Tutorial 4

SQLite

IS3261

Due date: 20th 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_Tut4.zip

SQLite Database

1. Introduction

In this tutorial, you will implement an SQLite database that works on your Android device.

The App allows the user to create a course database with each record comprising the following fields:

- courseCode *(eg. IS3261)*
- numberOfStudents *(eg. 47)*
- level *(eg. Undergrad)*

2. Requirements

2.1 The launching activity should look at Fig.1. Note the following

- The word **SQLITE** is in red and bold, with text size 24sp and aligned at the centre of the screen.
- "Type the course code here", "Type the number of students here", "Indicate undergrad or graduate here" are all hints to the EditText.
- The bottom section is a TextView that is parented by a ScrollView. This is because at some point in time when the database gets large, you will not have enough space to store all your records. So you need to let the user scroll to different rows of the database.

2.2 Adding a record:

- When the user key in the input, the virtual keyboard must not squeeze the top portion of the screen (Fig.2a).
- User key in the record before pressing the "Add" button (Fig.2b)
- After pressing the "Add" button, the TextView within the ScrollView shows "Added course – true" (Fig.2c)
- After adding 3 records and pressed the "DISPLAY" button, all the 3 records which had been added are shown (Fig.2d).

2.3 Deleting a record:

- Key in a course code that you want to delete and press the "DELETE" button. The TextView within the ScrollView shows "Deleted course – true" (Fig.3a)

- Press the “DISPLAY” button and the list of remaining records will be shown.

2.4 Testing your ScrollView:

- Input a few more records so that when you display them they won’t all fit into the display area at the bottom.

- Try to scroll the displayed records to make sure that the ScrollView is working.

2.5 Replace the default Android launcher icon for your app by a launcher icon of your own design. Please refer to the following for the guideline to icon design:

https://developer.android.com/guide/practices/ui_guidelines/icon_design.html

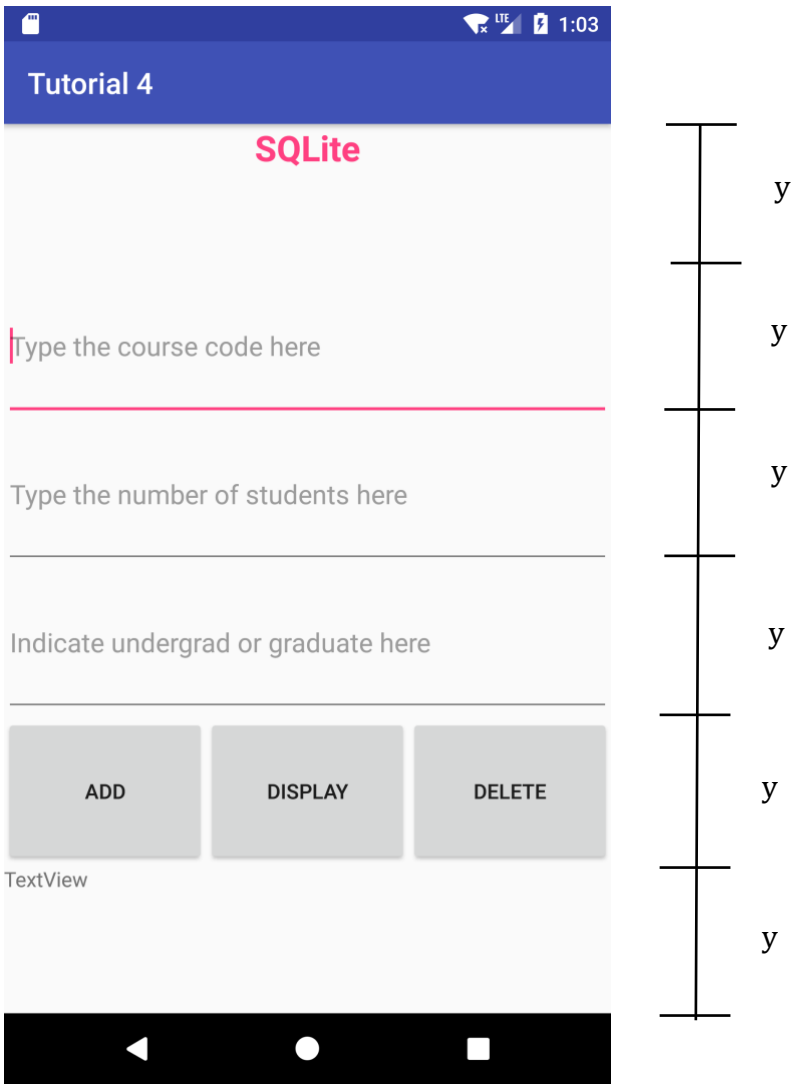
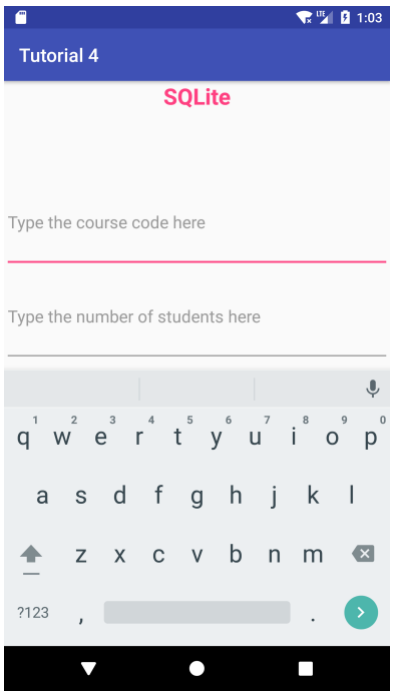
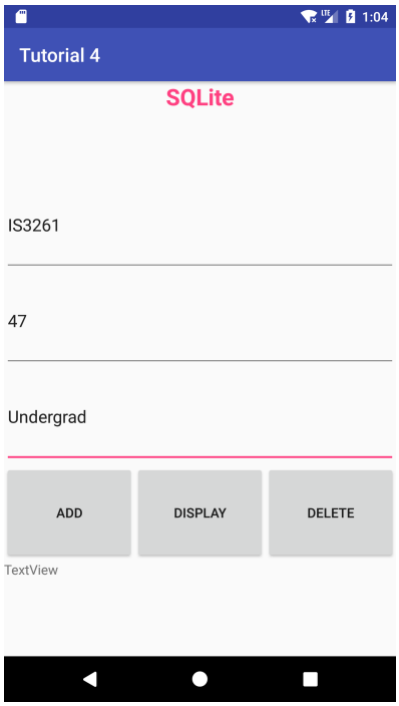


