### **Visiting Card Source Code:**

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
  xmlns:app="http://schemas.android.com/apk/res-auto"
  xmlns:tools="http://schemas.android.com/tools"
  android:layout_width="match_parent"
  android:layout height="match parent"
  tools:context=".MainActivity">
  <TextView
    android:id="@+id/textView2"
    android:layout width="217dp"
    android:layout_height="37dp"
    android:text="HKBK College Of Engineering"
    android:textColor="#000000"
    android:textSize="16sp"
    app:layout_constraintBaseline_toTopOf="parent"
    app:layout constraintBottom toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout constraintHorizontal bias="0.17"
    app:layout_constraintStart_toStartOf="parent"
    app:layout constraintTop toTopOf="parent"
    app:layout_constraintVertical_bias="0.041" />
  <TextView
    android:id="@+id/textView"
    android:layout width="140dp"
    android:layout height="32dp"
    android:text="Rohit Singh"
    android:textColor="@color/black"
    android:textSize="24sp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout constraintEnd toEndOf="parent"
    app:layout constraintHorizontal bias="0.498"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.268" />
  <View
    android:id="@+id/view"
    android:layout_width="match_parent"
    android:layout_height="5dp"
    android:layout marginTop="104dp"
    android:background="?android:attr/listDivider"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.0"
    app:layout constraintStart toStartOf="parent"
    app:layout constraintTop toTopOf="parent" />
  <TextView
    android:id="@+id/textView3"
    android:layout width="wrap content"
    android:layout_height="wrap_content"
```

```
android:text="Assistant Professor"
    android:textColor="#000000"
    android:textSize="16sp"
    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="0.363" />
  <ImageView
    android:id="@+id/imageView"
    android:layout_width="105dp"
    android:layout height="66dp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout constraintEnd toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.898"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.024"
    app:srcCompat="@drawable/logo"/>
</androidx.constraintlayout.widget.ConstraintLayout>
```



### **Calculator Source Code:**

#### 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">
  <RelativeLayout
    android:layout width="368dp"
    android:layout_height="495dp"
    android:layout marginTop="8dp"
    android:layout marginBottom="8dp"
    app:layout constraintBottom toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout constraintStart toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent">
    <Button
      android:id="@+id/btn 1"
      android:layout width="wrap content"
      android:layout height="wrap content"
      android:layout below="@+id/edText1"
      android:layout alignParentStart="true"
      android:layout alignParentLeft="true"
      android:layout marginTop="60dp"
      android:onClick="PressOne"
      android:text="1"
      android:textSize="18sp" />
    <Button
      android:id="@+id/btn 0"
      android:layout_width="wrap_content"
      android:layout height="wrap content"
      android:layout_below="@+id/btn_8"
      android:layout toEndOf="@+id/btn 7"
      android:layout_toRightOf="@+id/btn_7"
      android:text="0"
      android:textSize="18sp"/>
    <Button
      android:id="@+id/btn 9"
      android:layout width="wrap content"
      android:layout_height="wrap content"
      android:layout below="@+id/btn 6"
      android:layout toEndOf="@+id/btn 5"
      android:layout_toRightOf="@+id/btn_5"
      android:text="9"
      android:textSize="18sp"/>
    <Button
```

```
android:id="@+id/btn 8"
  android:layout_width="wrap_content"
  android:layout height="wrap content"
  android:layout below="@+id/btn 5"
  android:layout toEndOf="@+id/btn 7"
  android:layout toRightOf="@+id/btn 7"
  android:text="8"
  android:textSize="18sp"/>
<Button
  android:id="@+id/btn 7"
  android:layout width="wrap content"
  android:layout height="wrap content"
  android:layout below="@+id/btn 4"
  android:layout alignStart="@+id/btn 4"
  android:layout alignLeft="@+id/btn 4"
  android:text="7"
  android:textSize="18sp"/>
<Button
  android:id="@+id/btn 6"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:layout alignBaseline="@+id/btn 5"
  android:layout alignBottom="@+id/btn 5"
  android:layout_toEndOf="@+id/btn_5"
  android:layout toRightOf="@+id/btn 5"
  android:text="6"
  android:textSize="18sp"/>
<Button
  android:id="@+id/btn_5"
  android:layout_width="wrap_content"
  android:layout height="wrap content"
  android:layout below="@+id/btn 2"
  android:layout toEndOf="@+id/btn 4"
  android:layout_toRightOf="@+id/btn 4"
  android:text="5"
  android:textSize="18sp" />
<Button
  android:id="@+id/btn 4"
  android:layout width="wrap content"
  android:layout height="wrap content"
  android:layout below="@+id/btn 1"
  android:layout alignStart="@+id/btn 1"
  android:layout alignLeft="@+id/btn 1"
  android:text="4"
  android:textSize="18sp"/>
<Button
  android:id="@+id/btn 3"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:layout_alignBaseline="@+id/btn 2"
  android:layout_alignBottom="@+id/btn_2"
```

```
android:layout toEndOf="@+id/btn 2"
  android:layout_toRightOf="@+id/btn_2"
  android:text="3"
  android:textSize="18sp"/>
<Button
  android:id="@+id/btn 2"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:layout alignBaseline="@+id/btn 1"
  android:layout alignBottom="@+id/btn 1"
  android:layout toEndOf="@+id/btn 1"
  android:layout toRightOf="@+id/btn 1"
  android:text="2"
  android:textSize="18sp" />
<Button
  android:id="@+id/btn Add"
  android:layout width="wrap content"
  android:layout_height="wrap_content"
  android:layout above="@+id/btn 6"
  android:layout alignParentEnd="true"
  android:layout_alignParentRight="true"
  android:backgroundTint="@android:color/darker gray"
  android:text="+"
  android:textColor="@android:color/background_light"
  android:textSize="18sp" />
<Button
  android:id="@+id/btn_Sub"
  android:layout width="wrap content"
  android:layout_height="wrap_content"
  android:layout_below="@+id/btn_Add"
  android:layout alignStart="@+id/btn Add"
  android:layout_alignLeft="@+id/btn_Add"
  android:backgroundTint="@android:color/darker_gray"
  android:text="-"
  android:textColor="@android:color/background_light"
  android:textSize="18sp"/>
<Button
  android:id="@+id/btn Mul"
  android:layout width="wrap content"
  android:layout height="wrap content"
  android:layout below="@+id/btn 6"
  android:layout alignStart="@+id/btn Sub"
  android:layout alignLeft="@+id/btn Sub"
  android:backgroundTint="@android:color/darker gray"
  android:text="*"
  android:textColor="@android:color/background light"
  android:textSize="18sp" />
<Button
  android:id="@+id/btn_Div"
  android:layout width="wrap content"
  android:layout_height="wrap_content"
```

```
android:layout below="@+id/btn 9"
  android:layout_alignStart="@+id/btn_Mul"
  android:layout_alignLeft="@+id/btn Mul"
  android:backgroundTint="@android:color/darker gray"
  android:text="/"
  android:textColor="@android:color/background light"
  android:textSize="18sp"/>
<EditText
  android:id="@+id/edText1"
  android:layout_width="wrap_content"
  android:layout height="wrap content"
  android:layout_alignParentStart="true"
  android:layout alignParentLeft="true"
  android:layout_alignParentTop="true"
  android:layout alignParentEnd="true"
  android:layout alignParentRight="true"
  android:layout marginTop="22dp"
  android:ems="10"
  android:inputType="textPersonName"
  android:textAlignment="textEnd"
  android:textSize="24sp"/>
<Button
  android:id="@+id/btn calc"
  android:layout_width="wrap_content"
  android:layout height="wrap content"
  android:layout_below="@+id/btn_0"
  android:layout_toEndOf="@+id/btn_0"
  android:layout toRightOf="@+id/btn 0"
  android:backgroundTint="@android:color/holo_green_light"
  android:text="="
  android:textColor="@android:color/background light"
  android:textSize="18sp"/>
<Button
  android:id="@+id/btn dec"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:layout below="@+id/btn 7"
  android:layout toStartOf="@+id/btn 8"
  android:layout toLeftOf="@+id/btn 8"
  android:text="."
  android:textSize="18sp" />
<Button
  android:id="@+id/btn clear"
  android:layout width="wrap content"
  android:layout height="wrap content"
  android:layout below="@+id/btn Div"
  android:layout alignParentEnd="true"
  android:layout_alignParentRight="true"
  android:backgroundTint="@android:color/holo_blue dark"
  android:text="clear"
  android:textColor="@android:color/background_light"
```

```
android:textSize="18sp" />
  </RelativeLayout>
  </androidx.constraintlayout.widget.ConstraintLayout>
```

