

## Problem 5: Activity Navigator

**Exercise Objective:** Build a simple Android app that allows users to navigate to other activities using Explicit Intents.

**Problem Statement 5:** The app should have two activities each having a separate button. Upon clicking on the button of first activity, second activity should open and upon clicking on the button of second activity, first activity should be displayed.

**Expected Output:** Navigation between activities using explicit intent.

### 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:supportsRtl="true"
        android:theme="@style/Theme.ActivityNavigator"
        tools:targetApi="31">
        <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>

        <!-- ** Declaration for SecondActivity** -->
        <activity android:name=".SecondActivity"
            android:exported="false">
        </activity>
    </application>

</manifest>
```

## 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:padding="16dp"
    tools:context=".MainActivity">

    <TextView
        android:id="@+id/textView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="This is the First Activity"
        android:textSize="24sp"
        android:textStyle="bold"
        android:textColor="@android:color/holo_blue_dark"
        app:layout_constraintBottom_toTopOf="@+id/buttonGoToSecond
"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_chainStyle="packed"
        android:layout_marginBottom="32dp"/>

    <Button
        android:id="@+id/buttonGoToSecond"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Go to Second Activity"
        android:textSize="18sp"
        android:backgroundTint="@android:color/holo_green_dark"
        android:textColor="@android:color/white"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textView1" />

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

## activity\_second.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:padding="16dp"
    tools:context=".SecondActivity">

    <TextView
        android:id="@+id/textView2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="This is the Second Activity"
        android:textSize="24sp"
        android:textStyle="bold"
        android:textColor="@android:color/holo_red_dark"
        app:layout_constraintBottom_toTopOf="@+id/buttonGoToFirst"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_chainStyle="packed"
        android:layout_marginBottom="32dp"/>

    <Button
        android:id="@+id/buttonGoToFirst"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Go to First Activity"
        android:textSize="18sp"
        android:backgroundTint="@android:color/holo_orange_dark"
        android:textColor="@android:color/white"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textView2" />

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

## MainActivity.java

```
package com.example.activitynavigator;
import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;

public class MainActivity extends AppCompatActivity {

    private Button buttonGoToSecond; // Declare the button

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        // Set the content view to the layout for this activity
        setContentView(R.layout.activity_main);

        // Initialize the button by finding its ID from the layout
        buttonGoToSecond = findViewById(R.id.buttonGoToSecond);

        // Set an OnClickListener for the button
        buttonGoToSecond.setOnClickListener(new
View.OnClickListener() {
            @Override
            public void onClick(View v) {
                // Creating an Explicit Intent to start
                SecondActivity
                // The constructor takes two arguments:
                // 1. Context (usually 'this' for the current
                Activity)
                // 2. The Class of the Activity to start
                (SecondActivity.class)
                Intent intent = new Intent(MainActivity.this,
                SecondActivity.class);
                startActivity(intent); // Start the new activity
            }
        });
    }
}
```

## SecondActivity.java

```
package com.example.activitynavigator;

import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;

public class SecondActivity extends AppCompatActivity {

    private Button buttonGoToFirst; // Declare the button

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        // Set the content view to the layout for this activity
        setContentView(R.layout.activity_second);

        // Initialize the button by finding its ID from the layout
        buttonGoToFirst = findViewById(R.id.buttonGoToFirst);

        // Set an OnClickListener for the button
        buttonGoToFirst.setOnClickListener(new
View.OnClickListener() {
            @Override
            public void onClick(View v) {
                // Create an Explicit Intent to start MainActivity
                // This will take back to the first activity
                Intent intent = new Intent(SecondActivity.this,
MainActivity.class);
                startActivity(intent); // Start the new activity
                // Optional: To close SecondActivity completely
                when going back // finish();
            }
        });
    }
}
```