Lab 09 – Files and Strings

Objectives

- Problem solving using files and methods
- Design algorithms and write Java programs

Preparation

Chapter 12

Details

[50 marks] Write a program to search and insert the students record of a course in a file. This program first shows a menu including the following options to the user and responds according to the user selection.

```
Enter 1 to create a new course scores file.
Enter 2 to search into an existing course scores file.
Enter 3 to add more record to an existing course scores file.
Enter 4 to quit the program.
```

You can consider a default scores file as your active scores file unless user choose to create a new one. Option 2 and 3 would always apply to the active score file.

Organize your program into sub-problems using the following methods:

1. A main method including your program logic.
2. A method to prompt user for file name and create a new active score file.
3. A method to search a key (student name) in a scores file; this method returns all the search results when more than a record has the key. Key could be partial of name and search should be case insensitive.
4. A method to add the information of one student to a course score file.

You can have more methods if you wish.

For simplicity, assume that a student record contains `student name` and `score.` Each line of scores file includes information of one student separated by whitespaces (eg. Daisy Jessica 67). The student's name may compose more than one piece which are separated by whitespaces as well (eg. SHAUN TONY NORBERT FERNANDO). Repetitive names in the scores file is allowed. A sample of scores file is also available in Brightspace.

Using GUI to implement your program is optional.

Submission

Make a folder containing your source code (.java file) and external documentation, zip the folder and submit the zip file to D2L. Check Lab Guide (section 3) to find out more details about your submission and grading.