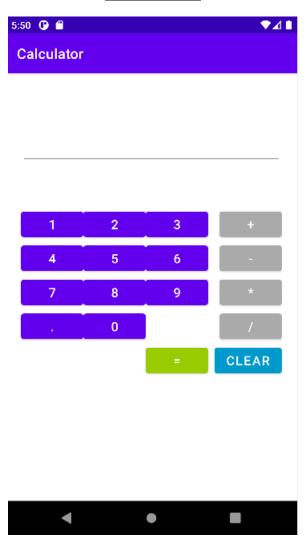
#### MainActivity.java

```
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
btn_1,btn_2,btn_3,btn_4,btn_5,btn_6,btn_7,btn_8,btn_9,btn_0,btn_Add,btn_Sub,btn_Mul,btn_Div,btn
_calc,btn_dec,btn_clear;
  EditText ed1;
  float Value1, Value2;
  boolean mAddition, mSubtract, mMultiplication, mDivision;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity main);
    btn_0 = (Button) findViewById(R.id.btn_0);
    btn_1 = (Button) findViewById(R.id.btn_1);
    btn 2 = (Button) findViewById(R.id.btn 2);
    btn 3 = (Button) findViewById(R.id.btn 3);
    btn_4 = (Button) findViewById(R.id.btn_4);
    btn 5 = (Button) findViewById(R.id.btn 5);
    btn 6 = (Button) findViewById(R.id.btn 6);
    btn_7 = (Button) findViewById(R.id.btn_7);
    btn 8 = (Button) findViewById(R.id.btn 8);
    btn 9 = (Button) findViewById(R.id.btn 9);
    btn_Add = (Button) findViewById(R.id.btn_Add);
    btn Div = (Button) findViewById(R.id.btn Div);
    btn_Sub = (Button) findViewById(R.id.btn_Sub);
    btn_Mul = (Button) findViewById(R.id.btn_Mul);
    btn calc = (Button) findViewById(R.id.btn calc);
    btn_dec = (Button) findViewById(R.id.btn_dec);
    btn_clear = (Button) findViewById(R.id.btn_clear);
    ed1 = (EditText) findViewById(R.id.edText1);
    btn_0.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View v) {
        ed1.setText(ed1.getText()+"0");
      }
    });
    btn 1.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View v) {
        ed1.setText(ed1.getText()+"1");
      }
```

```
});
btn_2.setOnClickListener(new View.OnClickListener() {
  @Override
  public void onClick(View v) {
    ed1.setText(ed1.getText()+"2");
  }
});
btn_3.setOnClickListener(new View.OnClickListener() {
  @Override
  public void onClick(View v) {
    ed1.setText(ed1.getText()+"3");
  }
});
btn_4.setOnClickListener(new View.OnClickListener() {
  @Override
  public void onClick(View v) {
    ed1.setText(ed1.getText()+"4");
  }
});
btn_5.setOnClickListener(new View.OnClickListener() {
  @Override
  public void onClick(View v) {
    ed1.setText(ed1.getText()+"5");
  }
});
btn_6.setOnClickListener(new View.OnClickListener() {
  @Override
  public void onClick(View v) {
    ed1.setText(ed1.getText()+"6");
  }
btn_7.setOnClickListener(new View.OnClickListener() {
  @Override
  public void onClick(View v) {
    ed1.setText(ed1.getText()+"7");
  }
});
btn_8.setOnClickListener(new View.OnClickListener() {
  @Override
  public void onClick(View v) {
    ed1.setText(ed1.getText()+"8");
  }
});
btn 9.setOnClickListener(new View.OnClickListener() {
  @Override
  public void onClick(View v) {
    ed1.setText(ed1.getText()+"9");
btn_dec.setOnClickListener(new View.OnClickListener() {
  @Override
  public void onClick(View v) {
```

```
ed1.setText(ed1.getText()+".");
  }
});
btn Add.setOnClickListener(new View.OnClickListener() {
  @Override
  public void onClick(View v) {
    if (ed1 == null){
      ed1.setText("");
    }else {
      Value1 = Float.parseFloat(ed1.getText() + "");
      mAddition = true;
      ed1.setText(null);
    }
  }
btn_Sub.setOnClickListener(new View.OnClickListener() {
  @Override
  public void onClick(View v) {
    Value1 = Float.parseFloat(ed1.getText() + "");
    mSubtract = true;
    ed1.setText(null);
 }
});
btn_Mul.setOnClickListener(new View.OnClickListener() {
  @Override
  public void onClick(View v) {
    Value1 = Float.parseFloat(ed1.getText() + "");
    mMultiplication = true;
    ed1.setText(null);
  }
});
btn_Div.setOnClickListener(new View.OnClickListener() {
  @Override
  public void onClick(View v) {
    Value1 = Float.parseFloat(ed1.getText()+"");
    mDivision = true;
    ed1.setText(null);
  }
});
btn_calc.setOnClickListener(new View.OnClickListener() {
  @Override
  public void onClick(View v) {
    Value2 = Float.parseFloat(ed1.getText() + "");
    if (mAddition == true){
      ed1.setText(Value1 + Value2 +"");
      mAddition=false;
    }
    if (mSubtract == true){
      ed1.setText(Value1 -Value2 +"");
      mSubtract=false;
    }
```

```
if (mMultiplication == true){
           ed1.setText(Value1 * Value2 + "");
           mMultiplication=false;
        }
        if (mDivision == true){
           ed1.setText(Value1 / Value2+"");
           mDivision=false;
        }
      }
    });
    btn_clear.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View v) {
        ed1.setText("");
      }
    });
  }
}
```



