

Lab:4

Develop an android application to input your Name, Age, gender, email address, phone number and a submit button. When clicked on the button, show this information on another activity. Perform given validation on the following input fields:

Name:	Must not be empty, must satisfy the following expression: “FirstName LastName”.
Email	Must not be empty, must be a valid email address
Phone Number	Must not be empty
Gender	One gender must be selected

Note: You can use Google’s material UI for better looking Input fields and error messages.

MainActivity.java

```
package com.example.personalinfoapp;

import android.content.Intent;
import android.os.Bundle;
import android.text.TextUtils;
import android.util.Patterns;
import android.view.View;
import android.widget.Button;
import android.widget.RadioButton;
import android.widget.RadioGroup;
import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;
import com.google.android.material.textfield.TextInputEditText;

public class MainActivity extends AppCompatActivity {
    private TextInputEditText nameInput, ageInput, emailInput, phoneInput;
    private RadioGroup genderRadioGroup;
    private Button submitButton;

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

        // Initialize Views
        nameInput = findViewById(R.id.inputName);
        ageInput = findViewById(R.id.inputAge);
        emailInput = findViewById(R.id.inputEmail);
        phoneInput = findViewById(R.id.inputPhone);
        genderRadioGroup = findViewById(R.id.genderRadioGroup);
        submitButton = findViewById(R.id.submitButton);

        submitButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                if (validateInputs()) {
                    // Get selected gender
                    int genderId = genderRadioGroup.getCheckedRadioButtonId();
                    RadioButton selectedGender = findViewById(genderId);
```

```

        // Create intent to pass data to SecondActivity
        Intent intent = new Intent(MainActivity.this, SecondActivity.class);
        intent.putExtra("name", nameInput.getText().toString());
        intent.putExtra("age", ageInput.getText().toString());
        intent.putExtra("email", emailInput.getText().toString());
        intent.putExtra("phone", phoneInput.getText().toString());
        intent.putExtra("gender", selectedGender.getText().toString());
        startActivity(intent);
    }
}
});
}

private boolean validateInputs() {
    boolean isValid = true;

    // Name validation
    String namePattern = "^[A-Za-z]+\\s[A-Za-z]+$";
    if (TextUtils.isEmpty(nameInput.getText()) ||
!nameInput.getText().toString().matches(namePattern)) {
        nameInput.setError("Enter valid full name (FirstName LastName)");
        isValid = false;
    }

    // Email validation
    if (TextUtils.isEmpty(emailInput.getText()) ||
!Patterns.EMAIL_ADDRESS.matcher(emailInput.getText()).matches()) {
        emailInput.setError("Enter a valid email");
        isValid = false;
    }

    // Gender validation
    if (genderRadioGroup.getCheckedRadioButtonId() == -1) {
        Toast.makeText(this, "Please select a gender", Toast.LENGTH_SHORT).show();
        isValid = false;
    }

    return isValid;
}
}

```

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">

    <com.google.android.material.textfield.TextInputLayout
        android:id="@+id/inputNameLayout"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:hint="Name"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintEnd_toEndOf="parent">

        <com.google.android.material.textfield.TextInputEditText
            android:id="@+id/inputName"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"/>
    </com.google.android.material.textfield.TextInputLayout>

    <com.google.android.material.textfield.TextInputLayout
        android:id="@+id/inputAgeLayout"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:hint="Age"
        app:layout_constraintTop_toBottomOf="@id/inputNameLayout"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintEnd_toEndOf="parent">

        <com.google.android.material.textfield.TextInputEditText
            android:id="@+id/inputAge"
            android:inputType="number"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"/>
    </com.google.android.material.textfield.TextInputLayout>
```

```
<com.google.android.material.textfield.TextInputLayout
    android:id="@+id/inputEmailLayout"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:hint="Email"
    app:layout_constraintTop_toBottomOf="@id/inputAgeLayout"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintEnd_toEndOf="parent">
```

```
<com.google.android.material.textfield.TextInputEditText
    android:id="@+id/inputEmail"
    android:inputType="textEmailAddress"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"/>
```

```
</com.google.android.material.textfield.TextInputLayout>
```

```
<com.google.android.material.textfield.TextInputLayout
    android:id="@+id/inputPhoneLayout"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:hint="Phone Number"
    app:layout_constraintTop_toBottomOf="@id/inputEmailLayout"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintEnd_toEndOf="parent">
```

```
<com.google.android.material.textfield.TextInputEditText
    android:id="@+id/inputPhone"
    android:inputType="phone"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"/>
```

```
</com.google.android.material.textfield.TextInputLayout>
```

```
<RadioGroup
    android:id="@+id/genderRadioGroup"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    app:layout_constraintTop_toBottomOf="@id/inputPhoneLayout"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintEnd_toEndOf="parent">
```

