

# PROGRAM 1

## AIM:

Design a Login Form with username and password using LinearLayout and toast valid credentials.

<b>activity_main.xml</b>	<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/textView"     android:layout_width="124dp"     android:layout_height="41dp"     android:text="UserName"     app:layout_constraintBottom_toBottomOf="parent"     app:layout_constraintEnd_toEndOf="parent"     app:layout_constraintHorizontal_bias="0.163"     app:layout_constraintStart_toStartOf="parent"     app:layout_constraintTop_toTopOf="parent"     app:layout_constraintVertical_bias="0.301" /&gt;  &lt;TextView     android:id="@+id/textView2"     android:layout_width="124dp"     android:layout_height="41dp"     android:text="Password"     app:layout_constraintBottom_toBottomOf="parent"     app:layout_constraintEnd_toEndOf="parent"     app:layout_constraintHorizontal_bias="0.163"     app:layout_constraintStart_toStartOf="parent"     app:layout_constraintTop_toTopOf="parent"     app:layout_constraintVertical_bias="0.4" /&gt;  &lt;EditText     android:id="@+id/usr"     android:layout_width="wrap_content"     android:layout_height="wrap_content"     android:ems="10"     android:inputType="textPersonName"     app:layout_constraintBottom_toBottomOf="parent"     app:layout_constraintEnd_toEndOf="parent"     app:layout_constraintHorizontal_bias="0.925"</pre>
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```
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.303" />
```

```
<EditText
    android:id="@+id/pass"
    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="0.92"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.402" />
```

```
<Button
    android:id="@+id/button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Login"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.537"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.645" />
```

```
</androidx.constraintlayout.widget.ConstraintLayout>
```

**MainActivity.java**

```
package com.example.log;

import androidx.annotation.RequiresApi;
import androidx.appcompat.app.AppCompatActivity;

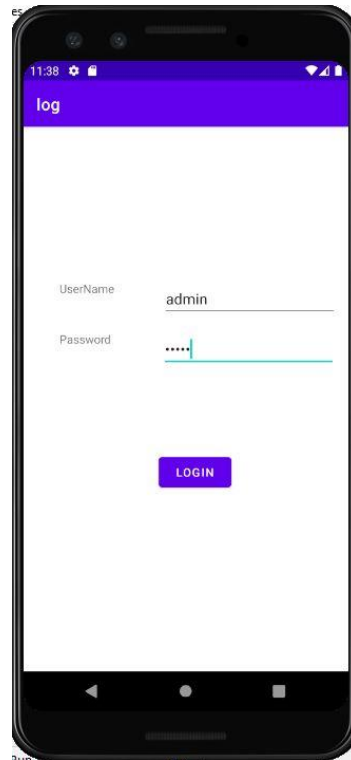
import android.os.Build;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

import java.util.Objects;

public class MainActivity extends AppCompatActivity {

    EditText Username,Password;
    Button LOGIN;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Username=findViewById(R.id.usr);
        Password=findViewById(R.id.pass);
        LOGIN=findViewById(R.id.button);
        LOGIN.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                if(Username.getText().toString().equals("admin") &&
                Password.getText().toString().equals("admin"))
                {
                    Toast.makeText(MainActivity.this,"You have
Authenticated Successfully",Toast.LENGTH_LONG).show();
                }else
                {
                    Toast.makeText(MainActivity.this,"Authentication
Failed",Toast.LENGTH_LONG).show();
                }
            }
        });
    }
}
```

## **OUTPUT:**



## **RESULT:**

Program has been successfully executed and output is obtained.

## PROGRAM 2

### AIM:

Write a program that demonstrates Activity Lifecycle.

**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"
android:background="#009688"
tools:context=".MainActivity">

    <TextView
        android:layout_width="170dp"
        android:layout_height="60dp"
        android:background="#009688"
        android:shadowColor="#636262"
        android:text="Hello World!"
        android:textAlignment="center"
        android:textColor="#E1DADA"
        android:textColorHighlight="#F4FAF9"
        android:textColorHint="#E8E0E0"
        android:textSize="24sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

**MainActivity.java**

