Tutorial 3

INTENT

IS3261

Due date: 6th Sep 2018 (Thursday) 2359 hrs

Semester 1, AY18/19, School of Computing, National University of Singapore

IMPORTANT:

For this tutorial, you are supposed to submit your project file to IVLE.

Instruction for submission:

- *Submit your project in a **single zip file** to IVLE. Name your zip file using the following convention:*

  StudentNumber_yourName_Tut#.zip

  For example, if your student number is A1234567B, and your name is Chow Yuen Fatt, for this tutorial, your file name should be A1234567B_ChowYuenFatt_Tut3.zip

INTENT

1. Introduction

In this tutorial, you will practice the following:

- To navigate from one activity to another
- To pass data from one activity to another using putExtra
- To pass data from one activity to another using putExtras (bundle)
- To receive data back from called activity
- To practice writing codes in Kotlin (non-recursive and recursive versions of Fibonacci Sequence generation)

2. Requirements

2.1 Create a blank activity, and use the default name MainActivity.

2.2 The MainActivity, which is the app's launching activity, should show 4 buttons as shown in Fig.2.2.

Fig.2.2 MainActivity – The Launching Activity

2.3 Upon pressing the first button of MainActivity (“Fibonacci Numbers”), the screen will be switched to an activity as shown in Fig.2.3.

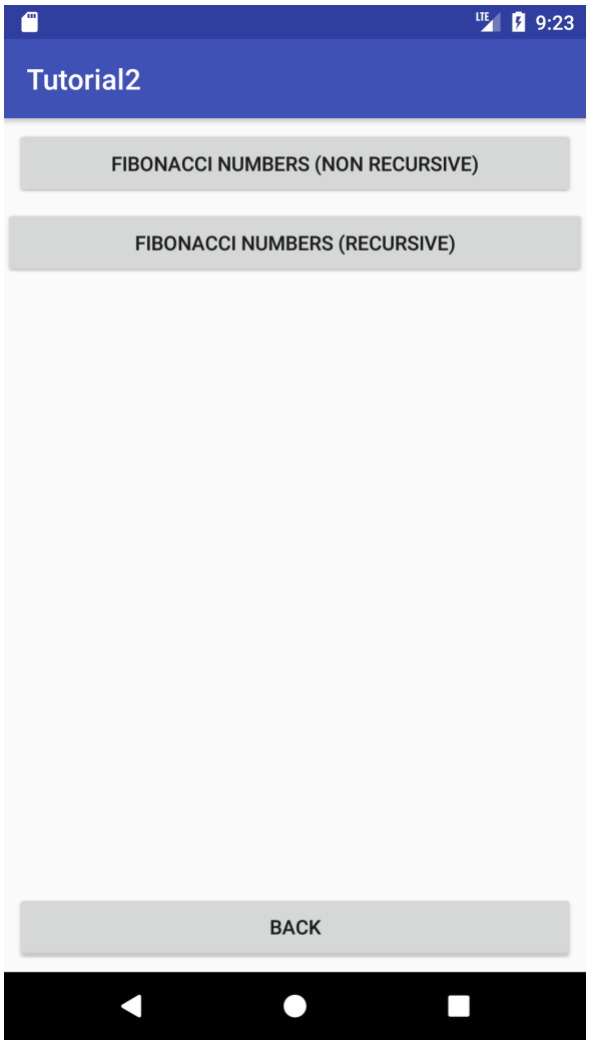

Fig.2.3. Screen layout of Activity1

2.3.1 When the button “Back” is pressed, MainActivity re-appears.

2.3.2 When the button “Fibonacci Numbers (Non Recursive)” is pressed, the activity shown in Fig.2.3.1 appears.

2.3.3 When the button “Fibonacci Numbers (Recursive)” is pressed, the activity shown and its interaction results are identical to Fig.2.3.1. The only difference is, the Fibonacci numbers are generated using a recursive function.