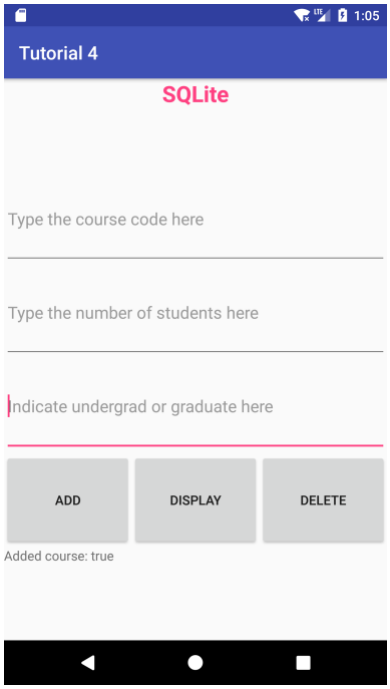
Fig.1 The Launching Activity (MainActivity)



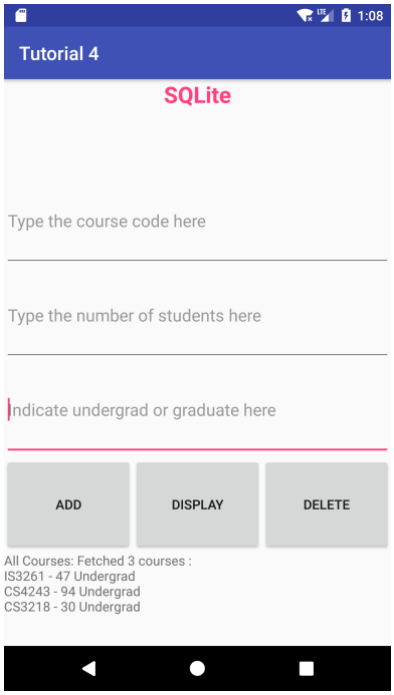
(a)



(b)

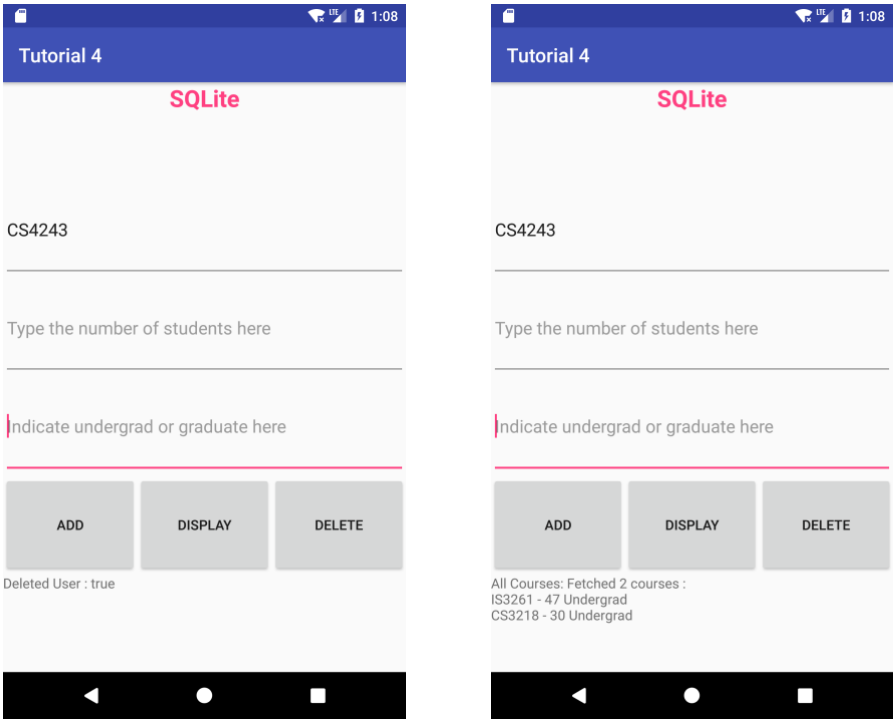


(c)



(d)

Fig.2 (a) Virtual keyboard does not squeeze the portion of screen on top of it (b) Example input (c) after pressing the "Add" button (d) After adding 3 records and pressed the "DISPLAY" button



(a) (b)

Fig.3. (a) To delete a record, key in the course code and press the “DELETE” button (b) Pressing the “DISPLAY” button now shows that the record has been deleted.