```
package com.example.lifecycle;

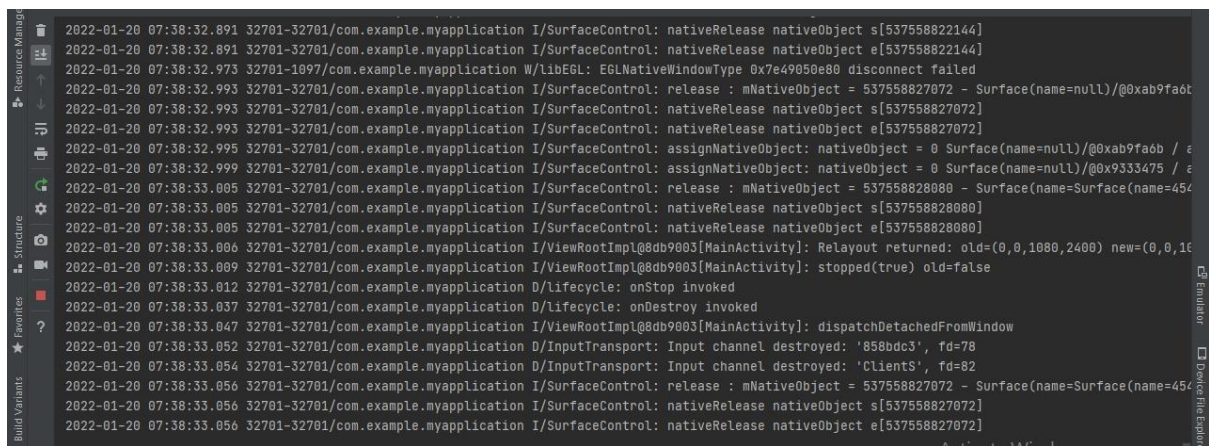
import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.util.Log;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Log.d("lifecycle", "onCreate invoked");
    }
    @Override
    protected void onStart() {
        super.onStart();
        Log.d("lifecycle", "onStart invoked");
    }
    @Override
    protected void onResume() {
        super.onResume();
        Log.d("lifecycle", "onResume invoked");
    }
    @Override
    protected void onPause() {
        super.onPause();
        Log.d("lifecycle", "onPause invoked");
    }
    @Override
    protected void onStop() {
        super.onStop();
        Log.d("lifecycle", "onStop invoked");
    }
    @Override
    protected void onRestart() {
        super.onRestart();
        Log.d("lifecycle", "onRestart invoked");
    }
    @Override
    protected void onDestroy() {
        super.onDestroy();
        Log.d("lifecycle", "onDestroy invoked");
    }
}
```

## OUTPUT:



```
2022-01-20 07:38:32.891 32701-32701/com.example.myapplication I/SurfaceControl: nativeRelease nativeObject s[537558822144]
2022-01-20 07:38:32.891 32701-32701/com.example.myapplication I/SurfaceControl: nativeRelease nativeObject e[537558822144]
2022-01-20 07:38:32.973 32701-1897/com.example.myapplication W/libEGL: EGLNativeWindowType 0x7e49050e80 disconnect failed
2022-01-20 07:38:32.993 32701-32701/com.example.myapplication I/SurfaceControl: release : mNativeObject = 537558827072 - Surface(name=null)/@0xab9fa6b / e
2022-01-20 07:38:32.993 32701-32701/com.example.myapplication I/SurfaceControl: nativeRelease nativeObject s[537558827072]
2022-01-20 07:38:32.993 32701-32701/com.example.myapplication I/SurfaceControl: nativeRelease nativeObject e[537558827072]
2022-01-20 07:38:32.995 32701-32701/com.example.myapplication I/SurfaceControl: assignNativeObject: nativeObject = 0 Surface(name=null)/@0xab9fa6b / e
2022-01-20 07:38:32.999 32701-32701/com.example.myapplication I/SurfaceControl: assignNativeObject: nativeObject = 0 Surface(name=null)/@0x9333475 / e
2022-01-20 07:38:33.005 32701-32701/com.example.myapplication I/SurfaceControl: release : mNativeObject = 537558828080 - Surface(name=Surface(name=454
2022-01-20 07:38:33.005 32701-32701/com.example.myapplication I/SurfaceControl: nativeRelease nativeObject s[537558828080]
2022-01-20 07:38:33.005 32701-32701/com.example.myapplication I/SurfaceControl: nativeRelease nativeObject e[537558828080]
2022-01-20 07:38:33.006 32701-32701/com.example.myapplication I/ViewRootImpl@8db9003[MainActivity]: RelativeLayout returned: old=(0,0,1080,2400) new=(0,0,1080,2400)
2022-01-20 07:38:33.009 32701-32701/com.example.myapplication I/ViewRootImpl@8db9003[MainActivity]: stopped(true) old=false
2022-01-20 07:38:33.012 32701-32701/com.example.myapplication D/lifecycle: onStop invoked
2022-01-20 07:38:33.037 32701-32701/com.example.myapplication D/lifecycle: onDestroy invoked
2022-01-20 07:38:33.047 32701-32701/com.example.myapplication I/ViewRootImpl@8db9003[MainActivity]: dispatchDetachedFromWindow
2022-01-20 07:38:33.052 32701-32701/com.example.myapplication D/InputTransport: Input channel destroyed: '858bdc3', fd=78
2022-01-20 07:38:33.054 32701-32701/com.example.myapplication D/InputTransport: Input channel destroyed: 'Clients', fd=82
2022-01-20 07:38:33.056 32701-32701/com.example.myapplication I/SurfaceControl: release : mNativeObject = 537558827072 - Surface(name=Surface(name=454
2022-01-20 07:38:33.056 32701-32701/com.example.myapplication I/SurfaceControl: nativeRelease nativeObject s[537558827072]
2022-01-20 07:38:33.056 32701-32701/com.example.myapplication I/SurfaceControl: nativeRelease nativeObject e[537558827072]
```

## RESULT:

Program has been successfully executed and output is obtained.

## **PROGRAM 3**

### **AIM:**

Implementing basic arithmetic operations of a simple calculator.

<b>activity_main.xml</b>	<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" android:background="#8BC34A" android:backgroundTint="@color/teal_700" tools:context=".MainActivity"&gt;  &lt;EditText     android:id="@+id/num1"     android:layout_width="191dp"     android:layout_height="53dp"     android:layout_marginStart="72dp"     android:layout_marginTop="70dp"     android:layout_marginEnd="71dp"     android:layout_marginBottom="416dp"     android:background="@android:color/white"     android:ems="10"     android:hint="Enter number 1"     android:inputType="number"     android:textColor="#02655C"     app:layout_constraintBottom_toBottomOf="parent"     app:layout_constraintEnd_toEndOf="parent"     app:layout_constraintHorizontal_bias="0.493"     app:layout_constraintStart_toStartOf="parent"     app:layout_constraintTop_toTopOf="parent"     app:layout_constraintVertical_bias="0.33" /&gt;  &lt;EditText     android:id="@+id/num2"     android:layout_width="190dp"     android:layout_height="53dp"     android:layout_marginStart="72dp"     android:layout_marginTop="112dp"     android:layout_marginEnd="71dp"     android:layout_marginBottom="374dp"     android:background="@android:color/white"     android:ems="10"     android:hint="Enter number 2"     android:inputType="number"</pre>
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```
android:textColor="#02655C"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.476"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.421" />
```

<TextView

```
android:id="@+id/result"
android:layout_width="260dp"
android:layout_height="41dp"
android:layout_marginStart="41dp"
android:layout_marginTop="151dp"
android:layout_marginEnd="48dp"
android:layout_marginBottom="287dp"
android:background="@android:color/background_light"
android:textColor="#02655C"
android:textColorLink="@color/black"
android:textSize="25sp"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.489"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.445" />
```