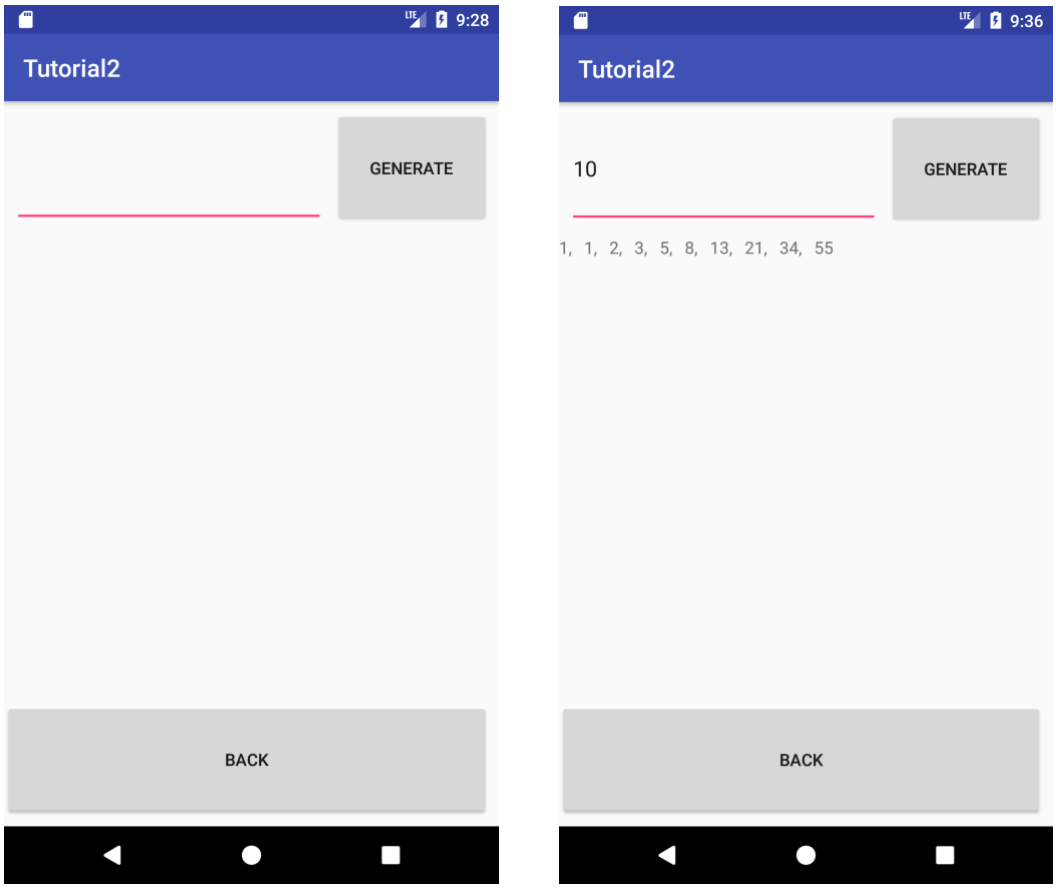

Fig.2.3.1 Left: screen before user input. Right: screen after user input (example shown is to generate 10 Fibonacci numbers)

2.4 Upon pressing “Intent With Data Passing” of MainActivity, the screen will be switched to the activity as shown in Fig.2.4, with a Toast message.

A Toast message shows the data passed from MainActivity.

The (key,value) pairs passed from MainActivity are as follows:

(“Country”, “Singapore”) , (“Sports”, “Football”), (“Team Size”, 11)

Note that the mode of data passing is **not** by Bundle object.

When “Back” is pressed, MainActivity re-appears.

