.example.signinandlogin;
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.Toast;
import java.util.regex.Matcher;
import java.util.regex.Pattern;

```

```

public class MainActivity extends
AppCompatActivity implements View.OnClickListener
{
    EditText signup_username, signup_password;
    Button btnsignup;
    String
RegularExpression="^(?=.*[A-Z])(?=.*[a-z])(?=.*\\d
)(?=.*[@$!]) [A-Za-z\\d@$!]{8,}$";
    @Override
    protected void onCreate(Bundle
savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        signup_username=(EditText)
findViewById(R.id.txt_username);
        signup_password=(EditText)
findViewById(R.id.txt_password);
        btnsignup=(Button)
findViewById(R.id.btn_signin);
        btnsignup.setOnClickListener(this);
    }
    @Override
    public void onClick(View view) {
        String
username=signup_username.getText().toString();
        String
password=signup_password.getText().toString();
        if(validatePassword(password))
        {
            Toast.makeText(getBaseContext(),"valid
password", Toast.LENGTH_LONG).show();
            Bundle bundle=new Bundle();
            bundle.putString("user", username);
            bundle.putString("pwd", password);

```



```

        Intent it=new Intent(this, login.class);
        it.putExtra("data", bundle);
        startActivity(it);
    }
    else
    {
        Toast.makeText(getApplicationContext(), "Invalid
password", Toast.LENGTH_LONG).show();
    }
}
private boolean validatePassword(String
password) {
    Pattern
pattern=Pattern.compile(RegularExpression);
    Matcher matcher=pattern.matcher(password);
    return matcher.matches();
}
}

```

login.java

```

package com.example.signinandlogin;

import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;
public class login extends AppCompatActivity
implements View.OnClickListener {
    EditText loginusername, loginpassword;
    Button btnlogin;
    String user, pass;
    int count=0;
}

```

```

@Override
protected void onCreate(Bundle
savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_login);
    loginusername=(EditText)
findViewById(R.id.login_username);
    loginpassword=(EditText)
findViewById(R.id.login_password);
    btnlogin=(Button)
findViewById(R.id.btn_login);
    btnlogin.setOnClickListener(this);
    Bundle
bundle=getIntent().getBundleExtra("data");
    user=bundle.getString("user");
    pass=bundle.getString("pwd");
}
@Override
public void onClick(View view) {
    String
user1=loginusername.getText().toString();
    String
pass1=loginpassword.getText().toString();
    if(user.equals(user1) && pass.equals(pass1))
    {
        Toast.makeText(this,"Successful login",
Toast.LENGTH_LONG).show();
    }
    else
    {
        count++;
        if(count==3)
        {
            btnlogin.setEnabled(false);

```

```

        Toast.makeText(this, "failed login
attempts", Toast.LENGTH_LONG).show();
    }
    else
    {
        Toast.makeText(this, "login failed",
Toast.LENGTH_LONG).show();
    }
}
}
}
}

```

## Program4:Wallpaper

### 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="332dp"
        android:layout_height="77dp"
        android:text="Changing Wall Paper"
        android:textColor="#F44336"
        android:textSize="34sp"

```

```

app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.6"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.105" />
<Button
    android:id="@+id/btn"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Click Here"

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="0.445" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

main\_activity.java

```

package com.example.wallpaper;

import androidx.appcompat.app.AppCompatActivity;
import android.app.WallpaperManager;
import android.graphics.BitmapFactory;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import java.io.IOException;
import java.util.Random;
import java.util.Timer;

```

```

import java.util.TimerTask;
public class MainActivity extends
AppCompatActivity implements View.OnClickListener
{
    Button btn;
    boolean running;
    int[] ia=new int[]{R.drawable.img1,
R.drawable.img2, R.drawable.img3, R.drawable.img4,
R.drawable.img5};
    @Override
    protected void onCreate(Bundle
savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        btn=(Button) findViewById(R.id.btn);
        btn.setOnClickListener(this);
    }
    @Override
    public void onClick(View view) {
        if(!running)
        {
            new Timer().schedule(new MyTimer(),0,3000);
            running=true;
        }
    }
    private class MyTimer extends TimerTask {
        @Override
        public void run() {
            try {
                WallpaperManager
wallpaperManager=WallpaperManager.getInstance(getApplicationContext());
                Random random=new Random();

```

