## PROGRAM NO:1

**AIM:** Implement validations on various UI controls.

## **PROGRAM CODE:**

```
package com.example.validations;
Main acti
vity.java
             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");
```

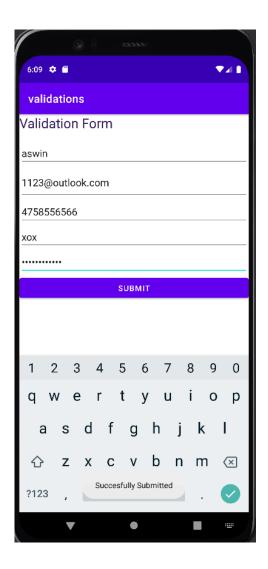
```
return false;
       }
       else{
           return true;
       }
    }
    public Boolean validateNumber() {
       EditText ed3 = (EditText) findViewById(R.id.number);
       String num = ed3.getText().toString();
       String numval = ".{10,}";
       if (num.isEmpty()) {
            ed3.setError("Phone 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
```

```
//"(?=.*[A-Z])" +
                                         //at least 1 upper case
letter
                "(?=.*[a-zA-Z])" +
                                       //any letter
                "(?=.*[@#$%^&+=])" +
                                       //at least 1 special
character
                "(?=\\S+$)" +
                                        //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();
        }
    }
}
```

```
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:**



## **RESULT**

Program Has Been Succesfully Executed And Output Is Obtained.