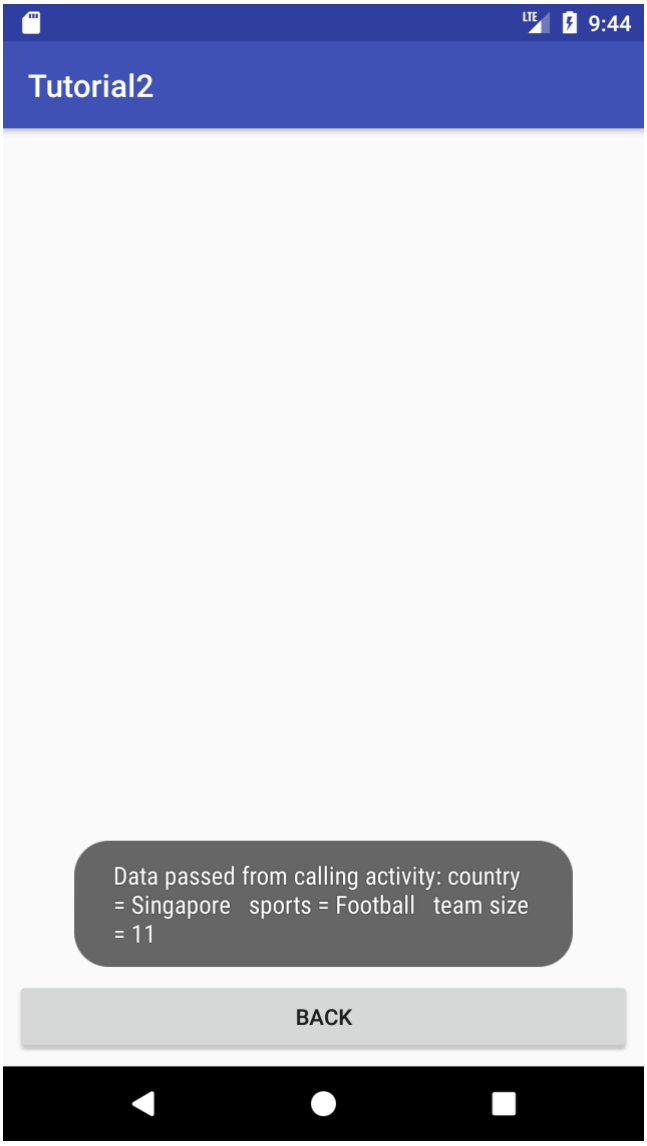

Fig.2.4 Upon showing this activity, a message showing the data passed from MainActivity will be toasted.

2.5 Upon pressing “Intent With Data Passing Using Bundle” of MainActivity, the screen will be switched to the activity as shown in Fig.2.5, with a Toast message.

A Toast message shows the data passed from MainActivity.

The (key,value) pairs passed from MainActivity are as follows:

(“Country”, “Indonesia”) , (“Sports”, “Badminton”), (“Team Size”, true)

Note that the mode of data passing is by Bundle object.

When “Back” is pressed, MainActivity re-appears.

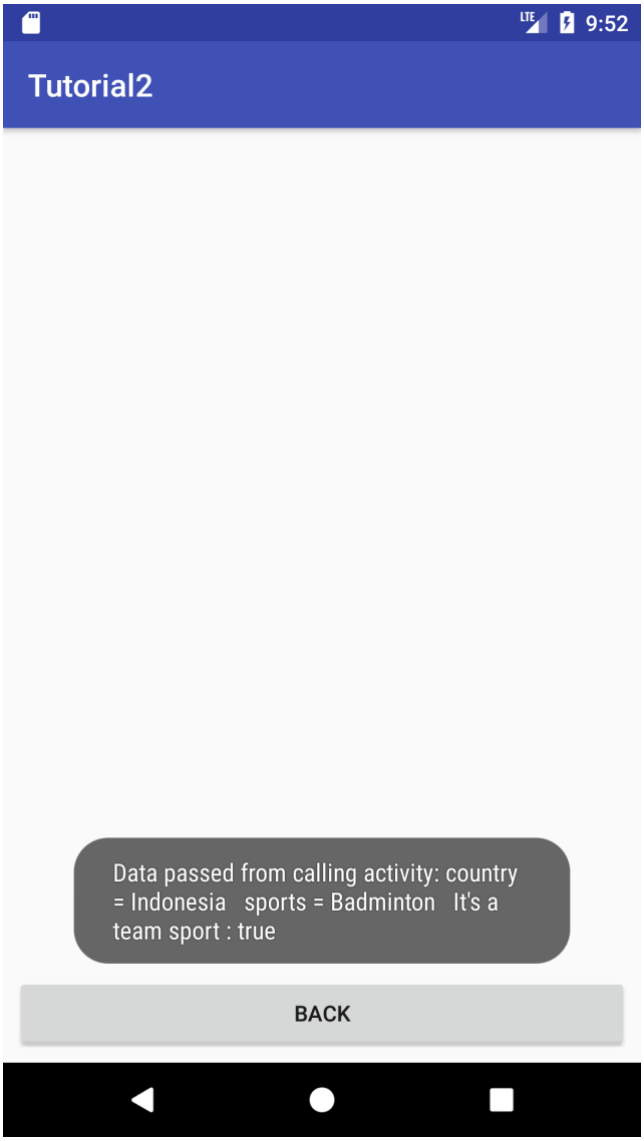

Fig.2.5 Upon showing this activity, a message showing the data passed from MainActivity will be toasted.

