

## PROGRAM 4:

Implement validations on various UI controls

### CODE:

#### activity\_main.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="16dp">

    <EditText
        android:id="@+id/editTextEmail"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Email"
        android:inputType="textEmailAddress"
        android:minHeight="48dp" />

    <EditText
        android:id="@+id/editTextPassword"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Password"
        android:inputType="textPassword"
        android:minHeight="48dp" />

    <Button
        android:id="@+id/buttonSubmit"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Submit" />

    <TextView
        android:id="@+id/textViewError"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:textColor="@color/my_red"
        android:textSize="16sp" />

</LinearLayout>
```

#### MainActivity.java

```
package com.example.fourthprogram;
import android.os.Bundle;
import android.text.TextUtils;
import android.util.Patterns;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
```

```

import android.widget.Toast;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

    private EditText emailEditText;
    private EditText passwordEditText;
    private Button submitButton;
    private TextView errorTextView;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        emailEditText = findViewById(R.id.editTextEmail);
        passwordEditText = findViewById(R.id.editTextPassword);
        submitButton = findViewById(R.id.buttonSubmit);
        errorTextView = findViewById(R.id.textViewError);

        submitButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                validateInputs();
            }
        });
    }

    private void validateInputs() {
        String email = emailEditText.getText().toString().trim();
        String password = passwordEditText.getText().toString().trim();

        // Reset error message
        errorTextView.setText("");

        if (TextUtils.isEmpty(email)) {
            errorTextView.setText("Email cannot be empty");
            return;
        }

        if (!Patterns.EMAIL_ADDRESS.matcher(email).matches()) {
            errorTextView.setText("Invalid email address");
            return;
        }

        if (TextUtils.isEmpty(password)) {
            errorTextView.setText("Password cannot be empty");
            return;
        }

        if (password.length() < 6) {
            errorTextView.setText("Password must be at least 6 characters");
            return;
        }
    }
}

```

```
        Toast.makeText(MainActivity.this, "Validation Successful", Toast.LENGTH_SHORT).show();
    }
}
```

```
colors.xml
<resources>
    <color name="my_red">#FF0000</color>
</resources>
```