

Tutorial 3

FRAGMENTS

IS3261

Due date: 13th Sep 2018 (Thursday) 2359hrs

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

FRAGMENT

1. Introduction

In this tutorial, you will practice implementing fragments. You will learn to attach fragments statically, dynamically, and also learn to do communication between a fragment and its host activity. You will also learn to display pictures.

2. Instructions

2.1. Create a blank activity (MainActivity) with 3 buttons as shown in Fig.2.1.

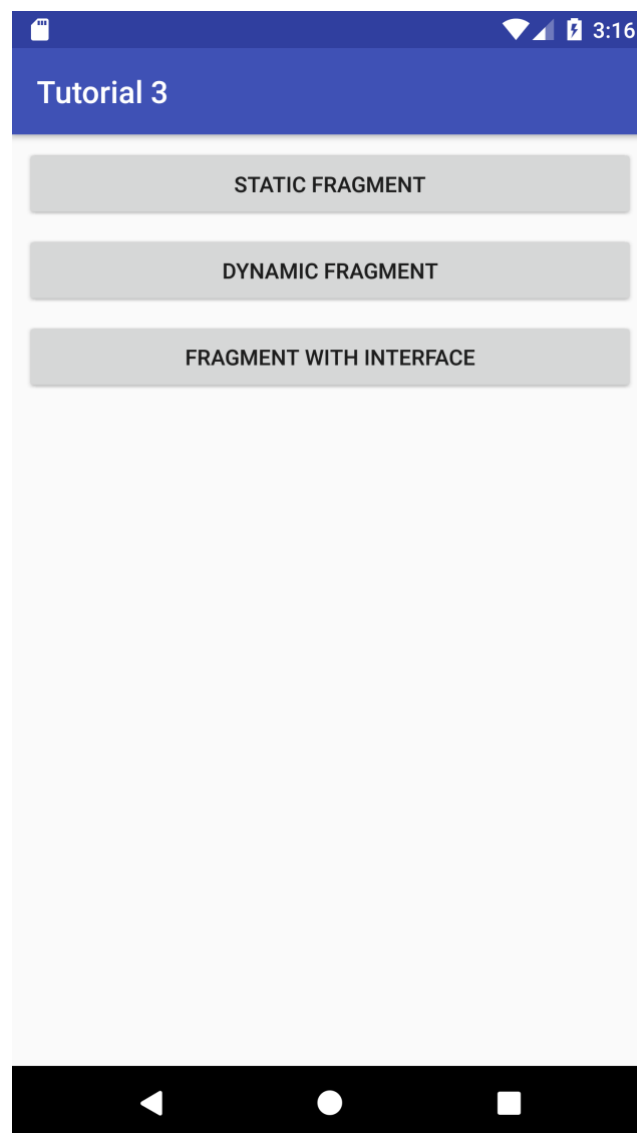


Fig.2.1 MainActivity (Launching Activity)

2.2. Create a blank activity and call it ActivityStatic. The “Static Fragment” button in MainActivity will bring the user to ActivityStatic.

The portrait and landscape modes of ActivityStatic are as shown in Fig.2.2(a) and Fig.2.2(b) respectively.

