

## **PROGRAM NO: 4**

### **AIM:**

To implement validations on various UI controls.

### **PROGRAM CODE:**

activity_main.xml	<pre>&lt;?xml version="1.0" encoding="utf-8"?&gt; &lt;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"&gt; &lt;TextView     android:id="@+id/textView4"     android:layout_width="wrap_content"     android:layout_height="wrap_content"     android:text="PASSWORD"     android:hint="password"     app:layout_constraintBottom_toBottomOf="parent"     app:layout_constraintEnd_toEndOf="parent"     app:layout_constraintHorizontal_bias="0.145"     app:layout_constraintStart_toStartOf="parent"     app:layout_constraintTop_toTopOf="parent"     app:layout_constraintVertical_bias="0.519" /&gt;  &lt;TextView     android:id="@+id/textView1"     android:layout_width="wrap_content"     android:layout_height="wrap_content"     android:text="NAME"     android:hint="name"     app:layout_constraintBottom_toBottomOf="parent"     app:layout_constraintEnd_toEndOf="parent"     app:layout_constraintHorizontal_bias="0.167"     app:layout_constraintStart_toStartOf="parent"     app:layout_constraintTop_toTopOf="parent"     app:layout_constraintVertical_bias="0.14" /&gt;  &lt;TextView</pre>
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```
android:id="@+id/textView2"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="MOB NO"
android:hint="10-digit number"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.167"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.327" />
```

<TextView

```
android:id="@+id/textView3"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="EMAIL"
android:hint="email"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.194"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.431" />
```

<EditText

```
android:id="@+id/editText"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:ems="10"
android:inputType="textPersonName"
android:hint="Name"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.757"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.125" />
```

<EditText

```
android:id="@+id/editText2"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:ems="10"
android:hint="Number"
android:inputType="textPersonName"
```

```
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.757"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.319" />
```

<EditText

```
android:id="@+id/editText3"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:ems="10"
android:inputType="textEmailAddress"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.757"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.425" />
```

<EditText

```
android:id="@+id/editText4"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:ems="10"
android:inputType="textPassword"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.757"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.523" />
```

<Button

```
android:id="@+id/button"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:background="#00BCD4"
android:text="OK"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.464"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.67" />
```

	<pre> &lt;EditText     android:id="@+id/addr"     android:layout_width="wrap_content"     android:layout_height="wrap_content"     android:ems="10"     android:inputType="textPersonName"     android:hint="Address"     app:layout_constraintBottom_toBottomOf="parent"     app:layout_constraintEnd_toEndOf="parent"     app:layout_constraintHorizontal_bias="0.757"     app:layout_constraintStart_toStartOf="parent"     app:layout_constraintTop_toTopOf="parent"     app:layout_constraintVertical_bias="0.221" /&gt;  &lt;TextView     android:id="@+id/adr"     android:layout_width="wrap_content"     android:layout_height="wrap_content"     android:text="Address"     app:layout_constraintBottom_toBottomOf="parent"     app:layout_constraintEnd_toEndOf="parent"     app:layout_constraintHorizontal_bias="0.17"     app:layout_constraintStart_toStartOf="parent"     app:layout_constraintTop_toTopOf="parent"     app:layout_constraintVertical_bias="0.233" /&gt; &lt;/androidx.constraintlayout.widget.ConstraintLayout&gt; </pre>
MainActivity.java	<pre> package com.example.registration_form; import androidx.appcompat.app.AppCompatActivity;  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 {     Button button;     TextView name,number,password,mail,addr;     EditText ename,enumber,epassword,email,address;      @Override      protected void onCreate(Bundle savedInstanceState) {         super.onCreate(savedInstanceState);         setContentView(R.layout.activity_main); </pre>

```
button = findViewById(R.id.button);
```

```
name = findViewById(R.id.textView1);  
number = findViewById(R.id.textView2);  
mail = findViewById(R.id.textView3);  
password = findViewById(R.id.textView4);  
addr=findViewById(R.id.adr);
```