<Button

```
android:id="@+id/sum"
android:layout_width="87dp"
android:layout_height="47dp"
android:background="#03574F"
android:backgroundTint="@android:color/transparent"
android:onClick="doSum"
android:text="+"
android:textSize="20sp"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.148"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent" />
```

<Button

```
android:id="@+id/sub"
android:layout_width="87dp"
android:layout_height="45dp"
android:layout_marginTop="292dp"
android:layout_marginBottom="263dp"
android:background="#03574F"
android:backgroundTint="@android:color/transparent"
```

```
android:onClick="doSub"
android:text="-"
android:textSize="20sp"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.456"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.389" />
```

<Button

```
android:id="@+id/div"
android:layout_width="85dp"
android:layout_height="42dp"
android:background="#03574F"
android:backgroundTint="@android:color/transparent"
android:onClick="doDiv"
android:text="/"
android:textSize="20sp"
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="0.6" />
```

<Button

```
android:id="@+id/mul"
android:layout_width="83dp"
android:layout_height="45dp"
android:background="#03574F"
android:backgroundTint="@android:color/transparent"
android:onClick="doMul"
android:text="x"
android:textSize="18sp"
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" />
```

<Button

```
android:id="@+id/button"
android:layout_width="86dp"
android:layout_height="47dp"
android:background="#03574F"
android:backgroundTint="@android:color/transparent"
android:onClick="doMod"
android:text="% "
android:textSize="20sp"
```

	<pre> app:layout_constraintBottom_toBottomOf="parent" app:layout_constraintEnd_toEndOf="parent" app:layout_constraintHorizontal_bias="0.15" app:layout_constraintStart_toStartOf="parent" app:layout_constraintTop_toTopOf="parent" app:layout_constraintVertical_bias="0.597" /&gt;  &lt;Button     android:id="@+id/pow"     android:layout_width="85dp"     android:layout_height="44dp"     android:background="#03574F"     android:backgroundTint="@android:color/transparent"     android:onClick="doPow"     android:text="n1^n2"     android:textSize="16sp"     app:layout_constraintBottom_toBottomOf="parent"     app:layout_constraintEnd_toEndOf="parent"     app:layout_constraintHorizontal_bias="0.453"     app:layout_constraintStart_toStartOf="parent"     app:layout_constraintTop_toTopOf="parent"     app:layout_constraintVertical_bias="0.598" /&gt;  &lt;/androidx.constraintlayout.widget.ConstraintLayout&gt; </pre>
--	--

<b>MainActivity.java</b>	<pre> package com.example.calculator;  import androidx.appcompat.app.AppCompatActivity;  import android.os.Bundle; import android.view.View; import android.widget.EditText; import android.widget.TextView;  public class MainActivity extends AppCompatActivity {      EditText e1, e2;     TextView t1;     int num1, num2;      @Override     protected void onCreate(Bundle savedInstanceState) {         super.onCreate(savedInstanceState);         setContentView(R.layout.activity_main);     }      public boolean getNumbers() {          e1 = (EditText) findViewById(R.id.num1); </pre>
--------------------------	--

```

e2 = (EditText) findViewById(R.id.num2);

t1 = (TextView) findViewById(R.id.result);

String s1 = e1.getText().toString();

String s2 = e2.getText().toString();

if ((s1.equals(null) && s2.equals(null))
    || (s1.equals("") && s2.equals(""))) {

    String result = "Please enter a value";
    t1.setText(result);
    return false;
} else {
    num1 = Integer.parseInt(s1);
    num2 = Integer.parseInt(s2);
}
return true;
}

public void doSum(View v) {
    if (getNumbers()) {
        int sum = num1 + num2;
        t1.setText(Integer.toString(sum));
    }
}

public void doPow(View v) {
    if (getNumbers()) {
        double sum = Math.pow(num1, num2);
        t1.setText(Double.toString(sum));
    }
}

public void doSub(View v) {
    if (getNumbers()) {
        int sum = num1 - num2;
        t1.setText(Integer.toString(sum));
    }
}

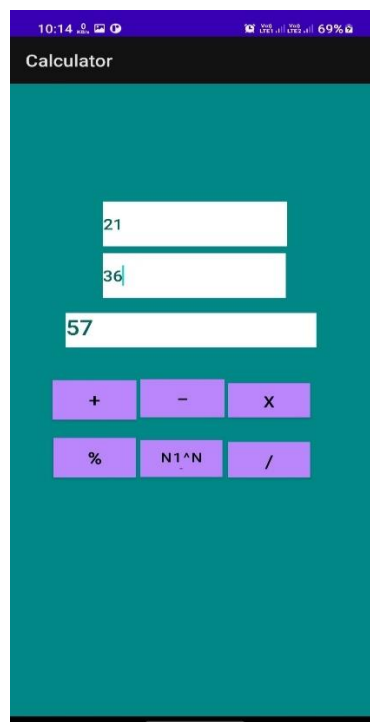
public void doMul(View v) {
    if (getNumbers()) {
        int sum = num1 * num2;
        t1.setText(Integer.toString(sum));
    }
}

public void doDiv(View v) {
    if (getNumbers()) {
        double sum = num1 / (num2 * 1.0);
        t1.setText(Double.toString(sum));
    }
}