2.6 Upon pressing “Intent With Request for Data Pass Back” of MainActivity, an activity as shown in Fig.2.6 will be shown. Note the following:

- MainActivity will request the activity being called to return some data. The key-value pair for the data returned will be (“Continent”, “Asia”). Upon returning to MainActivity, a message will be toasted to say “Returned Continent = Asia” (Fig.2.6).

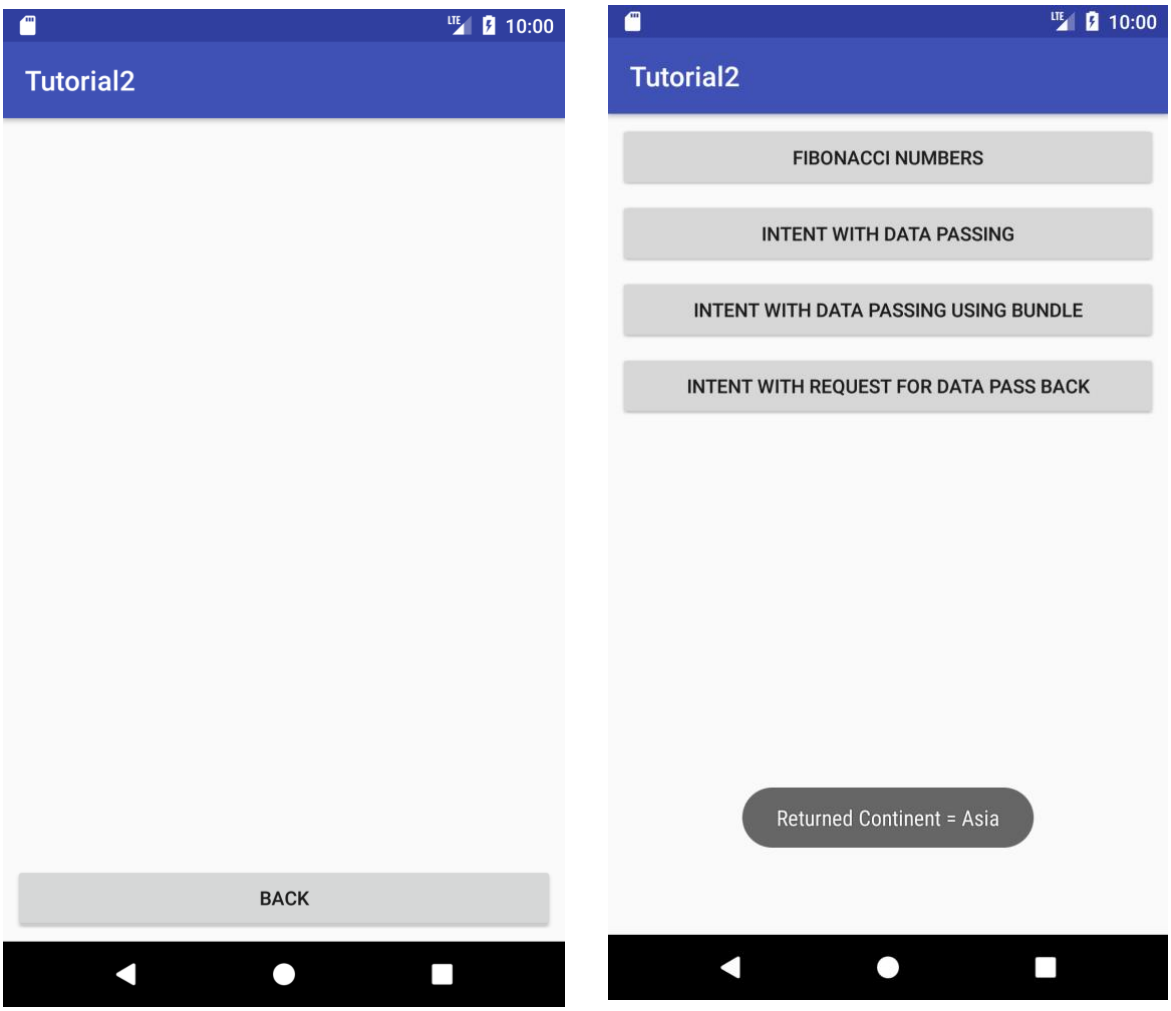

Fig.2.6 Activity called by MainActivity (Left). Pressing the “Back” button will return to MainActivity (Right). The key-value pair (“Continent”, “Asia”) will be returned to MainActivity and toasted.