**PROGRAM NO :4**

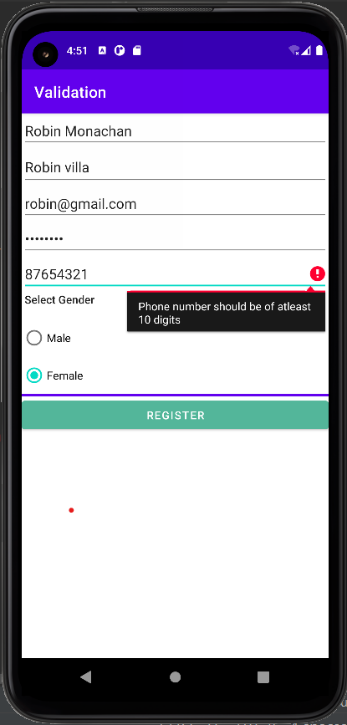
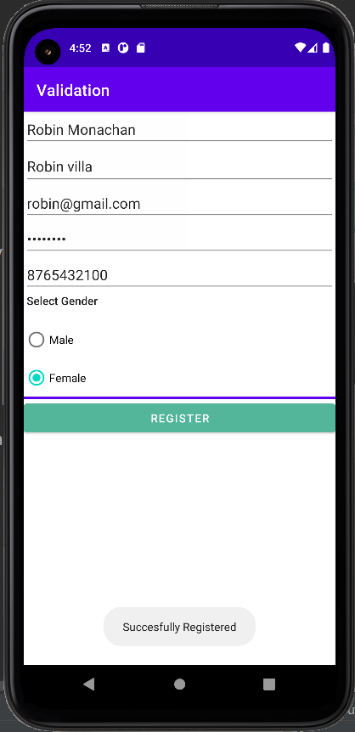
**AIM:** Implement validations on various UI controls.

**PROGRAM CODE:**

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| Mainac tivity.ja va | package com.example.validation;  import androidx.appcompat.app.AppCompatActivity;  import android.os.Bundle;  import android.provider.MediaStore;  import android.view.View;  import android.view.View.OnClickListener;  import android.widget.Button;  import android.widget.EditText;  import android.widget.RadioButton;  import android.widget.RadioGroup;  import android.widget.Toast;  public class MainActivity extends AppCompatActivity {  EditText e1,e2,e3,e4,e5;  Button b1;  RadioButton r1,r2;  RadioGroup r;  @Override  protected void onCreate(Bundle savedInstanceState) {  super.onCreate(savedInstanceState);  setContentView(R.layout.activity\_main);  e1=(EditText)findViewById(R.id.name);  e2=(EditText)findViewById(R.id.address);  e3=(EditText)findViewById(R.id.email);  e4=(EditText)findViewById(R.id.password);  e5=(EditText)findViewById(R.id.phno);  b1=(Button)findViewById(R.id.validate1);  r=(RadioGroup)findViewById(R.id.gender);  r1=(RadioButton)findViewById(R.id.male);  r2=(RadioButton)findViewById(R.id.female);  b1.setOnClickListener(new View.OnClickListener(){  @Override  public void onClick(View v)  {  validate();  }  });  }  public void validate()  {  String name=e1.getText().toString();  String email=e3.getText().toString().trim();  String address=e2.getText().toString();  String password=e4.getText().toString();  String namePattern="[0-9!@#$%^&\*]";  String emailPattern="[a-zA-Z0-9.\_-]+@[a-z]+\\.+[a-z]+";  String pno=e5.getText().toString();  int valid=1;  if(name.length()==0)  {  e1.getText().clear();  e1.requestFocus();  e1.setError("No valid name written");  Toast.makeText(getApplicationContext(), "Enter valid name", Toast.LENGTH\_SHORT).show();  valid++;  }  if(name.matches(namePattern))  {  e1.getText().clear();  e1.requestFocus();  e1.setError("Name contains illegal characters");  Toast.makeText(getApplicationContext(), "Enter valid name", Toast.LENGTH\_SHORT).show();  valid++;  }  if(address.length()==0)  {  e2.getText().clear();  e2.requestFocus();  e2.setError("No valid address written");  Toast.makeText(getApplicationContext(), "Enter valid address", Toast.LENGTH\_SHORT).show();  valid++;  }  if(email.length()==0)  {  e3.getText().clear();  e3.requestFocus();  e3.setError("No valid email written");  Toast.makeText(getApplicationContext(), "Enter valid email", Toast.LENGTH\_SHORT).show();  valid++;  }  if(!email.matches(emailPattern))  {  e3.getText().clear();  e3.requestFocus();  e3.setError("Invalid email pattern");  Toast.makeText(getApplicationContext(), "Enter valid email ", Toast.LENGTH\_SHORT).show();  valid++;  }  if(password.length()==0)  {  e4.requestFocus();  e4.setError("Enter valid password");  valid++;  }  if(password.length()<5)  {  e4.requestFocus();  e4.setError("Enter an 8 digit password");  valid++;  }  if(!password.equals("admin"))  {  Toast.makeText(getApplicationContext(), "Incorrect password", Toast.LENGTH\_SHORT).show();  }  if (r.getCheckedRadioButtonId() == -1)  {  Toast.makeText(getApplicationContext(), "Please select any gender", Toast.LENGTH\_SHORT).show();  valid++;  }  else  {  if(r1.isChecked())  {  Toast.makeText(getApplicationContext(), "Welcome Mr."+name, Toast.LENGTH\_SHORT).show();  }  if(r2.isChecked())  {  Toast.makeText(getApplicationContext(), "Welcome Ms."+name, Toast.LENGTH\_SHORT).show();  }  }  if(pno.length()<10)  {  e5.setError("Phone number should be of atleast 10 digits");  valid++;  }  if(valid==1)  {  Toast.makeText(getApplicationContext(), "Succesfully Registered", Toast.LENGTH\_SHORT).show();  }  }  } |

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| activity\_main.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">  <TextView  android:layout\_width="222dp"  android:layout\_height="50dp"  android:layout\_marginStart="92dp"  android:text="Email ID"  android:textSize="36sp"  app:layout\_constraintBottom\_toBottomOf="parent"  app:layout\_constraintLeft\_toLeftOf="parent"  app:layout\_constraintRight\_toRightOf="parent"  app:layout\_constraintStart\_toStartOf="parent"  app:layout\_constraintTop\_toTopOf="parent"  app:layout\_constraintVertical\_bias="0.327" />  <EditText  android:id="@+id/editText"  android:layout\_width="256dp"  android:layout\_height="55dp"  android:ems="10"  android:inputType="textEmailAddress"  app:layout\_constraintBottom\_toBottomOf="parent"  app:layout\_constraintEnd\_toEndOf="parent"  app:layout\_constraintHorizontal\_bias="0.593"  app:layout\_constraintStart\_toStartOf="parent"  app:layout\_constraintTop\_toTopOf="parent"  app:layout\_constraintVertical\_bias="0.44" />  </androidx.constraintlayout.widget.ConstraintLayout> |

**OUTPUT:**

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RESULT

Program Has Been Succesfully Executed And Output Is Obtained.