Q.1] Java android program to demonstrate Registration form with validation.

Ans.

```xml
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"    tools:context=".MainActivity">

    <EditText        android:id="@+id/editTextName"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_margin="16dp"
android:hint="Name" />


    <EditText        android:id="@+id/editTextAddress"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_below="@id/editTextName"
android:layout_margin="16dp"
android:hint="Address" />


    <EditText        android:id="@+id/editTextMobile"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_below="@id/editTextAddress"
android:layout_margin="16dp"        android:hint="Mobile
Number"        android:inputType="phone" />
```

```xml
<EditText
    android:id="@+id/editTextAge"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_below="@id/editTextMobile"
    android:layout_margin="16dp"
    android:hint="Age"
    android:inputType="number" />

<Button
    android:id="@+id/buttonRegister"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@id/editTextAge"
    android:layout_marginTop="16dp"
    android:layout_centerHorizontal="true"
    android:text="Register"
    android:onClick="register" />

</RelativeLayout>
```

MainActivity.java- package
com.example.myapplication;

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

```java
import androidx.appcompat.app.AppCompatActivity; public class
MainActivity extends AppCompatActivity {

    private EditText editTextName, editTextAddress, editTextMobile,
editTextAge;

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

        editTextName = findViewById(R.id.editTextName);        editTextAddress
= findViewById(R.id.editTextAddress);        editTextMobile =
findViewById(R.id.editTextMobile);        editTextAge =
findViewById(R.id.editTextAge);
    }

    public void register(View view) {
        String name = editTextName.getText().toString().trim();
        String address = editTextAddress.getText().toString().trim();
        String mobile = editTextMobile.getText().toString().trim();
        String age = editTextAge.getText().toString().trim();

        if (TextUtils.isEmpty(name)) {            showToast("Please
enter your name");
            return;
        }
```

```java
        if (TextUtils.isEmpty(address)) {          showToast("Please
enter your address");
            return;
        }


        if (TextUtils.isEmpty(mobile)) {          showToast("Please
enter your mobile number");
            return;
        }


        if (TextUtils.isEmpty(age)) {
showToast("Please enter your age");          return;
        }


        // Perform additional validation if needed


        // If all validations pass, registration is successful
showToast("Registration Successful!");
        // Add code here to perform further actions like saving data to database,
etc.
    }


    private void showToast(String message) {
        Toast.makeText(this, message,
Toast.LENGTH_SHORT).show();
    }
}
```