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"</pre>
/>
                <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</pre>
    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</pre>
    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();
            }
        });
    }
```