```

wallpaperManager.setImageBitmap(BitmapFactory.decodeResource(
    getResources(), ia[random.nextInt(5)]));
    } catch (IOException e) {
    }}
}
}

```

## Program 5: Counter Application

### activitymain.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="282dp"
        android:layout_height="91dp"
        android:layout_marginStart="61dp"
        android:layout_marginEnd="68dp"
        android:text="Counter Application"
        android:textAlignment="center"
    >

```

```

        android:textSize="34sp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        tools:layout_editor_absoluteY="72dp" />
<EditText
    android:id="@+id/count_val"
    android:layout_width="175dp"
    android:layout_height="62dp"
    android:layout_marginStart="108dp"
    android:layout_marginTop="42dp"
    android:layout_marginEnd="128dp"
    android:ems="10"
    android:inputType="textPersonName"
    android:text="Name"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/textView"
    />
<Button
    android:id="@+id/btn_start"
    android:layout_width="212dp"
    android:layout_height="89dp"
    android:layout_marginStart="99dp"
    android:layout_marginTop="54dp"
    android:layout_marginEnd="100dp"
    android:text="Start"
    android:textAlignment="center"
    android:textSize="34sp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/count_val"
    />

```

```

<Button
    android:id="@+id/btn_stop"
    android:layout_width="197dp"
    android:layout_height="66dp"
    android:layout_marginStart="99dp"
    android:layout_marginTop="100dp"
    android:layout_marginEnd="100dp"
    android:layout_marginBottom="166dp"
    android:text="Stop"
    android:textAlignment="center"
    android:textSize="34sp"

    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.0"
    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintTop_toBottomOf="@+id/btn_start" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

## Activitymain.java

```

package com.example.counter_ram;

import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.os.Handler;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;

```



```
public class MainActivity extends
AppCompatActivity implements View.OnClickListener
{
    Button start, stop;
    EditText val;
    int i = 0;
    Handler handler = new Handler();
    @Override
    protected void onCreate(Bundle
savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        val = (EditText) findViewById(R.id.count_val);
        start = (Button) findViewById(R.id.btn_start);
        start.setOnClickListener(this);
        stop = (Button) findViewById(R.id.btn_stop);
        stop.setOnClickListener(this);
    }
    @Override
    public void onClick(View view) {
        if (view.equals(start)) {
            handler.postDelayed(updatedTime, 0);
            start.setEnabled(false);
            stop.setEnabled(true);
        }
        if (view.equals(stop)) {
            handler.removeCallbacks(updatedTime);
            stop.setEnabled(false);
            start.setEnabled(true);
        }
    }
    private final Runnable updatedTime = new
Runnable() {
        @Override
```

```

        public void run() {
            val.setText("" + i);
            handler.postDelayed(this, 1000);
            i++;
        }
    };
}

```

## Program 6: Parsing

### Activitymain.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/xmlBtn"
    android:layout_width="214dp"
    android:layout_height="71dp"
    android:layout_marginStart="118dp"
    android:layout_marginTop="87dp"
    android:layout_marginEnd="79dp"
    android:text="ParseXML"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="1.0"

```

```

        app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toBottomOf="@+id/textView
" />
<Button
    android:id="@+id/JsonBtn"
    android:layout_width="231dp"
    android:layout_height="68dp"
    android:layout_marginStart="110dp"
    android:layout_marginTop="96dp"
    android:layout_marginEnd="79dp"
    android:text="Parse JSON"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="1.0"
    app:layout_constraintStart_toStartOf="parent"

app:layout_constraintTop_toBottomOf="@+id/xmlBtn"
/>
<TextView
    android:id="@+id/textView"
    android:layout_width="276dp"
    android:layout_height="71dp"
    android:layout_marginStart="83dp"
    android:layout_marginTop="70dp"
    android:layout_marginEnd="52dp"
    android:text="Parse Your Data"
    android:textAlignment="center"
    android:textSize="24sp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

## Viewactivity.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=".Viewactivity">
    <TextView
        android:id="@+id/XMLHeading"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="56dp"
        android:layout_marginTop="164dp"
        android:text="XML Data"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
    <TextView
        android:id="@+id/JSONHeading"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="180dp"
        android:layout_marginTop="164dp"
        android:layout_marginEnd="46dp"
        android:text="JSON Data"
        app:layout_constraintEnd_toEndOf="parent"
```

```
app:layout_constraintStart_toEndOf="@+id/XMLHeading"
```