```
<RadioButton
    android:id="@+id/maleRadioButton"
    android:layout_width="wrap_content"
```

```

        android:layout_height="wrap_content"
        android:text="Male"/>

<RadioButton
    android:id="@+id/femaleRadioButton"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Female"/>
</RadioGroup>

<Button
    android:id="@+id/submitButton"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Submit"
    app:layout_constraintTop_toBottomOf="@id/genderRadioGroup"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintEnd_toEndOf="parent"/>

</androidx.constraintlayout.widget.ConstraintLayout>

```

SecondActivity.java

```

package com.example.personalinfoapp;

import android.os.Bundle;
import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;

public class SecondActivity extends AppCompatActivity {
    private TextView nameTextView, ageTextView, emailTextView, phoneTextView,
genderTextView;

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

        // Initialize Views
        nameTextView = findViewById(R.id.nameTextView);
        ageTextView = findViewById(R.id.ageTextView);
        emailTextView = findViewById(R.id.emailTextView);
    }
}

```

```

phoneTextView = findViewById(R.id.phoneTextView);
genderTextView = findViewById(R.id.genderTextView);

// Get data from intent
String name = getIntent().getStringExtra("name");
String age = getIntent().getStringExtra("age");
String email = getIntent().getStringExtra("email");
String phone = getIntent().getStringExtra("phone");
String gender = getIntent().getStringExtra("gender");

// Set text to TextViews
nameTextView.setText("Name: " + name);
ageTextView.setText("Age: " + age);
emailTextView.setText("Email: " + email);
phoneTextView.setText("Phone: " + phone);
genderTextView.setText("Gender: " + gender);
}
}

```

second_activity.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=".SecondActivity"
    >

    <TextView
        android:id="@+id/nameTextView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Name"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintStart_toStartOf="parent"/>

    <TextView
        android:id="@+id/ageTextView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"

```

```
    android:text="Age"
    app:layout_constraintTop_toBottomOf="@id/nameTextView"
    app:layout_constraintStart_toStartOf="parent"/>
```

```
<TextView
    android:id="@+id/emailTextView"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Email"
    app:layout_constraintTop_toBottomOf="@id/ageTextView"
    app:layout_constraintStart_toStartOf="parent"/>
```

```
<TextView
    android:id="@+id/phoneTextView"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Phone"
    app:layout_constraintTop_toBottomOf="@id/emailTextView"
    app:layout_constraintStart_toStartOf="parent"/>
```

```
<TextView
    android:id="@+id/genderTextView"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Gender"
    app:layout_constraintTop_toBottomOf="@id/phoneTextView"
    app:layout_constraintStart_toStartOf="parent"/>
```