```
ename= findViewById(R.id.editText);  
enumber= findViewById(R.id.editText2);  
email= findViewById(R.id.editText3);  
epassword= findViewById(R.id.editText4);  
address= findViewById(R.id.addr);
```

```
button.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v) {  
        login();  
    }  
});
```

```
}  
public void login() {  
    if (ename.getText().toString().length() == 0) {  
        ename.requestFocus();  
        ename.setError("Name is required");  
        return;  
    }  
    String namePattern="^[0-9!@#$$%^&*]+$";  
    if(ename.getText().toString().matches(namePattern))  
    { ename.requestFocus();  
      ename.setError("Enter valid name");  
      return;  
    }  
    String fPattern="^[A-Za-z!@#$$%^&*]+[0-9!@#$$%^&*]+[A-Za-
```

```
z!@#$$%^&*]+$";  
    if(ename.getText().toString().matches(fPattern))  
    { ename.requestFocus();  
      ename.setError("Enter valid name");  
      return;  
    }  
}
```

```

String namPattern="^[A-Za-z!@#%&*]+[0-9!@#%&*]+$";
if(ename.getText().toString().matches(namPattern))
{
    ename.requestFocus();
    ename.setError("Enter valid name");
    return;

}
String naPattern="^[0-9!@#%&*]+[A-Za-z!@#%&*]++$";
if(ename.getText().toString().matches(naPattern))
{
    ename.requestFocus();
    ename.setError("Enter valid name");
    return;

}
if (address.getText().toString().length() == 0) {
    address.requestFocus();
    address.setError("Address is required");
    return;
}
String noPattern="^[A-Za-z!@#%&*]+$";
if(enumber.getText().toString().matches(noPattern))
{
    enumber.requestFocus();
    enumber.setError("Enter valid number");
    return;

}
String numPattern="^[A-Za-z]+[0-9]+[!@#%&*]+$";
if(enumber.getText().toString().matches(numPattern))
{
    enumber.requestFocus();
    enumber.setError("Enter valid number");
    return;

}
String nuPattern="^[A-Za-z]+[0-9]+$";
if(enumber.getText().toString().matches(nuPattern))
{
    enumber.requestFocus();
    enumber.setError("Enter valid number");
    return;

