

PROGRAM NO :1

AIM: Implement validations on various UI controls.

PROGRAM CODE:

Main_acti
vity.java

```
package com.example.validations;

import androidx.appcompat.app.AppCompatActivity;

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

public class MainActivity extends AppCompatActivity {

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

    public Boolean validateName(){
        EditText ed1 = (EditText) findViewById(R.id.name);
        String name = ed1.getText().toString();
        if (name.isEmpty()){
            ed1.setError("Name cannot be empty");
        }
    }
}
```

```
        return false;

    }

    else {

        return true;

    }

}

public Boolean validateAddress(){

    EditText ed5 = (EditText) findViewById(R.id.address);

    String address = ed5.getText().toString();

    if (address.isEmpty()){

        ed5.setError("Address cannot be empty");

        return false;

    }

    else {

        return true;

    }

}

public Boolean validateEmail(){

    EditText ed2 = (EditText) findViewById(R.id.email);

    String email = ed2.getText().toString();

    String emailPattern = "[a-zA-Z0-9._-]+@[a-z]+\\.+[a-z]+";

    if (email.isEmpty()){

        ed2.setError("Email cannot be empty");

        return false;

    }

    else if (!email.matches(emailPattern)){

        ed2.setError("Invalid email address");

    }

}
```

```

        return false;

    }

    else{

        return true;

    }

}

public Boolean validateNumber() {

    EditText ed3 = (EditText) findViewById(R.id.number);

    String num = ed3.getText().toString();

    String numval = ".{10,}";

    if (num.isEmpty()) {

        ed3.setError("Phone number cannot be empty");

        return false;

    } else if (!num.matches(numval)) {

        ed3.setError("Check it exist 10 numbers");

        return false;

    } else {

        return true;

    }

}

public Boolean validatePassword(){

    EditText ed4 = (EditText) findViewById(R.id.password);

    String pswd = ed4.getText().toString();

    String passwordVal = "^" +

        //"(?=.*[0-9])" +           //at least 1 digit
        //"(?=.*[a-z])" +           //at least 1 lower case
letter

```

	<pre> letter //(?=.*[A-Z])" + //at least 1 upper case "(?=.*[a-zA-Z])" + //any letter character "(?=.*[@#\$%^&+=])" + //at least 1 special "(?=.*\\S+\$)" + //no white spaces ".{4,}" + //at least 4 characters "\$"; if (pswd.isEmpty()){ ed4.setError("Password cannot be empty"); return false; } else if (!pswd.matches(passwordVal)) { ed4.setError("Password is too weak"); return false; } else{ return true; } } public void onSubmit(View view){ if(validateName() && validateEmail() && validateNumber() && validateAddress() && validatePassword()){ Toast t = Toast.makeText(getApplicationContext(),"Succesfully Submitted",Toast.LENGTH_LONG); t.show(); } } } </pre>
--	--

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:baselineAligned="false"
    android:orientation="vertical"
    android:textAlignment="center"
    tools:context=".MainActivity">

    <TextView
        android:id="@+id/textView3"
        android:layout_width="match_parent"
        android:layout_height="48dp"

        android:fontFamily="@string/material_motion_easing_emphasiz
        ed"
        android:text="Validation Form"
        android:textColor="#3D2361"
        android:textSize="24sp" />

    <EditText
        android:id="@+id/name"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:hint="Enter the Name"
        android:inputType="textPersonName" />

    <EditText
        android:id="@+id/email"
        android:layout_width="match_parent"
        android:layout_height="60dp"
        android:ems="10"
        android:hint="Enter the Email"
        android:inputType="textEmailAddress" />

    <EditText
        android:id="@+id/number"
```

```
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:hint="Enter Phone number"
        android:inputType="phone" />
```

```
<EditText
    android:id="@+id/address"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:ems="10"
    android:hint="Enter the Address"
    android:inputType="textPersonName" />
```

```
<EditText
    android:id="@+id/password"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:ems="10"
    android:hint="Enter the password"
    android:inputType="textPassword" />
```

```
<Button
    android:id="@+id/button"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:onClick="onSubmit"
    android:text="Submit" />
```

```
</LinearLayout>
```

OUTPUT:

The screenshot displays a mobile application interface. At the top, a purple header bar contains the text "validations". Below this, the title "Validation Form" is shown. The form consists of five input fields: a text field with "aswin", an email field with "1123@outlook.com", a phone field with "4758556566", a text field with "xox", and a password field with masked characters "*****". A purple "SUBMIT" button is positioned below the fields. At the bottom, a standard Android keyboard is visible. A green toast message "Succesfully Submitted" is displayed above the keyboard, accompanied by a green checkmark icon. The status bar at the very top shows the time as 6:09 and various system icons.

RESULT

Program Has Been Succesfully Executed And Output Is Obtained.