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Create a signup 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 SIGNUP proceed to the next Login activity. Here the user should SIGNIN using the Username and Password created during signup activity. IF 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 SIGNIN button. Use bundle to transfer information from one activity to another.

Main 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:orientation="vertical"
    android:layout_margin="5dp"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <TextView
        android:layout_width="match_parent"
        android:text="@string/sign_up_activity"
        android:gravity="center"
        android:textSize="25sp"
        android:layout_above="@+id/loginLayout"
        android:layout_marginBottom="25dp"
        android:layout_height="wrap_content">
    </TextView>
    <LinearLayout
        android:id="@+id/loginLayout"
        android:layout_width="match_parent"
        android:orientation="vertical"
        android:layout_centerInParent="true"
        android:layout_height="wrap_content">
        <com.google.android.material.textfield.TextInputLayout
            android:id="@+id/userNameTextInputLayout"
            style="@style/Widget.MaterialComponents.TextInputLayout.OutlinedBox"
```

```

        android:layout_width="match_parent"
        android:layout_margin="10dp"
        android:layout_height="wrap_content">

        <com.google.android.material.textfield.TextInputEditText
            android:id="@+id/user_name"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:hint="@string/name" />
    </com.google.android.material.textfield.TextInputLayout>

    <com.google.android.material.textfield.TextInputLayout
        android:id="@+id/passwordTextInputLayout"
        style="@style/Widget.MaterialComponents.TextInputLayout.OutlinedBox"
        android:layout_width="match_parent"
        app:passwordToggleEnabled="true"
        android:layout_margin="10dp"
        android:layout_height="wrap_content">

        <com.google.android.material.textfield.TextInputEditText
            android:id="@+id/password"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:inputType="textPassword"
            android:hint="@string/password" />
    </com.google.android.material.textfield.TextInputLayout>
</LinearLayout>
<Button
    android:layout_width="wrap_content"
    android:layout_gravity="center"
    android:layout_marginTop="12dp"
    android:text="@string/sign_up"
    android:textAllCaps="false"
    android:layout_centerHorizontal="true"
    android:layout_below="@+id/loginLayout"
    android:id="@+id/signupbtn"
    android:layout_height="wrap_content">
</Button>
</RelativeLayout>

```

Main Java Code:

```

package com.example.signupactivity;

import android.content.Intent;
import android.os.Bundle;
import android.text.TextUtils;
import android.view.View;

```

```

import android.widget.Button;
import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;

import com.google.android.material.textfield.TextInputLayout;

import java.util.regex.Pattern;

public class MainActivity extends AppCompatActivity implements Base{
    TextInputLayout mEditTextName;
    TextInputLayout mEditTextPassword;
    Button mButton;
    Bundle bundle;
    String mUserName, mPassword;
    private static final Pattern PASSWORD_PATTERN = Pattern.compile("(?=(.*[0-9])(?=.*[a-z])(?=.*[A-Z])(?=.*[@#$%^&+=])(?=\S+$)).{8,}$");
    Intent mIntent;
    public static final String Shared_PRIF_NAME = "MyPrefs";
    /*
    (?=\d)      #must contains one digit from 0-9
    (?=.*[a-z])  #must contains one lowercase characters
    (?=.*[A-Z])  #must contains one uppercase characters
    (?=.*[@#$%]) #must contains one special symbols in the list
    "@#$%"      #match anything with previous condition checking
    {8,}        #length at least 8 characters
    */
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        init();
        listener();
    }
    @Override
    public void init() {
        mIntent=new Intent();
        mEditTextName=findViewById(R.id.userNameTextInputLayout);
        mEditTextPassword=findViewById(R.id.passwordTextInputLayout);
        mButton=findViewById(R.id.signupbtn);
    }
    @Override
    public void listener() {
        mButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                mEditTextPassword.setErrorEnabled(false);
                mUserName = mEditTextName.getText().getText().toString();
                mPassword = mEditTextPassword.getText().getText().toString();
                if (TextUtils.isEmpty(mUserName) || TextUtils.isEmpty(mPassword)) {

```