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

```
<TextView
```

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

```
    android:layout_width="wrap_content"
```

```
    android:layout_height="wrap_content"
```

```
    android:layout_marginStart="59dp"
```

```
    android:layout_marginTop="100dp"
```

```
    app:layout_constraintStart_toStartOf="parent"
```

```
app:layout_constraintTop_toBottomOf="@+id/XMLHeading" />
```

```
<TextView
```

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

```
    android:layout_width="wrap_content"
```

```
    android:layout_height="wrap_content"
```

```
    android:layout_marginStart="188dp"
```

```
    android:layout_marginTop="100dp"
```

```
    android:layout_marginEnd="48dp"
```

```
    app:layout_constraintEnd_toEndOf="parent"
```

```
app:layout_constraintStart_toEndOf="@+id/XMLPlaceholder"
```

```
app:layout_constraintTop_toBottomOf="@+id/JSONHeading" />
```

```
<TextView
```

```
    android:id="@+id/textView2"
```

```
    android:layout_width="wrap_content"
```

```
    android:layout_height="wrap_content"
```

```
    android:text="Parsed Data"
```

```
    android:textSize="30dp"
```

```

    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.089" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

## MainActivity.java

```

package com.example.parser;

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 xmlBtn, jsonBtn;
    @Override
    protected void onCreate(Bundle
savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        xmlBtn=findViewById(R.id.xmlBtn);
        jsonBtn=findViewById(R.id.JsonBtn);
        xmlBtn.setOnClickListener(new
View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Intent intent=new
Intent(MainActivity.this,Viewactivity.class);

```

```

        intent.putExtra("mode",1);
        startActivity(intent);
    }
});
jsonBtn.setOnClickListener(new
View.OnClickListener() {
    @Override
    public void onClick(View view) {
        Intent intent=new
Intent(MainActivity.this,Viewactivity.class);
        intent.putExtra("mode",2);
        startActivity(intent);
    }
});
}
}

```

## ViewActivity.java

```

package com.example.parser;

import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.util.Log;
import android.widget.TextView;
import org.json.JSONException;
import org.json.JSONObject;
import org.w3c.dom.Document;
import org.w3c.dom.Element;
import org.w3c.dom.Node;
import org.w3c.dom.NodeList;
import org.xml.sax.SAXException;
import java.io.IOException;
import java.io.InputStream;
import javax.xml.parsers.DocumentBuilder;

```

```
import javax.xml.parsers.DocumentBuilderFactory;
import
javax.xml.parsers.ParserConfigurationException;
public class Viewactivity extends
AppCompatActivity {
    int mode;
    TextView XMLPlaceholder, JSONPlaceholder;
    @Override
    protected void onCreate(Bundle
savedInstanceState) {
        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_viewactivity);
        mode = getIntent().getIntExtra("mode", 0);
        XMLPlaceholder =
findViewById(R.id.XMLPlaceHolder);
        JSONPlaceholder =
findViewById(R.id.JSONPlaceHolder);
        if (mode == 1) {
            parseXML();
        }
        if (mode == 2) {
            parseJSON();
        }
    }
    public void parseJSON() {
        XMLPlaceholder.setText("");
        String stringData;
        try {
            InputStream inputstream =
getAssets().open("input.json");
            int size = inputstream.available();
            byte buffer[] = new byte[size];
            inputstream.read(buffer);
```



```

        stringData = new String(buffer);
        JSONObject jsonObject = new
JSONObject(stringData);
        JSONObject cityObject =
jsonObject.getJSONObject("city");
        String city =
cityObject.getString("City-name");
        String logintude =
cityObject.getString("Longitude");
        String latitude =
cityObject.getString("Latitude");
        String temperature =
cityObject.getString("Temperature");
        String humidity =
cityObject.getString("Humidity");
        JSONPlaceholder.setText("City-Name-" + city
+ "\n\n");
        JSONPlaceholder.append("Longitude - " +
logintude + "\n\n");
        JSONPlaceholder.append("Latitude - " +
latitude + "\n\n");
        JSONPlaceholder.append("Temperature - " +
temperature + "\n\n");
        JSONPlaceholder.append("Humidity - " +
humidity + "\n\n");
    } catch (IOException | JSONException e) {
        e.printStackTrace();
    }
}

public void parseXML() {
    try{
        InputStream inputStream =
getAssets().open("input.xml") ;

```

