**Program 3**

**Signup activity**

**Steps:**

1. Create a New Android Project with Empty Activity.

2. Open activity\_main.xml file from res→ layout folder, check/add Constraint Layout as the root view.

3. Create Signup Layout using Drag and Drop framework design the layout.

4. Create One more Empty Activity **Login** using Android Studio Create Activity Flow

* Right Click on app 🡪new 🡪activity 🡪empty activity🡪Login

5. Open activity\_login.xml file from res→layout folder, check/add Constraint Layout as the root view.

6. Create Login Layout using Drag and Drop framework.

7. Add Listeners to Button Click Event:

• Create a class which implements OnClickListener interface.

• Override onClick() method of OnClickListener Interface.

• Register the button for click event by calling setOnClickListener() method of View class and pass the object of the class that implemented OnClickListener Interface.

8. Use Regular Expression"^(?=.\*[A-Z])(?=.\*[a-z])(?=.\*\\d)(?=.\*[@$!])[A-Zaz\\d@$!]{8,}$” to validate the password.

**Signup Activity.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="@android:color/background\_dark"  
 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**>

**Main Activity.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(**"nalini"**, username);  
 bundle.putString(**"Nalini@2022"**, password);  
 Intent it = **new** Intent(**this**, Login.**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();  
 }  
}

**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=".Login"**>  
  
 <**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"  
 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**>

**Login.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** Login **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(**"nalini"**);  
 **pass**=bundle.getString(**"Nalini@2022"**);  
 }  
**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();  
 }  
 }  
 }  
}

 