### SignUp Source Code:

#### Activity\_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
  xmlns:app="http://schemas.android.com/apk/res-auto"
  xmlns:tools="http://schemas.android.com/tools"
  android:layout_width="match_parent"
  android:layout height="match parent"
  tools:context=".MainActivity">
  <TextView
    android:id="@+id/textView2"
    android:layout_width="wrap_content"
    android:layout height="wrap content"
    android:layout_marginTop="100dp"
    android:text="SIGN UP"
    android:textColor="@color/purple_700"
    android:textSize="22dp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout constraintStart toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
  <TextView
    android:id="@+id/textView3"
    android:layout width="wrap content"
    android:layout_height="wrap_content"
    android:layout marginStart="30dp"
    android:layout_marginTop="50dp"
    android:text="USERNAME"
    app:layout_constraintStart_toStartOf="parent"
    app:layout constraintTop toBottomOf="@+id/textView2"/>
  <TextView
    android:id="@+id/textView4"
    android:layout_width="82dp"
    android:layout height="34dp"
    android:layout_marginTop="50dp"
    android:text="PASSWORD"
    app:layout constraintStart toStartOf="@+id/textView3"
    app:layout_constraintTop_toBottomOf="@+id/textView3" />
  <EditText
    android:id="@+id/txt_username"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="40dp"
    android:layout marginEnd="10dp"
    android:ems="10"
    android:inputType="textPersonName"
    app:layout_constraintBottom_toBottomOf="@+id/textView3"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toEndOf="@+id/textView3"
```

