PROGRAM 3 :Create a SIGN Up activity with Username and Password. Validation of password should happen based on the following rules:

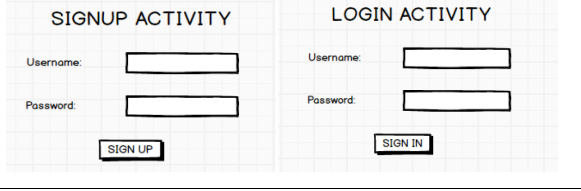
• Password should contain uppercase and lowercase letters.

• Password should contain letters and numbers.

• Password should contain special characters.

• Minimum length of the password (the default value is 8).

On successful SIGN UP proceed to the next Login activity. Here the user should SIGN IN using the Username and Password created during signup activity. If the Username and Password are matched then navigate to the next activity which displays a message saying “Successful Login” or else display a toast message saying “Login Failed”. The user is given only two attempts and after that display a toast message saying “Failed Login Attempts” and disable the SIGN IN button. Use Bundle to transfer information from one activity to another.



*FILE NAME: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"  
 android:textAlignment="center"  
 tools:context=".MainActivity">  
  
 <TextView  
 android:id="@+id/textView"  
 android:layout\_width="278dp"  
 android:layout\_height="50dp"  
 android:text="SIGNUP ACTIVITY"  
 android:textAlignment="center"  
 android:textColor="#9C27B0"  
 android:textSize="28sp"  
 android:textStyle="bold"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.497"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.173" />  
  
 <TextView  
 android:id="@+id/textView2"  
 android:layout\_width="175dp"  
 android:layout\_height="44dp"  
 android:text="USER NAME"  
 android:textAlignment="center"  
 android:textColor="#F44336"  
 android:textSize="24sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.1"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.396" />  
  
 <TextView  
 android:id="@+id/textView3"  
 android:layout\_width="133dp"  
 android:layout\_height="50dp"  
 android:text="PASSWORD"  
 android:textAlignment="center"  
 android:textColor="#F44336"  
 android:textSize="24sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.147"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.499" />  
  
 <EditText  
 android:id="@+id/Signup\_username"  
 android:layout\_width="205dp"  
 android:layout\_height="49dp"  
 android:ems="10"  
 android:inputType="textPersonName"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.932"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.397" />  
  
 <EditText  
 android:id="@+id/Signup\_password"  
 android:layout\_width="207dp"  
 android:layout\_height="58dp"  
 android:ems="10"  
 android:inputType="textPersonName"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.947"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent" />  
  
 <Button  
 android:id="@+id/btn\_signin"  
 android:layout\_width="208dp"  
 android:layout\_height="51dp"  
 android:background="#E91E63"  
 android:text="SIGN UP"  
 android:textAlignment="center"  
 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="0.672" />  
</androidx.constraintlayout.widget.ConstraintLayout>

**FILE NAME: MainActivity.java**

package com.example.signupandlogin;  
  
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.*Signup\_username*);  
 Signup\_Password = (EditText) findViewById(R.id.*Signup\_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*(getBaseContext(), "Invalid password", Toast.*LENGTH\_LONG*).show();  
 }  
 }  
  
 private boolean validatePassword(String password) {  
 Pattern pattern = Pattern.*compile*(regularExpression);  
 Matcher matcher = pattern.matcher(password);  
 return matcher.matches();  
  
 }  
}

**file Name: 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"  
 android:textAlignment="center"  
 tools:context=".MainActivity">  
  
 <TextView  
 android:id="@+id/textView"  
 android:layout\_width="278dp"  
 android:layout\_height="50dp"  
 android:text="LOGIN ACTIVITY"  
 android:textAlignment="center"  
 android:textColor="#9C27B0"  
 android:textSize="28sp"  
 android:textStyle="bold"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.497"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.173" />  
  
 <TextView  
 android:id="@+id/textView2"  
 android:layout\_width="175dp"  
 android:layout\_height="44dp"  
 android:text="USER NAME"  
 android:textAlignment="center"  
 android:textColor="#F44336"  
 android:textSize="24sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.1"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.396" />  
  
 <TextView  
 android:id="@+id/textView3"  
 android:layout\_width="133dp"  
 android:layout\_height="50dp"  
 android:text="PASSWORD"  
 android:textAlignment="center"  
 android:textColor="#F44336"  
 android:textSize="24sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.147"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.499" />  
  
 <EditText  
 android:id="@+id/Signup\_username"  
 android:layout\_width="205dp"  
 android:layout\_height="49dp"  
 android:ems="10"  
 android:inputType="textPersonName"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.932"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.397" />  
  
 <EditText  
 android:id="@+id/Signup\_password"  
 android:layout\_width="198dp"  
 android:layout\_height="53dp"  
 android:ems="10"  
 android:inputType="textPersonName"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.924"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.534" />  
  
 <Button  
 android:id="@+id/btn\_signin"  
 android:layout\_width="208dp"  
 android:layout\_height="51dp"  
 android:background="#E91E63"  
 android:text="SIGN IN"  
 android:textAlignment="center"  
 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="0.672" />  
</androidx.constraintlayout.widget.ConstraintLayout>

FILE NAME: login.java

package com.example.signupandlogin;  
  
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.*Signup\_username*);  
 LoginPassword=(EditText)findViewById(R.id.*Signup\_password*);  
 btnLogin=(Button)findViewById(R.id.*btn\_signin*);  
 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,"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();  
 }  
 }  
 }  
}

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