```

	<pre>} public void doMod(View v) {     if (getNumbers()) {         double sum = num1 % num2;         t1.setText(Double.toString(sum));     } }</pre>
--	--

## **OUTPUT:**



## **RESULT:**

Program has been successfully executed and output is obtained.

## PROGRAM 4

### AIM:

Implement validations on various UI controls.

<b>activity_main.xml</b>	<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;androidx.constraintlayout.widget.ConstraintLayout     android:layout_width="match_parent"     android:layout_height="match_parent"     app:layout_constraintBottom_toBottomOf="parent"     app:layout_constraintEnd_toEndOf="parent"     app:layout_constraintStart_toStartOf="parent"     app:layout_constraintTop_toTopOf="parent"&gt;      &lt;EditText         android:id="@+id/name"         android:layout_width="wrap_content"         android:layout_height="wrap_content"         android:ems="10"         android:hint="Name"         android:inputType="textPersonName"         app:layout_constraintBottom_toBottomOf="parent"         app:layout_constraintEnd_toEndOf="parent"         app:layout_constraintHorizontal_bias="0.482"         app:layout_constraintStart_toStartOf="parent"         app:layout_constraintTop_toTopOf="parent"         app:layout_constraintVertical_bias="0.086" /&gt;      &lt;EditText         android:id="@+id/add"         android:layout_width="wrap_content"         android:layout_height="wrap_content"         android:ems="10"         android:hint="Address"         android:inputType="textPersonName"         app:layout_constraintBottom_toBottomOf="parent"         app:layout_constraintEnd_toEndOf="parent"         app:layout_constraintHorizontal_bias="0.497"         app:layout_constraintStart_toStartOf="parent"         app:layout_constraintTop_toTopOf="parent"&gt;</pre>
--------------------------	---

```
app:layout_constraintVertical_bias="0.215" />
```

```
<EditText
```

```
    android:id="@+id/email"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:hint="Email"
    android:inputType="textPersonName"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.482"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.421" />
```

```
<EditText
```

```
    android:id="@+id/pass"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:hint="password"
    android:inputType="textPersonName"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.497"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.526" />
```

```
<Button
```

```
    android:id="@+id/button"
    android:layout_width="117dp"
    android:layout_height="59dp"
    android:text="Submit"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.66" />
```

```
<EditText
```

```
    android:id="@+id/ph"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:hint="Phone no."
    android:inputType="textPersonName"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
```

	<pre> app:layout_constraintHorizontal_bias="0.497" app:layout_constraintStart_toStartOf="parent" app:layout_constraintTop_toTopOf="parent" app:layout_constraintVertical_bias="0.322" /&gt; &lt;/androidx.constraintlayout.widget.ConstraintLayout&gt; &lt;/androidx.constraintlayout.widget.ConstraintLayout&gt; </pre>
--	--