```
app:layout constraintTop toTopOf="@+id/textView3" />
  <EditText
    android:id="@+id/txt password"
    android:layout width="0dp"
    android:layout height="40dp"
    android:layout_marginTop="26dp"
    android:ems="10"
    android:inputType="textPassword"
    app:layout constraintEnd toEndOf="@+id/txt username"
    app:layout_constraintStart_toStartOf="@+id/txt_username"
    app:layout constraintTop toBottomOf="@+id/txt username" />
  <Button
    android:id="@+id/btn signup"
    android:layout_width="wrap_content"
    android:layout height="wrap content"
    android:layout marginTop="30dp"
    android:text="Sign Up"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout constraintStart toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/txt_password" />
</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=".LoginActivity">
  <TextView
    android:id="@+id/textView7"
    android:layout width="wrap content"
    android:layout_height="wrap_content"
    android:layout_marginTop="50dp"
    android:text="Login"
    android:textSize="22dp"
    android:textColor="@color/purple 700"
    app:layout constraintEnd toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
  <TextView
    android:id="@+id/textView9"
    android:layout width="wrap content"
    android:layout height="wrap content"
    android:layout marginStart="30dp"
    android:layout marginTop="50dp"
    android:text="USERNAME"
    app:layout constraintStart toStartOf="parent"
    app:layout constraintTop toBottomOf="@+id/textView7" />
```

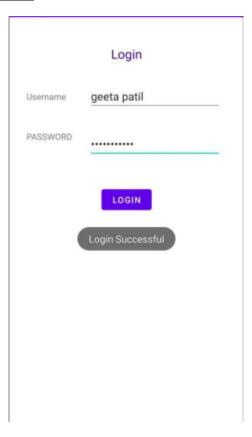
```
<EditText
    android:id="@+id/txt_login_username"
    android:layout width="wrap content"
    android:layout height="wrap content"
    android:layout marginStart="20dp"
    android:layout marginEnd="20dp"
    android:ems="10"
    android:inputType="textPersonName"
    app:layout constraintBottom toBottomOf="@+id/textView9"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout constraintStart toEndOf="@+id/textView9"
    app:layout_constraintTop_toTopOf="@+id/textView9" />
  <TextView
    android:id="@+id/textView10"
    android:layout width="wrap content"
    android:layout_height="wrap_content"
    android:layout marginStart="30dp"
    android:layout_marginTop="50dp"
    android:text="PASSWORD"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/textView9" />
  <EditText
    android:id="@+id/txt login password"
    android:layout_width="wrap_content"
    android:layout height="wrap content"
    android:ems="10"
    android:inputType="textPassword"
    app:layout constraintEnd toEndOf="@+id/txt login username"
    app:layout_constraintStart_toStartOf="@+id/txt_login_username"
    app:layout_constraintTop_toTopOf="@+id/textView10" />
  <Button
    android:id="@+id/btn login signin"
    android:layout_width="wrap_content"
    android:layout height="wrap content"
    android:layout_marginTop="50dp"
    android:text="Login"
    app:layout constraintEnd toEndOf="parent"
    app:layout constraintStart toStartOf="parent"
    app:layout constraintTop toBottomOf="@+id/txt login password"/>
</androidx.constraintlayout.widget.ConstraintLayout>
MainActivity.java
package com.example.signup;
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 txtUsername:
  EditText txtPassword;
  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);
    txtUsername = (EditText) findViewById(R.id.txt username);
    txtPassword = (EditText) findViewById(R.id.txt_password);
    btnSignup = (Button) findViewById(R.id.btn signup);
    btnSignup.setOnClickListener(this);
  }
  public void onClick(View v) {
    String username = txtUsername.getText().toString();
    String password = txtPassword.getText().toString();
    if (validatePassword(password)) {
      Bundle bundle = new Bundle();
      bundle.putString("user", username);
      bundle.putString("Lab@2018", password);
      Intent it = new Intent(this, LoginActivity.class);
      it.putExtra("data", bundle);
      startActivity(it);
    } else {
      Toast.makeText(getBaseContext(), "Invalid Password", Toast.LENGTH_LONG).show();
    }
  }
  public boolean validatePassword(String password) {
    Pattern pattern = Pattern.compile(regularExpression);
    Matcher matcher = pattern.matcher(password);
    return matcher.matches();
  }
}
LoginActivity.java
package com.example.signup;
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 LoginActivity extends AppCompatActivity implements View.OnClickListener {
  EditText txtLoginUsername;
  EditText txtLoginPassword;
  Button btnLogin;
  String user, pass;
  int count = 0;
  @Override
```

```
protected void onCreate(Bundle savedInstanceState) {
  super.onCreate(savedInstanceState);
  setContentView(R.layout.activity login);
  txtLoginUsername = (EditText) findViewById(R.id.txt login username);
  txtLoginPassword = (EditText) findViewById(R.id.txt_login_password);
  btnLogin = (Button) findViewById(R.id.btn_login_signin);
  btnLogin.setOnClickListener(this);
  Bundle bundle = getIntent().getBundleExtra("data");
  user = bundle.getString("user");
  pass = bundle.getString("Lab@2018");
public void onClick(View v) {
  String user1 = txtLoginUsername.getText().toString();
  String pass1 = txtLoginPassword.getText().toString();
  if (user.equals(user1) && pass.equals(pass1)) {
    Toast.makeText(this, "Login Successful", 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 " + count, Toast.LENGTH_LONG).show();
    }
  }
}
```

	SIGN UP
USERNAME	
PASSWORD	
	SIGN UP

}



### **Wallpaper Changer Source Code:**

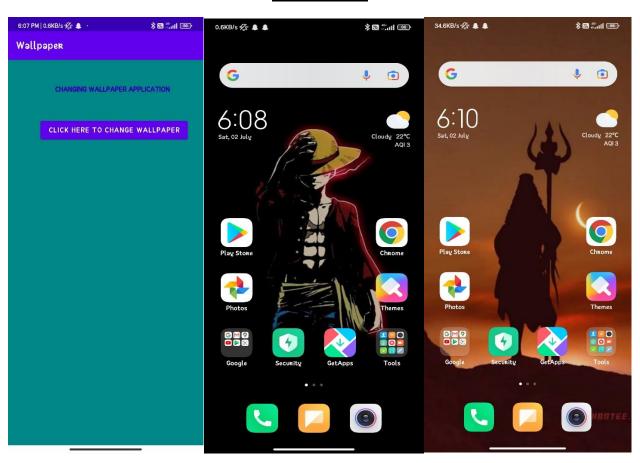
#### Activity\_main.xml

```
<?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"
  android:background="@color/teal_700">
  <TextView
    android:layout_width="wrap_content"
    android:layout height="wrap content"
    android:text="CHANGING WALLPAPER APPLICATION"
    android:textColor="@color/design default color primary dark"
    android:textStyle="bold"
    app:layout constraintBottom toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout constraintHorizontal bias="0.583"
    app:layout_constraintLeft_toLeftOf="parent"
    app:layout constraintRight toRightOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout constraintTop toTopOf="parent"
    app:layout constraintVertical bias="0.067" />
  <Button
    android:id="@+id/button"
    android:layout width="wrap content"
    android:layout_height="wrap_content"
    android:layout marginStart="72dp"
    android:layout marginTop="53dp"
    android:layout_marginEnd="35dp"
    android:layout_marginBottom="590dp"
    android:text="CLICK HERE TO CHANGE WALLPAPER"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout constraintEnd toEndOf="parent"
    app:layout constraintHorizontal bias="0.714"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="1.0" />
</androidx.constraintlayout.widget.ConstraintLayout>
MainActivity.java
package com.example.wallpaper;
import androidx.appcompat.app.AppCompatActivity;
import android.app.WallpaperManager;
import android.graphics.Bitmap;
import android.graphics.BitmapFactory;
```

import android.graphics.drawable.AnimationDrawable;

