

1. In the UsingIntent app, add a UI control on the screen of the second activity so that you can go back to the first activity (i.e., the main activity). In addition, on the main activity, display an iteration count on the number of times the main activity is displayed.

What to submit: zipped project folder containing all the source code, a report with screenshots of the final app in action, data structures used/class design, and the implementation logic.

ANS:

Created two activities named **MainActivity.java** and **SecondActivity.java**

MainActivity.java

Defined the following code under the **onCreate** method to launch the second activity when clicking the button.

```
// Launch the SecondActivity when a button is clicked
findViewById(R.id.buttonGoToSecond).setOnClickListener(new
View.OnClickListener() {
    @Override
    public void onClick(View v) {
        startActivity(new Intent(MainActivity.this, SecondActivity.class));
    }
});
```

Updating the count every time MainActivity is launched.

```
private void updateCountTextView() {
    TextView countTextView = findViewById(R.id.textView2); // Replace with your
TextView ID
    System.out.print(launchCount);
    countTextView.setText("Count: " + launchCount);
}
```

Incrementing the count when the main activity is resumed and the count is updated on **updateCountTextView()**

```
@Override
protected void onResume() {
    super.onResume();

    // Increment the count when the main activity is resumed
    launchCount++;

    // Update and display the count
    updateCountTextView();
}
```

Now to go back to the MainActivity, the code snippet below under the onCreate method of secondActivity is defined.

```
// Add a button to go back to the MainActivity
findViewById(R.id.buttonGoBack).setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {

        finish();
    }
});
```

In **main_activity.xml**, the following 2 TextView and 1button are defined

```
<TextView
    android:id="@+id/textView"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Main Activity!"

    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.498"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.419"

/>
```

```

<TextView

    android:id = "@+id/textView2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"

    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.488"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.550"

    tools:ignore="MissingConstraints" />

<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Display second activity"
    android:onClick="onClick"
    android:id="@+id/buttonGoToSecond"
    android:layout_below="@+id/textView"
    android:layout_alignParentStart="true"
    android:layout_marginTop="56dp"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintBottom_toBottomOf="parent"
    tools:ignore="MissingConstraints" />

```

In **activity_second.xml**, 1 text view and button is defined

```

<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id = "@+id/textView"
    android:text="This is Second Activity!"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.498"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.419" />

```

```

<Button

    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Go back to Main Activity"
    android:onClick="onClick"
    android:id="@+id/buttonGoBack"
    android:layout_below="@+id/textView"
    android:layout_alignParentStart="true"
    android:layout_marginTop="56dp"
    android:background = "@color/black"
    android:textColor = "#FFFFFF"
    android:radius="56dp"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintBottom_toBottomOf="parent"
    tools:ignore="MissingConstraints" />

```

The communication between two activities is established using intents defined in **AndroidManifest.xml**

```

<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>

<activity android:name=".SecondActivity"
    android:exported="true">
    <intent-filter >
        <action android:name="com.example.usingintent.SecondActivity" />
        <category android:name="android.intent.category.DEFAULT" />
    </intent-filter>
</activity>

```

Result:

13:06 M

72%

Main Activity!

Count: 1

Display second activity



13:06 M

72%

This is Second Activity!

Go back to Main Activity



13:06 M

72%

Main Activity!

Count: 2

Display second activity