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

AndroidManifest.xml

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools">
```

```
<application
    android:allowBackup="true"
    android:dataExtractionRules="@xml/data_extraction_rules"
    android:fullBackupContent="@xml/backup_rules"
    android:icon="@mipmap/ic_launcher"
    android:label="@string/app_name"
    android:roundIcon="@mipmap/ic_launcher_round"
    android:supportRtl="true"
```



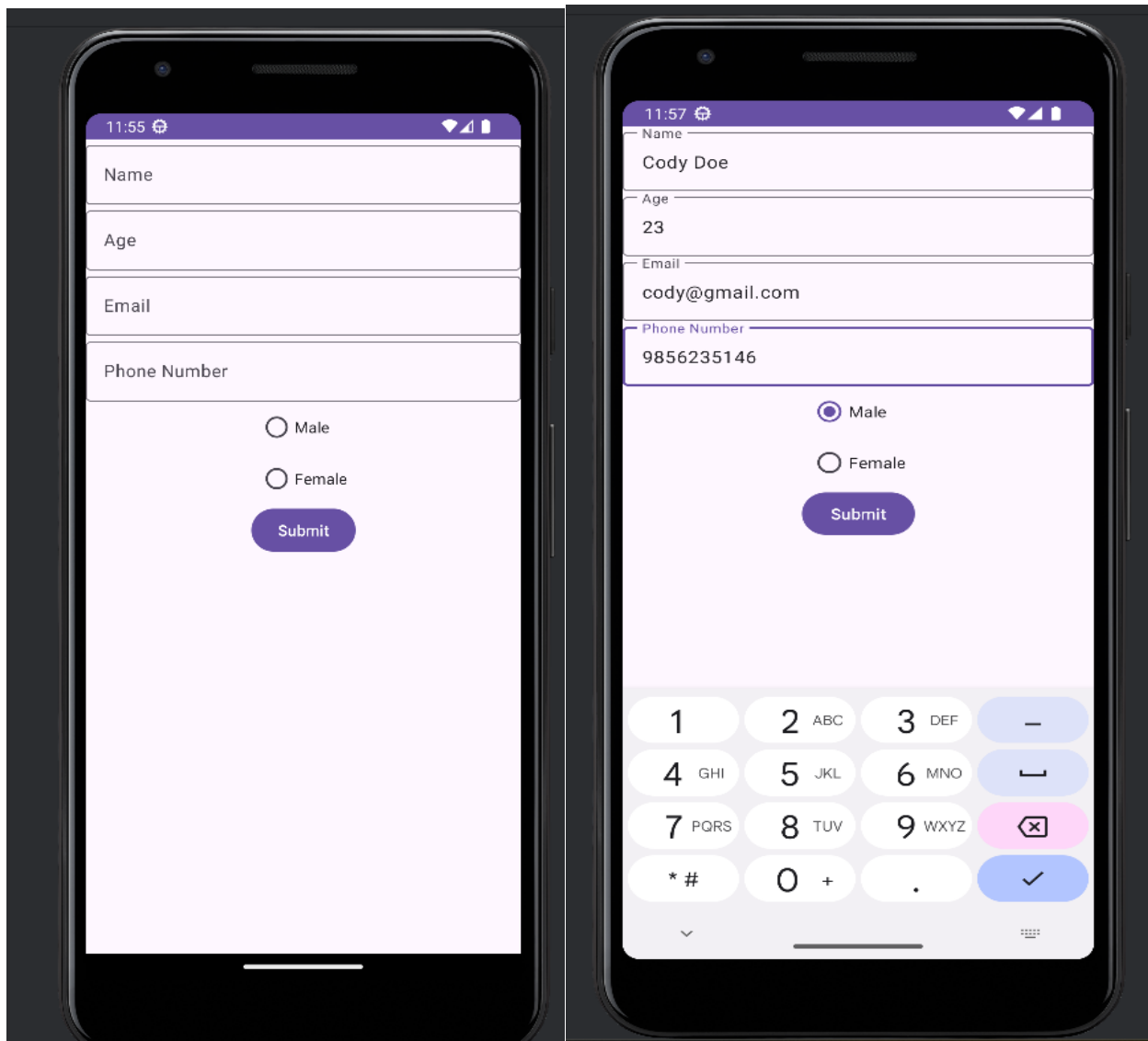
```
    android:theme="@style/Theme.PersonalInfoApp"
    tools:targetApi="31">
    <activity
        android:name=".SecondActivity"
        android:exported="false" />
    <activity
        android:name=".MainActivity"
        android:exported="true">
        <intent-filter>
            <action android:name="android.intent.action.MAIN" />

            <category android:name="android.intent.category.LAUNCHER" />
        </intent-filter>
    </activity>
</application>

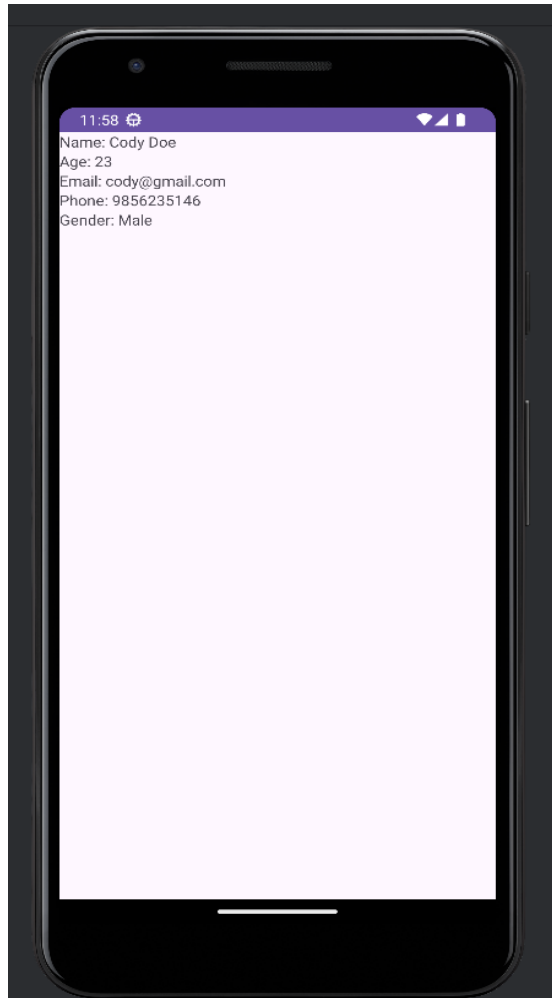
</manifest>
```

Output:

This is the initial view of mainActivity create a simple form



After clicking on submit we goto secondActivity and that activity show the information inputed in the form



Conclusion:

In this lab , we learn about the multiple activity and how to handle them . we create a simple form and validate them and that form information is submitted and show in another activity .

Intent class is used to build connection between to activity . Main activity have simple form and second activity is used to show the details of form input.