```
import android.graphics.drawable.BitmapDrawable;
import android.graphics.drawable.Drawable;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.Toast;
import java.io.IOException;
import java.util.Timer;
import java.util.TimerTask;
public class MainActivity extends AppCompatActivity {
  Button changewallpaper;
  Timer mytimer;
  Drawable drawable;
  WallpaperManager wpm;
  int prev=1;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    mytimer = new Timer();
    wpm = WallpaperManager.getInstance(this);
    changewallpaper = findViewById(R.id.button);
    changewallpaper.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View view) {
        setWallpaper();
      }
    });
  }
  private void setWallpaper()
    mytimer.schedule(new TimerTask() {
      @Override
      public void run() {
        if(prev==1) {
          drawable = getResources().getDrawable(R.drawable.one);
          prev = 2;
        else if(prev==2) {
          drawable = getResources().getDrawable(R.drawable.two);
          prev=3;
        else if(prev==3) {
          drawable = getResources().getDrawable(R.drawable.three);
          prev=4;
        else if(prev==4) {
          drawable = getResources().getDrawable(R.drawable.four);
          prev=5;
        else if(prev==5) {
```

```
drawable = getResources().getDrawable(R.drawable.five);
    prev=1;
}
Bitmap wallpaper = ((BitmapDrawable)drawable).getBitmap();
    try {
        wpm.setBitmap(wallpaper);
    }
    catch (IOException e) {
        e.printStackTrace();
    }
    }
},0,30000);
}
```



### **Counter Source Code:**

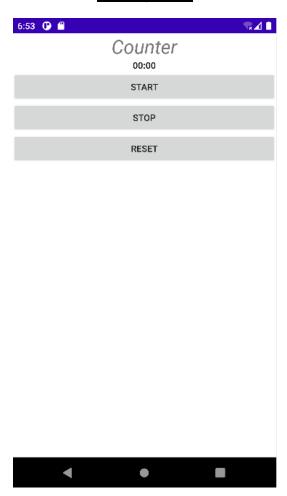
#### Activity\_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"</p>
  android:orientation ="vertical"
  android:layout width="match parent"
  android:layout_height="fill_parent" >
  <TextView
    android:layout width="fill parent"
    android:layout_height="wrap_content"
    android:text="Counter"
    android:textSize="30dp"
    android:textAlignment="center"
    android:textStyle="italic"/>
  <Chronometer
    android:id="@+id/chronometer"
    android:layout_gravity="center_horizontal"
    android:layout width="fill parent"
    android:layout_height="wrap_content"
    android:textAlignment="center"
    android:textStyle="bold"/>
  <Button
    android:id="@+id/buttonstart"
    android:layout width="fill parent"
    android:layout_height="wrap_content"
    android:text="Start"/>
  <Button
    android:id="@+id/buttonstop"
    android:layout_width="fill_parent"
    android:layout height="wrap content"
    android:text="Stop"/>
  <Button android:id="@+id/buttonreset"
    android:layout_width="fill_parent"
    android:layout height="wrap content"
    android:text="Reset"/>
</LinearLayout>
MainActivity.java
package com.example.counter;
import android.app.Activity;
import android.os.Bundle;
import android.os.SystemClock;
import android.view.View;
import android.widget.Button;
import android.widget.Chronometer;
public class MainActivity extends Activity {
  @Override
  public void onCreate(Bundle savedInstanceState) {
```

super.onCreate(savedInstanceState);

```
setContentView(R.layout.activity main);
  final Chronometer myChronometer =
      (Chronometer)findViewById(R.id.chronometer);
  Button buttonStart = (Button)findViewById(R.id.buttonstart);
  Button buttonStop = (Button)findViewById(R.id.buttonstop);
  Button buttonReset = (Button)findViewById(R.id.buttonreset);
  buttonStart.setOnClickListener(new Button.OnClickListener(){
    @Override
    public void onClick(View v) {
      myChronometer.start();
    }});
  buttonStop.setOnClickListener(new Button.OnClickListener(){
    @Override
    public void onClick(View v) {
      myChronometer.stop();
    }});
  buttonReset.setOnClickListener(new Button.OnClickListener(){
    @Override
    public void onClick(View v) {
      myChronometer.setBase(SystemClock.elapsedRealtime());
    }});
}
```

}



### Parsing XML and JSON Data Source Code:

### Activity\_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
  xmlns:android="http://schemas.android.com/apk/res/android"
  xmlns:app="http://schemas.android.com/apk/res-auto"
  xmlns:tools="http://schemas.android.com/tools"
  android:layout_width="match_parent"
  android:layout height="match parent"
  tools:context=".MainActivity">
  <Button
    android:id="@+id/btn parsexml"
    android:layout_width="wrap_content"
    android:layout height="wrap content"
    android:layout_marginTop="80dp"
    android:text="Parse XML Data"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout constraintStart toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/textView4" />
  <Button
    android:id="@+id/btn_parsejson"
    android:layout width="wrap content"
    android:layout_height="wrap_content"
    android:layout marginTop="80dp"
    android:text="Parse Json Data"
    app:layout constraintEnd toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout constraintTop toBottomOf="@+id/btn parsexml"/>
  <TextView
    android:id="@+id/textView4"
    android:layout width="wrap content"
    android:layout_height="wrap_content"
    android:layout_marginTop="40dp"
    android:text="PARSING XML AND JSON DATA"
    android:textSize="20dp"
    app:layout constraintEnd toEndOf="parent"
    app:layout constraintStart toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
Activity_view.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">