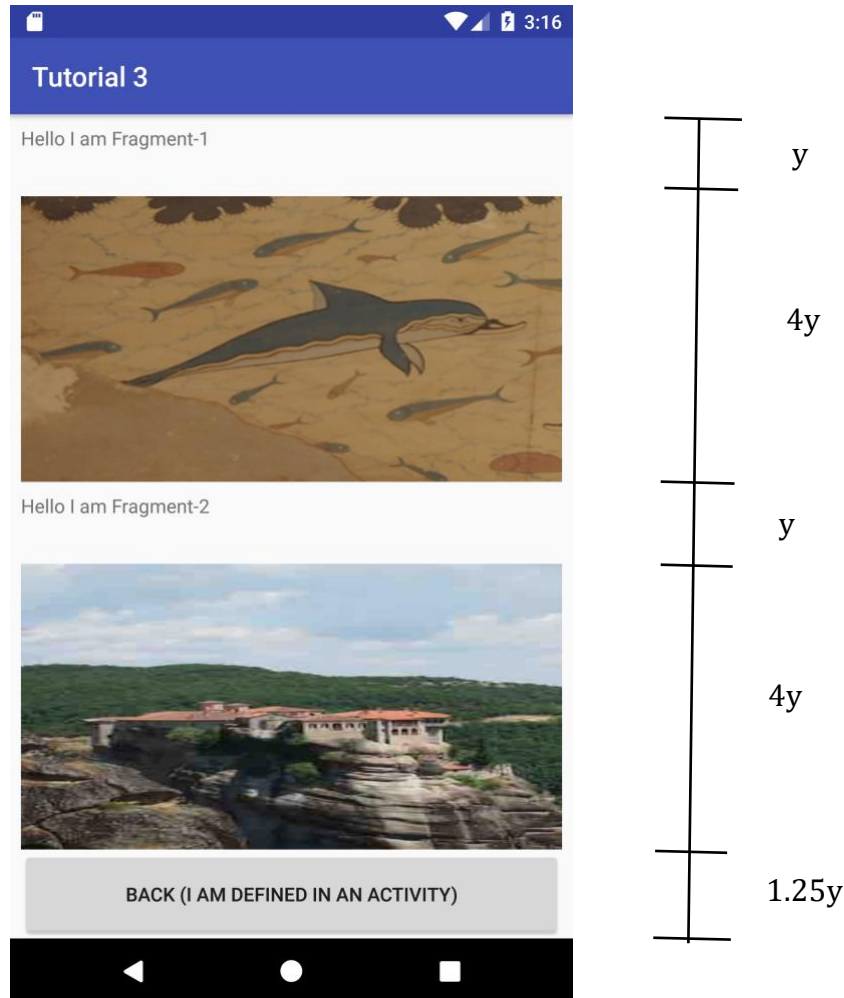


Fig.2.2(a) ActivityStatic: Two fragments and a button arranged in vertical order. Fragment-1 and Fragment-2 each contains a Text View and a picture. The “Back (I AM DEFINED IN AN ACTIVITY)” button is defined in ActivityStatic. Upon pressing this button, MainActivity as shown in Fig.2.1 will be displayed.

Note:

- Fragment-1 and Fragment-2 are statically attached to ActivityStatic.
- Fragment-1 and Fragment-2 each contains a photograph. The photograph is stretched to fill the available space (aspect ratio is changed as the picture is stretched, but that is ok for this tutorial).
- The button “BACK (I AM DEFINED IN AN ACTIVITY)” is defined in ActivityStatic, **not** in the fragments