```

        Toast.makeText(MainActivity.this, "Enter All fields",
Toast.LENGTH_SHORT).show();
    } else {
        if (PASSWORD_PATTERN.matcher(mPassword).matches()) {
            bundle = new Bundle();
            bundle.putString("NAME", mUserName);
            bundle.putString("PASSWORD", mPassword);
            mIntent.setClass(MainActivity.this, LoginActivity.class);
            mIntent.putExtras(bundle);
            startActivity(mIntent);
        } else {
            mEditTextPassword.setErrorEnabled(true);
            mEditTextPassword.setError("Invalid Password Pattern");
        }
    }
}
});
}
}
}

```

Login XML 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=".LoginActivity">
    <com.google.android.material.textfield.TextInputLayout
        android:id="@+id/login_username_layout"
        style="@style/Widget.MaterialComponents.TextInputLayout.OutlinedBox"
        android:layout_width="match_parent"
        android:layout_height="54dp"
        android:layout_marginStart="16dp"
        android:layout_marginTop="8dp"
        android:layout_marginEnd="16dp"
        android:layout_marginBottom="8dp"
        app:layout_constraintBottom_toTopOf="@+id/login_password_layout"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.5"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.25"
        app:layout_constraintVertical_chainStyle="packed">

        <com.google.android.material.textfield.TextInputEditText

```

```

        android:id="@+id/login_username"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:hint="@string/username" />
</com.google.android.material.textfield.TextInputLayout>

<com.google.android.material.textfield.TextInputLayout
    android:id="@+id/login_password_layout"
    style="@style/Widget.MaterialComponents.TextInputLayout.OutlinedBox"
    android:layout_width="match_parent"
    android:layout_height="54dp"
    android:layout_marginStart="16dp"
    android:layout_marginTop="8dp"
    android:layout_marginRight="16dp"
    android:layout_marginEnd="16dp"
    android:layout_marginBottom="8dp"
    app:enableIconCheckable="true"
    app:enableIconMode="password_toggle"
    app:layout_constraintBottom_toTopOf="@+id/loginButton"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/login_username_layout">

    <com.google.android.material.textfield.TextInputEditText
        android:id="@+id/login_password"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:hint="@string/password"
        android:inputType="textPassword" />
</com.google.android.material.textfield.TextInputLayout>

<com.google.android.material.button.MaterialButton
    android:id="@+id/loginButton"
    android:layout_width="match_parent"
    android:layout_height="54dp"
    android:layout_marginStart="16dp"
    android:layout_marginTop="5dp"
    android:layout_marginEnd="16dp"
    android:layout_marginBottom="8dp"
    android:text="@string/login"
    app:layout_constraintBottom_toTopOf="@+id/login_to_signup"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@id/login_password_layout" />
<com.google.android.material.textview.MaterialTextView
    android:layout_marginRight="16dp"
    android:id="@+id/login_to_signup"
    android:layout_width="wrap_content"

```

```

        android:layout_height="wrap_content"
        android:layout_marginStart="16dp"
        android:layout_marginTop="16dp"
        android:layout_marginEnd="16dp"
        android:layout_marginBottom="8dp"
        android:text="@string/sign_up"
        android:textColor="@color/purple_500"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.5"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@id/loginButton" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

Login Java code:

```

package com.example.signupactivity;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;

import com.google.android.material.textfield.TextInputLayout;

public class LoginActivity extends AppCompatActivity implements Base {
    TextInputLayout mEditTextName, mEditTextPassword;
    Button mButton;
    String mUserName, mPassword;
    Bundle mBundle;
    int count = 0;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_login);
        init();
        listener();
    }

    @Override
    public void init() {
        mBundle = getIntent().getExtras();
        if (mBundle != null) {
            mUserName = mBundle.getString("NAME");
            mPassword = mBundle.getString("PASSWORD");
        }
        mEditTextName = (TextInputLayout)findViewById(R.id.login_username_layout);
        mEditTextPassword = (TextInputLayout)findViewById(R.id.login_password_layout);
    }

```

```

        mButton = (Button) findViewById(R.id.loginButton);
    }

    @Override
    public void listener() {
        mButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                if (count < 3) {
                    if (mUserName.equals(mEditTextName.getText().toString()) &&
mPassword.equals(mEditTextPassword.getText().toString())) {
                        Toast.makeText(LoginActivity.this, "Successful Login",
Toast.LENGTH_SHORT).show();
                    } else {
                        count++;
                        Toast.makeText(LoginActivity.this, "Login Failed",
Toast.LENGTH_SHORT).show();
                    }
                } else {
                    mButton.setEnabled(false);
                }
            }
        });
    }
}

```

Output:



Sign Up Activity

Name
 Girish

Password

Sign Up



After Successful Signup



Username
Girish

Password
.....

LOGIN

[Sign Up](#)

Login Failed



Login failed



Username
Girish

Password
.....

LOGIN

[Sign Up](#)



After 2 failed attempts, Login button is disabled



Username
Girish

Password
.....

LOGIN

Sign Up

Successful Login

After successful Login



Sign Up Activity

Name
Kshama

Password
.....

Invalid Password Pattern

Sign Up

Password not according to the rules