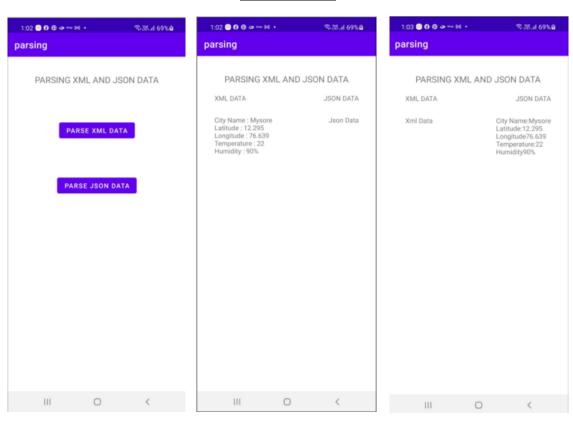
```
<TextView
    android:id="@+id/lbl_xml_data"
    android:layout width="wrap content"
    android:layout height="wrap content"
    android:layout marginTop="30dp"
    android:text="Xml Data"
    app:layout constraintStart toStartOf="@id/textView2"
    app:layout_constraintTop_toBottomOf="@id/textView2"/>
  <TextView
    android:id="@+id/textView"
    android:layout width="wrap content"
    android:layout_height="wrap_content"
    android:layout marginTop="40dp"
    android:text="PARSING XML AND JSON DATA"
    android:textSize="20dp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout constraintStart toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
  <TextView
    android:id="@+id/textView2"
    android:layout_width="wrap_content"
    android:layout height="wrap content"
    android:layout marginStart="40dp"
    android:layout_marginTop="20dp"
    android:text="XML DATA"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/textView" />
  <TextView
    android:id="@+id/textView3"
    android:layout_width="wrap_content"
    android:layout height="wrap content"
    android:layout marginTop="20dp"
    android:layout marginEnd="40dp"
    android:text="JSON DATA"
    app:layout constraintEnd toEndOf="parent"
    app:layout constraintTop toBottomOf="@+id/textView"/>
  <TextView
    android:id="@+id/lbl json data"
    android:layout width="wrap content"
    android:layout_height="wrap_content"
    android:layout marginTop="30dp"
    android:text="Json Data"
    app:layout constraintEnd toEndOf="@+id/textView3"
    app:layout constraintTop toBottomOf="@+id/textView3"/>
</androidx.constraintlayout.widget.ConstraintLayout>
MainActivity.java
package com.example.parsing;
```

```
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 implements View.OnClickListener {
    Button btnParseXml,btnParseJson;
@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    btnParseXml=(Button)findViewById(R.id.btn parsexml);
    btnParseJson=(Button)findViewById(R.id.btn_parsejson);
    btnParseJson.setOnClickListener(this);
    btnParseXml.setOnClickListener(this);
}
  @Override
  public void onClick(View v) {
    if(v.equals(btnParseJson))
    {
      Intent it=new Intent(this, ViewActivity.class);
      it.putExtra("mode",1);
      startActivity(it);
    }
    else
      Intent it=new Intent(this, ViewActivity.class);
      it.putExtra("mode",2);
      startActivity(it);
    }
  }
}
ViewActivity.java
package com.example.parsing;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.widget.TextView;
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 java.io.InputStream;
import javax.xml.parsers.DocumentBuilder;
import javax.xml.parsers.DocumentBuilderFactory;
public class ViewActivity extends AppCompatActivity {
  TextView lblXmlData,lblJsonData;
  int mode=0;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_view);
    lblXmlData=(TextView)findViewById(R.id.lbl_xml_data);
```

```
lblJsonData=(TextView)findViewById(R.id.lbl json data);
    mode=getIntent().getIntExtra("mode",0);
    if(mode== 1)
      parseJson();
    else
      parseXmlDocument();
  }
  public String parseXmlDocument()
    try {
      InputStream is = getAssets().open("input.xml");
      DocumentBuilderFactory dbFactory = DocumentBuilderFactory.newInstance();
      DocumentBuilder dBuilder= dbFactory.newDocumentBuilder();
      Document doc = dBuilder.parse(is);
      Element element=doc.getDocumentElement();
      element.normalize();
      NodeList nList = doc.getElementsByTagName("employee");
      for (int i=0; i<nList.getLength(); i++) {
        Node node = nList.item(i);
        if (node.getNodeType() ==
            Node.ELEMENT_NODE) {Element element2 =
            (Element) node;
          lblXmlData.setText("City Name : " + getValue("city_name", element2)+"\n");
          lblXmlData.append("Latitude : " + getValue("Latitude", element2)+"\n");
          lblXmlData.append("Longitude: " + getValue("Longitude", element2)+"\n");
          lblXmlData.append("Temperature : " + getValue("Temperature", element2)+"\n");
          lblXmlData.append("Humidity : " + getValue("Humidity", element2)+"\n");
        }
      }
    }
    catch (Exception e) {e.printStackTrace();}return
      null;
  }
  private static String getValue(String tag, Element element) {
    NodeList nodeList = element.getElementsByTagName(tag).item(0).getChildNodes();Node node =
nodeList.item(0);
    return node.getNodeValue();
  public void parseJson()
  {
    try {
      InputStream inputStream=getAssets().open("input.json");
      byte[] data=new byte[inputStream.available()];
      inputStream.read(data);
      String readData=new String(data);
      JSONObject jsonObject=new JSONObject(readData);
      JSONObject jsonObject1=jsonObject.getJSONObject("employee");
      lblJsonData.setText("City Name:"+jsonObject1.getString("city_name")+"\n");
      lblJsonData.append("Latitude:"+jsonObject1.getString("Latitude")+"\n");
      lblJsonData.append("Longitude"+jsonObject1.getString("Longitude")+"\n");
      lblJsonData.append("Temperature:"+jsonObject1.getInt("Temperature")+"\n");
```

```
lblJsonData.append("Humidity"+jsonObject1.getString("Humidity")+"\n");
    }
    catch (Exception e) {e.printStackTrace();}
  }
}
data.json
 "employee": {
  "city_name": "Mysore",
  "Latitude": "12.295",
  "Longitude": "76.639",
  "Temperature": 22,
  "Humidity": "90%"
}}
Data.xml
<?xml version="1.0"?>
<records>
  <employee>
    <city_name>Mysore</city_name>
    <Latitude>12.295</Latitude>
    <Longitude>76.639</Longitude>
    <Temperature>22</Temperature>
    <Humidity>90%</Humidity>
  </employee>
</records>
```



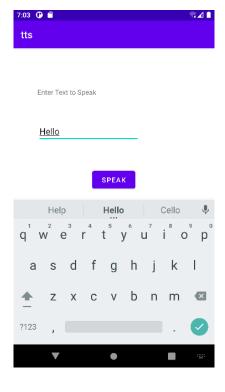
### **Text To Speech Source Code:**

### Activity\_main.xml

import java.util.Locale;

