

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.

## XML Part: Activity\_main.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">
<TextView
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:text="Sign UP Activity"
android:textSize="30sp"
android:textAlignment="center"
android:textColor="@color/design_default_color_error"
/>
<EditText
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:id="@+id/uid"
android:hint="Enter User Name"
android:textSize="20sp"
android:textAlignment="center"
/>
<EditText
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:id="@+id/pwd"
android:hint="Enter Password"
android:textSize="20sp"
android:inputType="textPassword"
android:textAlignment="center"
/>
<Button
```

```
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:id="@+id/signup"
android:text="SIGNUP"
android:onClick="signup"
/>
</LinearLayout>
```

## Activity\_signin.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=".Signin">
<TextView
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:text="SIGN IN ACTIVITY"
android:textAlignment="center"
android:textSize="30sp"
android:textColor="@color/design_default_color_error"
/>
<EditText
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:id="@+id/uid"
android:hint="Enter UID"
android:textAlignment="center"
android:textSize="20sp"
/>
<EditText
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:id="@+id/pwd"
android:hint="Enter Password"
android:textAlignment="center"
android:inputType="textPassword"
android:textSize="20sp"
/>
<Button
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:id="@+id/signin"
android:text="SIGN IN"
android:textAlignment="center"
android:onClick="signin"
/>
```

```
</LinearLayout>
```

## Activity\_success.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"
tools:context=".Success">
<TextView
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:text="LOGIN SUCCESSFUL"
android:textSize="30sp"
android:textAlignment="center"
android:layout_gravity="center"

android:textColor="@color/design_default_color_primary_dark"
/>
</LinearLayout>
```

## Java Coding Part: MainActivity.java

```
package com.example.labpgm3;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import android.widget.Toast;
import java.util.regex.Matcher;
import java.util.regex.Pattern;
public class MainActivity extends AppCompatActivity {
    EditText username, passwd;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        username = findViewById(R.id.uid);
        passwd = findViewById(R.id.pwd);
    }
    public void signup(View v)
    {
        if(passwd.getText().toString().length()>=8 &&
        validatepassword(passwd.getText().toString()))
        {
```

```
        Toast.makeText(this, "SIGN UP Successful",
        Toast.LENGTH_LONG).show();
        Intent i = new Intent(this,Signin.class);
        Bundle b=new Bundle();
        b.putString("uid",username.getText().toString());
        b.putString("password",passwd.getText().toString());
        i.putExtras(b);
        startActivity(i);
    }
    else
    {
        Toast.makeText(this, "Password is not meeting the
        constraints",
        Toast.LENGTH_LONG).show();
    }
}
public boolean validatepassword(String password)
{
    Pattern ptrn;
    Matcher mat;
    String passwordptrn="^(?=.*[A-Z])(?=.*[a-z])(?=.*[0-9])(?=.*[<>/@%$#+=])(?=\S+$).{8,}$";
    ptrn=Pattern.compile(passwordptrn);
    mat=ptrn.matcher(password);
    return mat.matches();
}
}
```

## Java Coding Part: Signin.java

```
package com.example.labpgm3;
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;
public class Signin extends AppCompatActivity {
    EditText username,password;
    Button signin;
    int attempts=0;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_signin);
        username=findViewById(R.id.uid);
        password=findViewById(R.id.pwd);
        signin=findViewById(R.id.signin);
    }
    public void signin(View v)
    {
        Bundle b=getIntent().getExtras();
        String uname=b.getString("uid");
```

```

String passwd=b.getString("password");
if(username.getText().toString().equals(uname) &&
password.getText().toString().equals(passwd))
{
    Toast.makeText(this, "SIGN IN SUCCESSFUL",
Toast.LENGTH_LONG).show();
    attempts=0;
    Intent i =new Intent(this,Success.class);
    startActivity(i);
}
else
{
    attempts++;
    Toast.makeText(this, "SIGN IN UNSUCCESSFUL. Number of
Attempts="+attempts, Toast.LENGTH_LONG).show();
    if(attempts==3)
    signin.setEnabled(false);
}
}
}

```

## Java Coding Part: Success.java

```

package com.example.labpgm3;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
public class Success extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_success);
    }
}

```