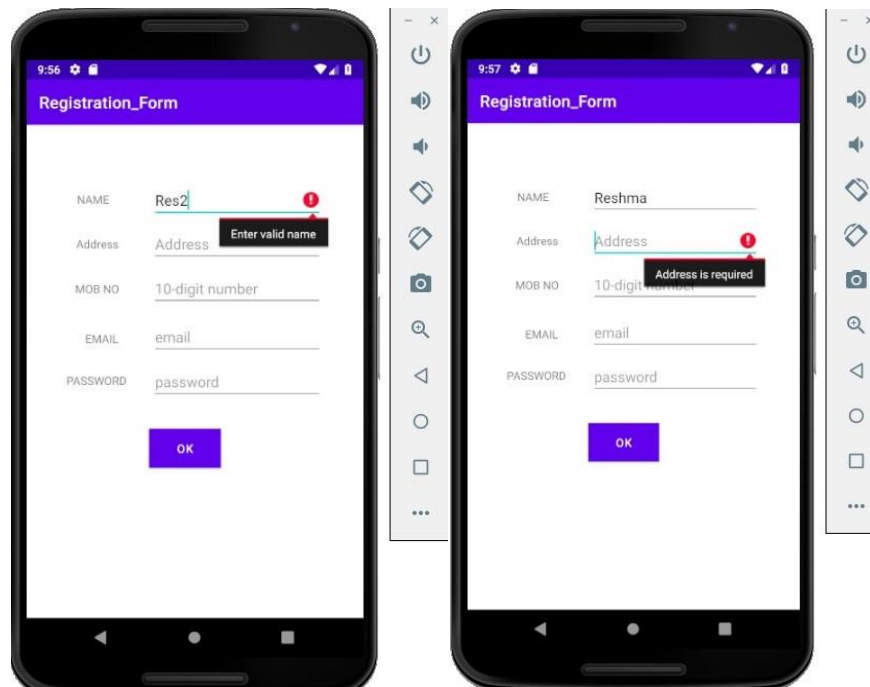
}
String nPattern="^[0-9]+[A-Za-z]+$";
if(enumber.getText().toString().matches(nPattern))
{
    enumber.requestFocus();
    enumber.setError("Enter valid number");
    return;
}

```

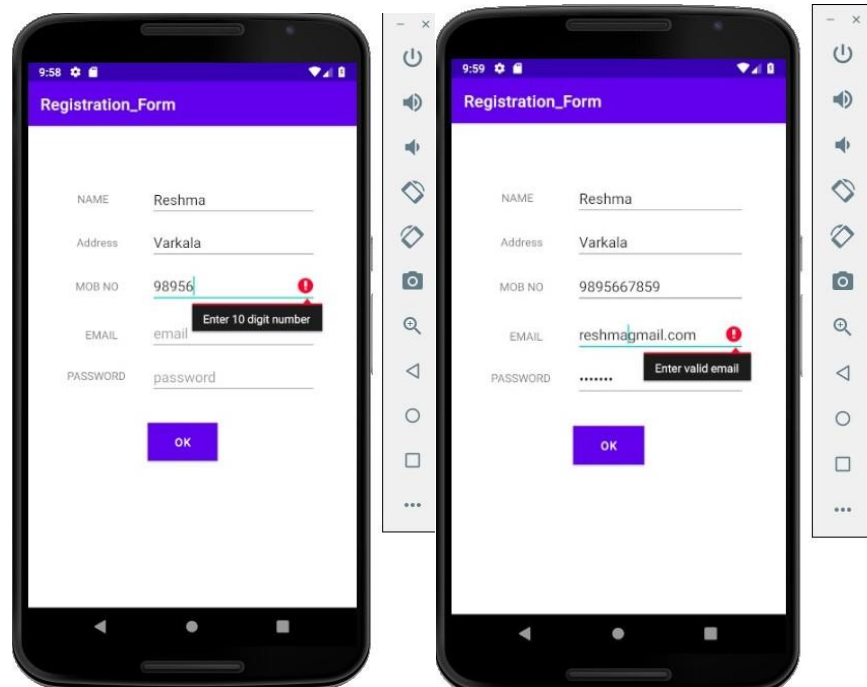
	<pre> } String numberPattern="^[0-9]+[!@#\$\$%^&amp;*]+\$"; if(enumerator.getText().toString().matches(numberPattern)) {     enumerator.requestFocus();     enumerator.setError("Enter valid number");     return;  }  if (enumerator.getText().toString().length() == 0) {     enumerator.requestFocus();     enumerator.setError("Number is required");     return; }  if (enumerator.getText().toString().length() &lt; 10) {     enumerator.requestFocus();     enumerator.setError("Enter 10 digit number");     return; }  if (enumerator.getText().toString().length() &gt;10) {     enumerator.requestFocus();     enumerator.setError("Enter 10 digit number");     return; }  if (email.getText().toString().length() == 0) {     Toast.makeText(getApplicationContext(), "Invalid Address", Toast.LENGTH_SHORT).show();     email.requestFocus();     email.setError("email is required");     return; } String emailpattern="^[a-zA-Z0-9._-]+@[a-z]+.[a-z]+\$"; if(email.getText().toString().matches(emailpattern)) {  } else{     email.requestFocus();     email.setError("Enter valid email");     return; }  if (epassword.getText().toString().length() == 0) {     epassword.requestFocus();     epassword.setError("Enter valid password");     return; </pre>	
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	<pre>}  if (epassword.getText().toString().length() &lt; 8) {     epassword.requestFocus();     epassword.setError("Enter minimum 8 digit password");     return; }  }</pre>
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## **OUTPUT:**







## **RESULT:**

The program is successfully executed and the output is verified.