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
  xmlns:app="http://schemas.android.com/apk/res-auto"
  xmlns:tools="http://schemas.android.com/tools"
  android:layout_width="match_parent"
  android:layout height="match parent"
  tools:context=".MainActivity">
  <TextView
    android:id="@+id/textView"
    android:layout_width="wrap_content"
    android:layout height="wrap content"
    android:layout_marginStart="50dp"
    android:layout marginTop="80dp"
    android:text="Enter Text to Speak"
    app:layout constraintStart toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
  <EditText android:id="@+id/editText"
    android:layout_width="wrap_content"
    android:layout height="wrap content"
    android:layout_marginTop="48dp"
    android:ems="10"
    android:inputType="textPersonName"
    app:layout constraintEnd toEndOf="parent"
    app:layout constraintHorizontal bias="0.0"
    app:layout constraintStart toStartOf="@+id/textView"
    app:layout_constraintTop_toBottomOf="@+id/textView" />
  <Button
    android:id="@+id/btn speak"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout marginTop="52dp" android:text="Speak"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout constraintStart toStartOf="parent"
    app:layout constraintTop toBottomOf="@+id/editText"/>
</androidx.constraintlayout.widget.ConstraintLayout>
MainActivity.java
package com.example.tts;
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;
```

```
public class MainActivity extends AppCompatActivity implements View.OnClickListener {
    EditText txtSpeak;
    Button btnSpeak;
    TextToSpeech textToSpeech;
@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    txtSpeak=(EditText)findViewById(R.id.editText);
    btnSpeak=(Button)findViewById(R.id.btn_speak);
    btnSpeak.setOnClickListener(this);
    textToSpeech=new TextToSpeech(getBaseContext(),
    new TextToSpeech.OnInitListener() {
@Override
public void onInit(int status) {
    if(status!=TextToSpeech.ERROR)
    {
    Toast.makeText(getBaseContext(),"Success", Toast.LENGTH_LONG).show();
    }
    });
    textToSpeech.setLanguage(Locale.UK);
public void onClick(View v)
    String text=txtSpeak.getText().toString();
    textToSpeech.speak(text,TextToSpeech.QUEUE_FLUSH,null
    );
    }
    }
```



### **Phone Dialer Source Code:**

#### 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="wrap_content"
    android:layout height="wrap content"
    android:layout marginTop="50dp"
    android:text="PHONE DAILER"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout constraintStart toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
  <EditText
    android:id="@+id/txt_phonenumber"
    android:layout width="wrap content"
    android:layout_height="wrap_content"
    android:layout marginStart="20dp"
    android:layout marginTop="30dp"
    android:ems="10"
    android:inputType="textPersonName"
    app:layout constraintStart toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/textView" />
  <Button
    android:id="@+id/btn delete"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout marginStart="20dp"
    android:layout_marginTop="30dp"
    android:text="Delete"
    app:layout constraintStart toEndOf="@+id/txt phonenumber"
    app:layout_constraintTop_toBottomOf="@+id/textView" />
  <Button
    android:id="@+id/btn one"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="20dp"
    android:layout_marginTop="30dp"
    android:text="1"
    app:layout constraintStart toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/txt_phonenumber" />
  <Button
    android:id="@+id/btn two"
```

```
android:layout width="wrap content"
  android:layout_height="wrap_content"
  android:layout marginTop="30dp"
  android:text="2"
  app:layout_constraintEnd_toStartOf="@+id/btn_three"
  app:layout constraintStart toEndOf="@+id/btn one"
  app:layout constraintTop toBottomOf="@+id/txt phonenumber" />
<Button
  android:id="@+id/btn three"
  android:layout_width="wrap_content"
  android:layout height="wrap content"
  android:layout_marginTop="30dp"
  android:layout marginEnd="20dp"
  android:text="3"
  app:layout constraintEnd toEndOf="parent"
  app:layout_constraintTop_toBottomOf="@+id/txt_phonenumber" />
<Button
  android:id="@+id/btn_four"
  android:layout width="wrap content"
  android:layout_height="wrap_content"
  android:layout_marginStart="20dp"
  android:layout marginTop="30dp"
  android:text="4"
  app:layout_constraintStart_toStartOf="parent"
  app:layout constraintTop toBottomOf="@+id/btn one"/>
<Button
  android:id="@+id/btn_five"
  android:layout width="wrap content"
  android:layout_height="wrap_content"
  android:layout_marginTop="30dp"
  android:text="5"
  app:layout_constraintEnd_toStartOf="@+id/btn_six"
  app:layout_constraintStart_toEndOf="@+id/btn_four"
  app:layout constraintTop toBottomOf="@+id/btn two"/>
<Button
  android:id="@+id/btn six"
  android:layout width="wrap content"
  android:layout height="wrap content"
  android:layout_marginTop="30dp"
  android:layout marginEnd="20dp"
  android:text="6"
  app:layout constraintEnd toEndOf="parent"
  app:layout_constraintTop_toBottomOf="@+id/btn_three"/>
<Button
  android:id="@+id/btn seven"
  android:layout width="wrap content"
  android:layout height="wrap content"
  android:layout_marginStart="20dp"
  android:layout_marginTop="30dp"
  android:text="7"
  app:layout_constraintStart_toStartOf="parent"
```

```
app:layout constraintTop toBottomOf="@+id/btn four"/>
<Button
  android:id="@+id/btn eight"
  android:layout width="wrap content"
  android:layout height="wrap content"
  android:layout_marginTop="30dp"
  android:text="8"
  app:layout_constraintEnd_toStartOf="@+id/btn_nine"
