**PRACTICAL: 5**

**AIM:**

Create a login application with following features:

1. Successful Login message in TextView with Green background if Username & password is correct
2. Failure message in TextView with Red background if Username or password is incorrect.
3. Disable Login Button after three wrong login attempts.
4. Close application if user selects Cancel Button.

**THEORY:**

Android password field: In Android, you can use “android.widget.EditText“, with inputType="textPassword" to render a password component.

LinearLayout: Linear layout is a simple layout used in android for layout designing. In the Linear layout all the elements are displayed in linear fashion means all the childs/elements of a linear layout are displayed according to its orientation. The value for orientation property can be either horizontal or vertical.

**CODE:**

|  |
| --- |
| **// MainActivity.java**  package com.example.pr5; import androidx.appcompat.app.AppCompatActivity; import android.graphics.Color; import android.os.Bundle; import android.view.View; import android.widget.Button; import android.widget.EditText; import android.widget.TextView; import android.widget.Toast; public class MainActivity extends AppCompatActivity {  private EditText username;  private EditText password;  private Button login;  private Button cancel;  private TextView status;  private byte count;  @Override  protected void onCreate(Bundle savedInstanceState) {  super.onCreate(savedInstanceState);  setContentView(R.layout.activity\_main);  username = findViewById(R.id.username);  password = findViewById(R.id.password);  login = findViewById(R.id.login);  cancel = findViewById(R.id.cancel);  status = findViewById(R.id.status);   count = 0;  login.setOnClickListener(new View.OnClickListener() {  @Override  public void onClick(View view) {  count++;  String user = String.valueOf(username.getText());  String pass = String.valueOf(password.getText());  if (user.equals("admin") && pass.equals("admin")){  count=0;  status.setText("Success!!");  status.setBackgroundColor(Color.GREEN);  }  else{  status.setText("Failed!!");  status.setBackgroundColor(Color.RED);  }  if (count>2){  Toast.makeText(getApplicationContext(),"Too Many Attempts",Toast.LENGTH\_LONG).show();  login.setVisibility(View.INVISIBLE);  }  username.setText("");  password.setText("");  }  });  cancel.setOnClickListener(new View.OnClickListener() {  @Override  public void onClick(View view) {  System.exit(0);  }  });   } }  **activity\_mail.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"  android:background="#7067CF"  >  <LinearLayout  android:layout\_width="match\_parent"  android:layout\_height="match\_parent"  android:orientation="vertical"  android:gravity="center" >  <TextView  android:layout\_width="match\_parent"  android:layout\_height="wrap\_content"  android:textAlignment="center"  android:text="17IT011"  android:textSize="50sp"  android:textColor="#7B287D" />  <EditText  android:id="@+id/username"  android:layout\_width="match\_parent"  android:layout\_height="wrap\_content"  android:inputType="text"  android:layout\_margin="20dp"  android:textSize="35sp"  android:hint="Username"  android:textAlignment="center"  android:textColor="#330C2F" />  <EditText  android:id="@+id/password"  android:layout\_width="match\_parent"  android:layout\_height="wrap\_content"  android:layout\_margin="20dp"  android:inputType="textPassword"  android:textSize="35sp"  android:hint="Password"  android:textAlignment="center"  android:textColor="#330C2F" />  <LinearLayout  android:layout\_width="match\_parent"  android:layout\_height="wrap\_content"  android:orientation="horizontal"  android:gravity="center" >  <Button  android:id="@+id/login"  android:layout\_width="90dp"  android:layout\_height="60dp"  android:layout\_margin="20dp"  android:text="Login"  android:background="#330C2F"  android:textColor="#CBF3D2" />  <Button  android:id="@+id/cancel"  android:layout\_width="90dp"  android:layout\_height="60dp"  android:layout\_margin="20dp"  android:background="#330C2F"  android:textColor="#CBF3D2"  android:text="Cancel" />  </LinearLayout>  <TextView  android:id="@+id/status"  android:layout\_width="wrap\_content"  android:layout\_height="wrap\_content"  android:padding="10dp"  android:textAlignment="center"  android:textColor="#FFF"  android:textSize="40sp" />  </LinearLayout> </androidx.constraintlayout.widget.ConstraintLayout> |

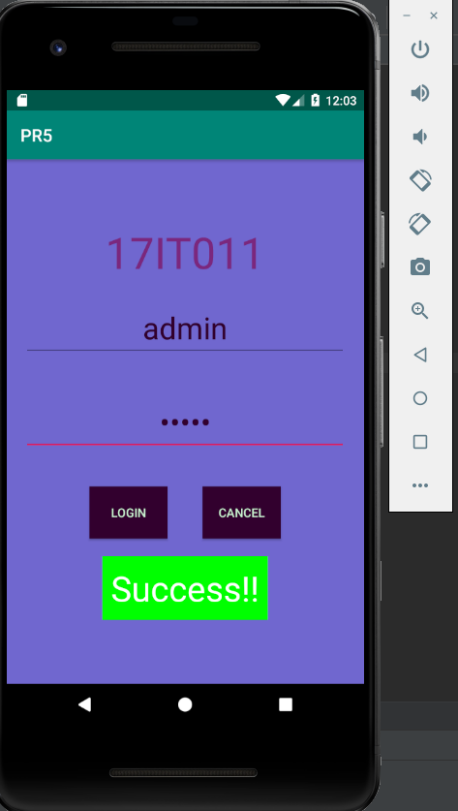
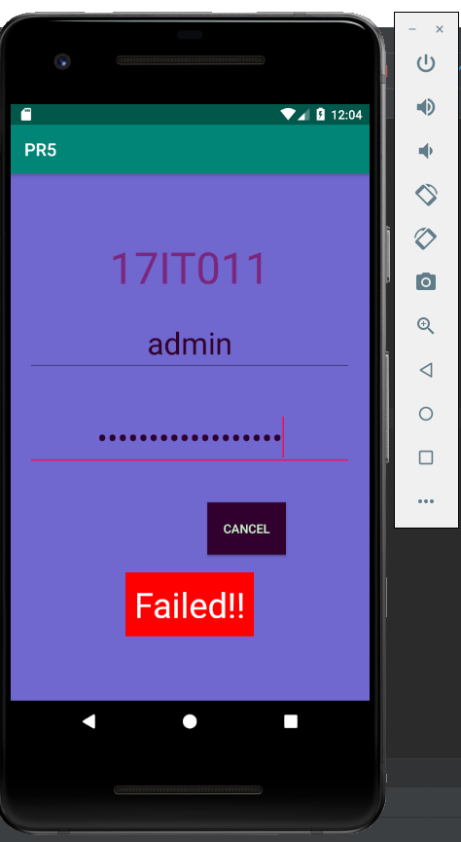
**OUTPUT:**

Figure 1 On successful login

Figure 2 On failed Login

**LATEST APPLICATIONS:**

All the application like Gmail, Edmodo, Instagram require authentication mechanisms in their application

**LEARNING OUTCOME:**

1. Disabling button on 3 attempts.
2. Authentication mechanisms.
3. Importance of authentication.