<b>MainActivity.java</b>	<pre> package com.example.regvalidation;  import androidx.appcompat.app.AppCompatActivity;  import android.content.Intent; import android.os.Bundle; import android.widget.Button; import android.widget.EditText; import android.view.View; import android.widget.Toast; import java.util.regex.Matcher; import java.util.regex.Pattern;  public class MainActivity extends AppCompatActivity {     EditText name, add, phn, em,pass;     Button bts1;     Pattern patterns;     Matcher matches;     String emailPattern = "[a-zA-Z0-9._-]+@[a-z]+\.[a-z]+";      @Override     protected void onCreate(Bundle savedInstanceState) {         super.onCreate(savedInstanceState);         setContentView(R.layout.activity_main);         name = (EditText) findViewById(R.id.name);         add = (EditText) findViewById(R.id.add);         phn = (EditText) findViewById(R.id.add);         em = (EditText) findViewById(R.id.email);         pass = (EditText) findViewById(R.id.pass);         String emailPattern = "[a-zA-Z0-9._-]+@[a-z]+\.[a-z]+";         bts1 = (Button) findViewById(R.id.button);         bts1.setOnClickListener(new View.OnClickListener() {             @Override             public void onClick(View v) {                 login();                 Intent i = new Intent(getApplicationContext(),explicit.class);                 startActivity(i);             }         });     } } </pre>
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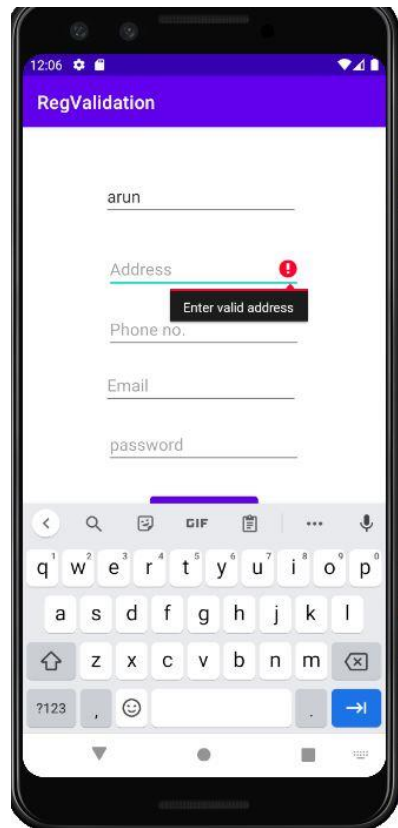


```

public void login() {
    String email = em.getText().toString().trim();
    String nm = name.getText().toString();
    if (name.getText().toString().length() == 0) {
        name.requestFocus();
        name.setError("Enter valid name");
        return;
    }
    String namePattern = "[0-9!@#$$%^&*]";
    if (name.getText().toString().matches(namePattern)) {
        name.requestFocus();
        name.setError("Enter valid name");
        return;
    }
    if (add.getText().toString().length() == 0) {
        add.requestFocus();
        add.setError("Enter valid address");
        return;
    }
    if (phn.getText().toString().length() == 0) {
        phn.requestFocus();
        phn.setError("Enter valid Number");
        return;
    }
    if (em.getText().toString().length() == 0) {
        Toast.makeText(getApplicationContext(), "Invalid Email
Address", Toast.LENGTH_SHORT).show();
        em.requestFocus();
        em.setError("Enter valid email");
        return;
    }
    if (!email.matches(emailPattern)) {
        em.requestFocus();
        em.setError("Invalid email");
    }
    else {
        Toast.makeText(getApplicationContext(), "valid Email
Address", Toast.LENGTH_SHORT).show();
    }
    if (pass.getText().toString().length() == 0) {
        pass.requestFocus();
        pass.setError("Enter valid password");
        return;
    }
    if (pass.getText().toString().length() < 8) {
        pass.requestFocus();
        pass.setError("Enter minimum 8 digit password");
        return;
    }
}
}

```

## **OUTPUT:**



## **RESULT:**

Program has been successfully executed and output is obtained.