  app:layout constraintStart toEndOf="@+id/btn seven"
  app:layout_constraintTop_toBottomOf="@+id/btn_five" />
<Button
  android:id="@+id/btn nine"
  android:layout width="wrap content"
  android:layout_height="wrap_content"
  android:layout marginTop="30dp"
  android:layout marginEnd="20dp"
  android:text="9"
  app:layout_constraintEnd_toEndOf="parent"
  app:layout constraintTop toBottomOf="@+id/btn six"/>
<Button
  android:id="@+id/btn_zero"
  android:layout width="wrap content"
  android:layout height="wrap content"
  android:layout_marginTop="30dp"
  android:text="0"
  app:layout_constraintEnd_toEndOf="parent"
  app:layout_constraintStart_toStartOf="parent"
  app:layout constraintTop toBottomOf="@+id/btn eight"/>
<Button
  android:id="@+id/btn call"
  android:layout width="wrap content"
  android:layout height="wrap content"
  android:layout_marginStart="20dp"
  android:layout_marginTop="30dp" android:text="Call"
  app:layout_constraintStart_toStartOf="parent"
  app:layout_constraintTop_toBottomOf="@+id/btn_zero" />
<Button
  android:id="@+id/btn save"
  android:layout width="wrap content"
  android:layout height="wrap content"
  android:layout marginTop="30dp"
  android:layout marginEnd="20dp"
  android:text="Save"
  app:layout constraintEnd toEndOf="parent"
  app:layout_constraintTop_toBottomOf="@+id/btn_zero" />
<Button
  android:id="@+id/btn start"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:layout marginStart="20dp"
  android:layout_marginTop="30dp"
```

```
android:text="*"
    app:layout_constraintStart_toStartOf="parent"
    app:layout constraintTop toBottomOf="@+id/btn seven"/>
  <Button
    android:id="@+id/btn hash"
    android:layout width="wrap content"
    android:layout_height="wrap_content"
    android:layout_marginTop="30dp"
    android:layout marginEnd="20dp"
    android:text="#"
    app:layout constraintEnd toEndOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/btn_nine" />
</androidx.constraintlayout.widget.ConstraintLayout>
MainActivity.java
package com.example.phone;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
import android.provider.ContactsContract;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
public class MainActivity extends AppCompatActivity implements View.OnClickListener{
    Button btnOne,btnTwo,btnThree,btnFour,btnFive;
    Button btnSix,btnSeven,btnEight,btnNine,btnZero;
    Button btnDel,btnStar,btnHash,btnCall,btnSave;
    EditText txtPhonenumber;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
      super.onCreate(savedInstanceState);
      setContentView(R.layout.activity_main);
      btnOne=(Button)findViewById(R.id.btn one);
      btnOne.setOnClickListener(this);
      btnTwo=(Button)findViewById(R.id.btn_two);
      btnTwo.setOnClickListener(this);
      btnThree=(Button)findViewById(R.id.btn_three);
      btnThree.setOnClickListener(this);
      btnFour=(Button)findViewById(R.id.btn four);
      btnFour.setOnClickListener(this);
      btnFive=(Button)findViewById(R.id.btn_five);
      btnFive.setOnClickListener(this);
      btnSix=(Button)findViewById(R.id.btn_six);
      btnSix.setOnClickListener(this);
      btnSeven=(Button)findViewById(R.id.btn seven);
      btnSeven.setOnClickListener(this);
      btnEight=(Button)findViewById(R.id.btn eight);
      btnEight.setOnClickListener(this);
      btnNine=(Button)findViewById(R.id.btn nine);
      btnNine.setOnClickListener(this);
```

```
btnZero=(Button)findViewById(R.id.btn_zero);
  btnZero.setOnClickListener(this);
  btnStar=(Button)findViewById(R.id.btn start);
  btnStar.setOnClickListener(this);
  btnHash=(Button)findViewById(R.id.btn_hash);
  btnHash.setOnClickListener(this);
  btnCall=(Button)findViewById(R.id.btn call);
  btnCall.setOnClickListener(this);
  btnSave=(Button)findViewById(R.id.btn save);
  btnSave.setOnClickListener(this);
  btnDel=(Button)findViewById(R.id.btn delete);
  btnDel.setOnClickListener(this);
  txtPhonenumber=(EditText)findViewById(R.id.txt phonenumber);
  txtPhonenumber.setText("");
public void onClick(View v) {
  if(v.equals(btnOne))
  txtPhonenumber.append("1");
  else if(v.equals(btnTwo)) txtPhonenumber.append("2");
  else if(v.equals(btnThree))txtPhonenumber.append("3");
  else if(v.equals(btnFour))txtPhonenumber.append("4");
  else if(v.equals(btnFive))txtPhonenumber.append("5");
  else if(v.equals(btnSix)) txtPhonenumber.append("6");
  else if(v.equals(btnSeven))txtPhonenumber.append("7");
  else if(v.equals(btnEight))txtPhonenumber.append("8");
  else if(v.equals(btnNine))txtPhonenumber.append("9");
  else if(v.equals(btnZero))txtPhonenumber.append("0");
  else if(v.equals(btnStar)) txtPhonenumber.append("*");
  else if(v.equals(btnHash))txtPhonenumber.append("#");
  else if(v.equals(btnSave)) {
    Intent contactIntent= new Intent
    (ContactsContract.Intents.Insert.ACTION);
    contactIntent.setType
    (ContactsContract.RawContacts.CONTENT TYPE);
    contactIntent
    .putExtra(ContactsContract.Intents.Insert.NAME,"Unknown");
    contactIntent.putExtra(ContactsContract.Intents.Insert.PHONE,
    txtPhonenumber.getText().toString());
    startActivity(contactIntent);
  }
  else if(v.equals(btnDel)) {
    String data=txtPhonenumber.getText().toString();
    if(data.length()>0)
    txtPhonenumber.setText(data.substring(0,data.length()-1));
    else
    txtPhonenumber.setText("");
  }
  btnCall.setOnClickListener(new View.OnClickListener() {
  @Override
  public void onClick(View v) {
    String data = txtPhonenumber.getText().toString();
```

```
Intent intent=new Intent(Intent.ACTION_DIAL);
  intent.setData(Uri.parse("tel:"+ data));
  startActivity(intent);
  }
});
}
```