```

        DocumentBuilderFactory documentBuilderFactory=
DocumentBuilderFactory.newInstance();
        DocumentBuilder
documentBuilder=documentBuilderFactory.newDocument
Builder();
        Document
document=documentBuilder.parse(inputStream);
        NodeList
citylist=document.getElementsByTagName("city");
        for(int i=0;i<citylist.getLength();i++)
        {
            Node c= citylist.item(i);
            if(c.getNodeType()==Node.ELEMENT_NODE)
            {
                Element city=(Element) c;
                String id= city.getAttribute("id");
                Log.e("data", "parseXML"+id);
                NodeList
cityDetailList=city.getChildNodes();
                for(int
j=0;j<cityDetailList.getLength();j++)
                {
                    Node n=cityDetailList.item(j);
                    if(n.getNodeType()==Node.ELEMENT_NODE)
                    {
                        Element cityDetails=(Element)n;
                        String tagValue =
cityDetails.getTagName();
                        String
value=cityDetails.getTextContent();
                        Log.e("data", "parseXML"+value);
                        XMLPlaceholder.append(tagValue+"-"+
value+"\n");
                        XMLPlaceholder.append("\n");

```

```

    }
    }
    }
    }
    }
    catch (IOException |
ParserConfigurationException e) {
        e.printStackTrace();
    } catch (SAXException e) {
        e.printStackTrace();
    }
}
}

```

Input.xml

```

<?xml version="1.0" ?>

<Records>
    <city id="1">
        <city-name> Mysore</city-name>
        <Longitude>82</Longitude>
        <Latitude>25</Latitude>
        <Temperature>32</Temperature>
        <Humidity>90</Humidity>
    </city>
    <city id="2">
        <city-name> Bangalore</city-name>
        <Longitude>82</Longitude>
        <Latitude>25</Latitude>
        <Temperature>32</Temperature>
        <Humidity>90</Humidity>
    </city>
</Records>

```

## Input.json

```
{  
  "city":  
  {  
    "City-name": "Mysore",  
    "Longitude": "82",  
    "Latitude": "25",  
    "Temperature": "32",  
    "Humidity": "90"  
  }  
}
```

## Program 7: Text to speech

### Mainactivity.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="242dp"  
    android:layout_height="67dp"  
    android:text="Text to Speech"  
    android:textColor="#F10A0A"  
    android:textSize="32sp"
```

```
app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.077" />
<EditText
    android:id="@+id/edt_txt"
    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="0.422"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.307"

tools:ignore="SpeakableTextPresentCheck,TouchTarge
tSizeCheck" />
<Button
    android:id="@+id/btn_speech"
    android:layout_width="180dp"
    android:layout_height="81dp"
    android:text="Speak"
    android:textSize="34sp"

app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.413"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
```

```
        app:layout_constraintVertical_bias="0.521" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

### Mainactivity.java

```
package com.example.text;

import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.speech.tts.TextToSpeech;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;
import java.util.Locale;
public class MainActivity extends
AppCompatActivity implements View.OnClickListener,
TextToSpeech.OnInitListener {
    Button btnSpeak;
    EditText txtSpeak;
    TextToSpeech textToSpeech;
    @Override
    protected void onCreate(Bundle
savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        txtSpeak=(EditText)findViewById(R.id.edt_txt);
```

```
        btnSpeak=(Button)
findViewById(R.id.btn_speech);
        btnSpeak.setOnClickListener(this);
        textToSpeech=new
TextToSpeech(getBaseContext(),this);
        textToSpeech.setLanguage(Locale.ENGLISH);
    }
    @Override
    public void onClick(View view) {
        String text=txtSpeak.getText().toString();

textToSpeech.speak(text,TextToSpeech.QUEUE_FLUSH,n
ull);
    }
    @Override
    public void onInit(int i) {
        {

Toast.makeText(getBaseContext(),"success",Toast.LE
NGTH_LONG).show();
        }
    }
}
```