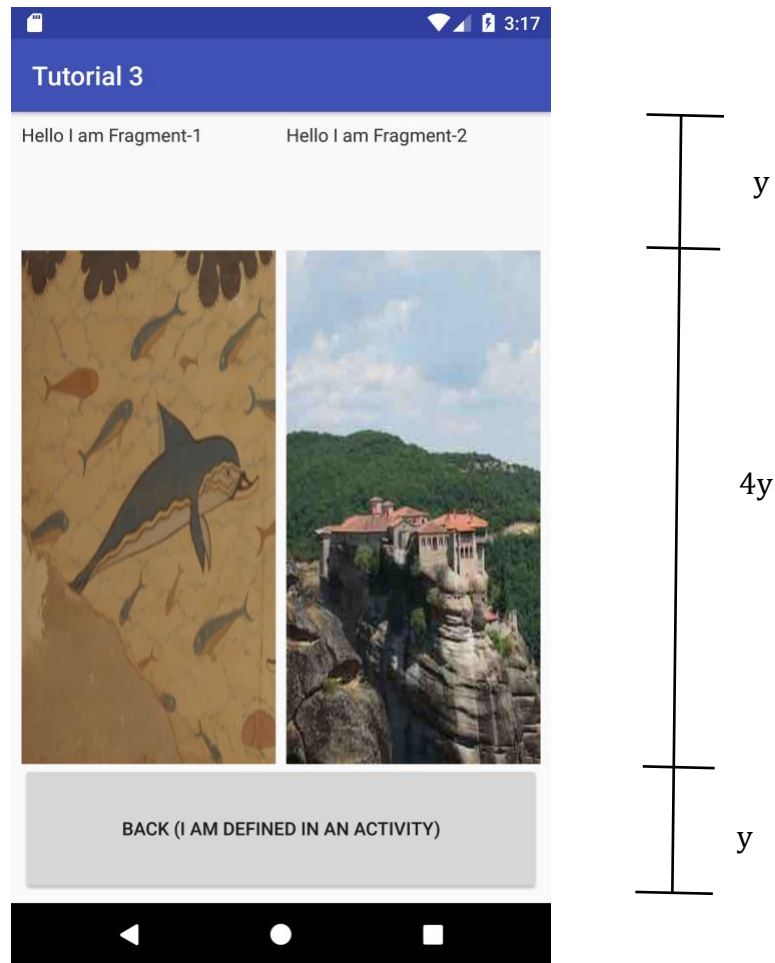
Fig.2.2(b) ActivityStatic in landscape mode. Note that the pictures are stretched to cover the entire space available.

2.3. Create a blank activity and call it ActivityDynamic. The “Dynamic Fragment” button in MainActivity will bring the user to ActivityDynamic.

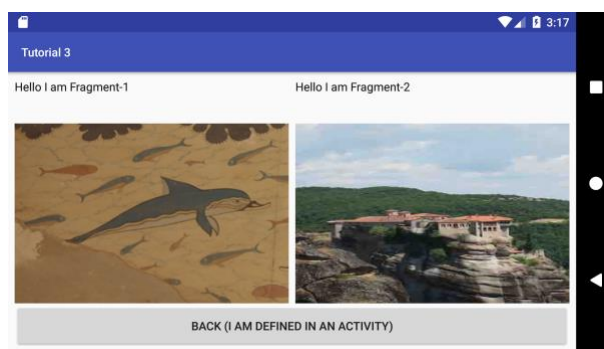
The portrait and landscape modes of ActivityDynamic are as shown in Fig.2.3(a) and Fig.2.3(b) respectively.

Note:

- Fragment-1 and Fragment-2 are now dynamically attached to ActivityDynamic.
- Fragment-1 and Fragment-2 each contains a photograph. The photograph is stretched to fill the available space (aspect ratio is changed as the picture is stretched, but that is ok for this tutorial).
- The button “BACK (I AM DEFINED IN AN ACTIVITY)” is defined in ActivityDynamic, **not** in the fragments



(a)



(b)

Fig.2.3 ActivityDynamic: Two fragments and a button arranged in horizontal order. Fragment-1 and Fragment-2 each contains a Text View and a picture. The “BACK (I AM DEFINED IN AN ACTIVITY)” button is defined in ActivityDynamic. Upon pressing this button, MainActivity as shown in Fig.2.1 will be displayed. (a) portrait mode. (b) landscape mode.

2.4 Create a blank activity and call it ActivityInterface. The “Fragment With Interface” button in MainActivity will bring the user to ActivityInterface.

ActivityInterface is as shown in Fig.2.4(a). When the button “BACK (I AM DEFINED IN AN ACTIVITY)” is pressed, the MainActivity shown in Fig.2.1 will be displayed.

