

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.

1) Firstly Create an Application by Name “SignUpActivity”

2) Go to xml code of design change the layout to “RelativeLayout”

3) Add TextView component & change the following properties:

- Size: 38dp
- Text: “Sign Up”
- Center-Align

4) Add Email (EditText) component & change the following properties in XML Code:

- Hint: “Email ID”
- id: “@+id/emailEditText”

5) Add Password (EditText) component & change the following properties in XML

Code:

- Hint: "Password"
- id: "@+id/passwordEditText"

6) Add Button component & change the following properties in XML

- Id: "@+id/signBtn"
- Text: "Sign Up"

XML-CODE

```
<?xml version="1.0" encoding="utf-8"?>
```

```
<RelativeLayout 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="160dp"
```

```
        android:layout_height="42dp"
```

```
        android:layout_alignParentEnd="true"
```

android:layout_alignParentBottom="true"

android:layout_marginEnd="112dp"

android:layout_marginBottom="573dp"

android:text="Sign Up"

android:textSize="28dp"

app:layout_constraintBottom_toBottomOf="parent"

app:layout_constraintLeft_toLeftOf="parent"

app:layout_constraintRight_toRightOf="parent"

app:layout_constraintTop_toTopOf="parent" />

<EditText

android:id="@+id/emailEditText"

android:layout_width="wrap_content"

android:layout_height="wrap_content"

android:layout_alignParentEnd="true"

android:layout_alignParentBottom="true"

android:layout_marginEnd="29dp"

android:layout_marginBottom="431dp"

android:ems="10"

android:hint="Email ID"

```
android:inputType="textEmailAddress"

android:textSize="28dp" />
```

```
<EditText
```

```
    android:id="@+id/passwordEditText"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentEnd="true"
    android:layout_alignParentBottom="true"
    android:layout_marginEnd="34dp"
    android:layout_marginBottom="345dp"
    android:ems="10"
    android:hint="Password"
    android:inputType="textPassword"
    android:textSize="28dp" />
```

```
<Button
```

```
    android:id="@+id/signUpBtn"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentEnd="true"
    android:layout_alignParentBottom="true"
```

```
android:layout_marginEnd="106dp"  
android:layout_marginBottom="226dp"  
android:text="Sign Up"  
android:textSize="28dp" />
```

```
</RelativeLayout>
```

JAVA-CODE

```
package com.example.loginapplication;  
  
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.Pattern;
```

```
public class MainActivity extends AppCompatActivity {
```

```
    EditText emailEditText, passwordEditText;
```

```
    Button signUpBtn;
```

```
    @Override
```

```
    protected void onCreate(Bundle savedInstanceState) {
```

```
        super.onCreate(savedInstanceState);
```

```
        setContentView(R.layout.activity_main);
```

```
        emailEditText = findViewById(R.id.emailEditText);
```

```
        passwordEditText = findViewById(R.id.passwordEditText);
```

```
        signUpBtn = findViewById(R.id.signUpBtn);
```

```
        signUpBtn.setOnClickListener(new View.OnClickListener() {
```

```
            @Override
```

```
            public void onClick(View v) {
```

```
                String email = emailEditText.getText().toString();
```

```
                String password = passwordEditText.getText().toString();
```

```
                if (!isValidPassword(password)) {
```

```
                    Toast.makeText(MainActivity.this, "Password Does not match the  
rules",
```

```
                    Toast.LENGTH_LONG).show();
```

```
        return;
    }

    Intent intent = new Intent(MainActivity.this, LoginActivity.class);

    intent.putExtra("email", email);

    intent.putExtra("password", password);

    startActivity(intent);

}

});

}
```

```
Pattern lowercase = Pattern.compile("^[a-z].*$");
```

```
Pattern uppercase = Pattern.compile("^[A-Z].*$");
```

```
Pattern number = Pattern.compile("^[0-9].*$");
```

```
Pattern specialCharacter = Pattern.compile("^[^a-zA-Z0-9].*$");
```

```
private Boolean isValidPassword(String password) {
```

```
    if (password.length() < 8) {
```

```
        return false;
```

```
    }
```

```
    if (!lowercase.matcher(password).matches()) {
```

```
        return false;
    }
    if (!uppercase.matcher(password).matches()) {
        return false;
    }
    if (!number.matcher(password).matches()) {
        return false;
    }
    if (!specialCharacter.matcher(password).matches()) {
        return false;
    }
    return true;
}
}
```

7) Right click on Java folder-> new-> activity->empty activity-> name it as

“LoginActivity”

8) Go to xml code of design change the layout to “RelativeLayout”

9) Add TextView component & change the following properties:

- Size: 38dp
- Text: “Login”
- Center-Align

10) Add Email (EditText) component & change the following properties in XML Code:

- Hint: "Email ID"
- id: "@+id/emailEditText"

11) Add Password (EditText) component & change the following properties in XML

Code:

- Hint: "Password"
- id: "@+id/passwordEditText"

12) Add Button component & change the following properties in XML

- Id: "@+id/loginBtn"
- Text: "Login"

XML-CODE

```
<?xml version="1.0" encoding="utf-8"?>
```

```
<RelativeLayout 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/textView"
```

```
    android:layout_width="210dp"
```

```
    android:layout_height="54dp"
```

```
    android:layout_alignParentEnd="true"
```

```
    android:layout_alignParentBottom="true"
```

```
    android:layout_marginEnd="120dp"
```

```
    android:layout_marginBottom="576dp"
```

```
    android:text="Login Activity"
```

```
    android:textSize="28dp" />
```

```
<EditText
```

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

```
    android:layout_width="222dp"
```

```
    android:layout_height="80dp"
```

```
    android:layout_alignParentEnd="true"
```

```
    android:layout_alignParentBottom="true"
```

```
    android:layout_marginEnd="108dp"
```

```
    android:layout_marginBottom="424dp"
```

```
    android:ems="10"
```

```
android:hint="Email ID"

android:inputType="textEmailAddress"

android:textSize="28dp" />
```

<EditText

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

android:layout_width="wrap_content"

android:layout_height="wrap_content"

android:layout_alignParentEnd="true"

android:layout_alignParentBottom="true"

android:layout_marginEnd="40dp"

android:layout_marginBottom="299dp"

android:ems="10"

android:hint="Password"

android:inputType="textPassword"

android:textSize="28dp" />
```

<Button

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

android:layout_width="wrap_content"

android:layout_height="wrap_content"

android:layout_alignParentEnd="true"
```

```
        android:layout_alignParentBottom="true"

        android:layout_marginEnd="173dp"

        android:layout_marginBottom="189dp"

        android:text="login"

        android:textSize="26dp" />
```

```
</RelativeLayout>
```

JAVA-CODE

```
package com.example.loginapplication;

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 LoginActivity extends AppCompatActivity {
```

```
EditText emailEditText, passwordEditText;
```

```
Button loginBtn;
```

```
int counter=2;
```

```
@Override
```

```
protected void onCreate(Bundle savedInstanceState) {
```

```
    super.onCreate(savedInstanceState);
```

```
    setContentView(R.layout.activity_login);
```

```
    emailEditText=findViewById(R.id.emailEditText);
```

```
    passwordEditText=findViewById(R.id.passwordEditText);
```

```
    loginBtn=findViewById(R.id.loginBtn);
```

```
    String registeredEmail=getIntent().getStringExtra("email");
```

```
    String registeredPassword=getIntent().getStringExtra("password");
```

```
    loginBtn.setOnClickListener(new View.OnClickListener() {
```

```
        @Override
```

```
        public void onClick(View v) {
```

```
            String email=emailEditText.getText().toString();
```

```
            String password=passwordEditText.getText().toString();
```

```
            if(registeredEmail.equals(email)&&  
registeredPassword.equals(password))
```

```
            {
```

```
                Intent intent=new
```

```
Intent(LoginActivity.this,LoginSuccessActivity.class);
```

```

        startActivity(intent);
    }

    else{

        Toast.makeText(LoginActivity.this,"Invalid
Credentials",Toast.LENGTH_LONG).show();

    }

    counter--;

    if (counter==0)

    {

        Toast.makeText(getBaseContext(),"FAILED LOGIN
ATTEMPTS",Toast.LENGTH_LONG).show();

        loginBtn.setEnabled(false);

    }

}

});

}

}

```

13) Right click on Java folder-> new-> activity->empty activity-> name it as “LoginSuccessful”

14) Go to xml code of design change the layout to “RelativeLayout”

15) Add TextView component & change the following properties:

- Size: 38dp
- Text: “Login Successful”
- Center-Align

XML-CODE

```
<?xml version="1.0" encoding="utf-8"?>
```

```
<RelativeLayout 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=".LoginSuccessActivity">
```

```
<TextView
```

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

```
    android:layout_width="297dp"
```

```
    android:layout_height="190dp"
```

```
    android:layout_alignParentEnd="true"
```

```
    android:layout_alignParentBottom="true"
```

```
    android:layout_marginEnd="42dp"
```

```
    android:layout_marginBottom="400dp"
```

```
        android:text="Login Successful"

        android:textSize="38dp" />
</RelativeLayout>
```

JAVA-CODE

```
package com.example.loginapplication;

import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;

public class LoginSuccessActivity extends AppCompatActivity {

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_login_success);

    }

}
```