Note:

- The fragment is statically attached to ActivityInterface.
- The fragment contains two view items: TextView and a button labelled as “(TOAST A MESSAGE: I AM DEFINED IN A FRAGMENT)”
- When the button “(TOAST A MESSAGE: I AM DEFINED IN A FRAGMENT)” is pressed, a message “This Toast message is from Fragment 4!” will be toasted.
- The button “BACK (I AM DEFINED IN AN ACTIVITY)” is defined in ActivityDynamic, **not** in the fragment

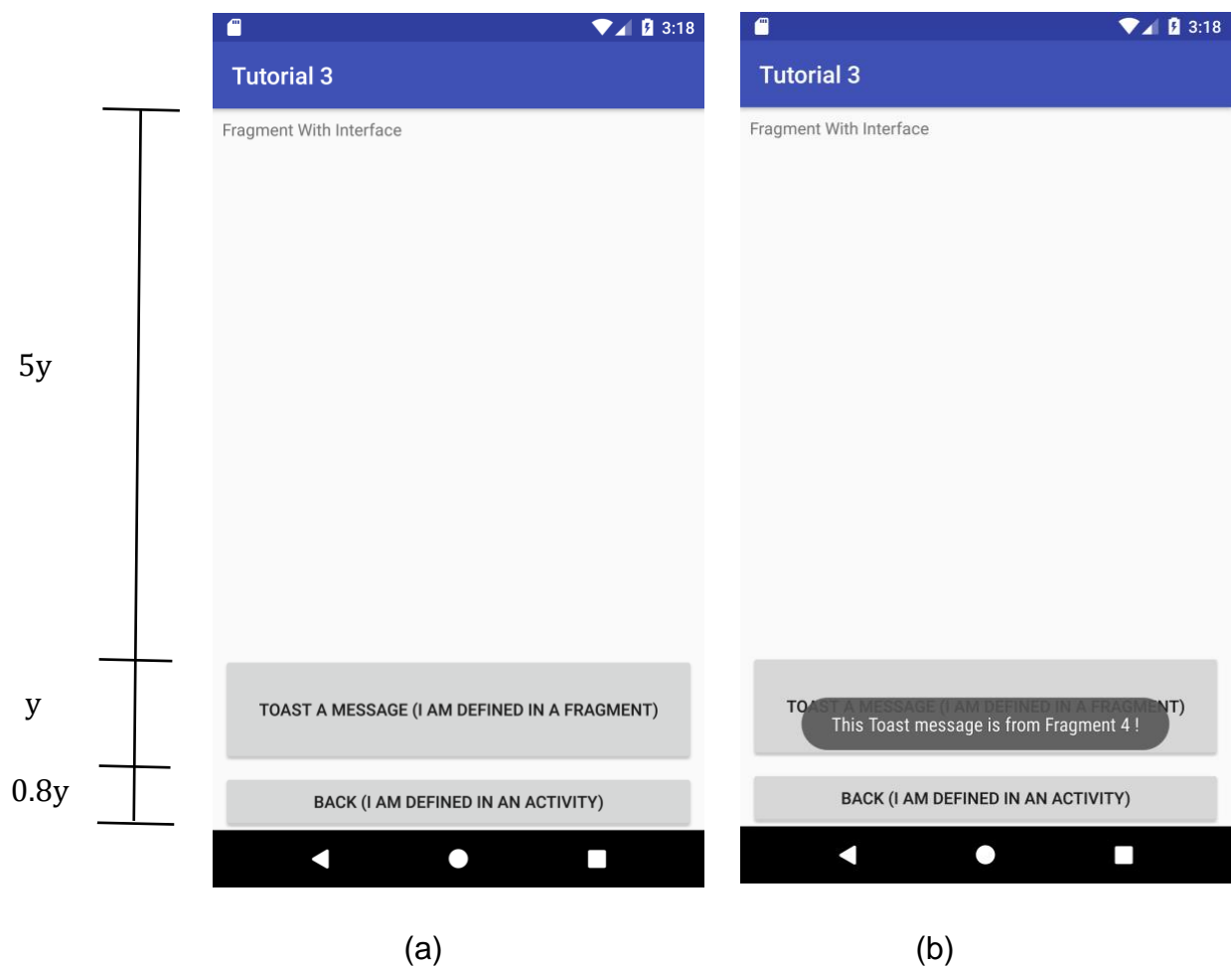


Fig.2.4 ActivityInterface.