

LAB211 Assignment

Type:
Code:
LOC:
Slot(s):

Short Assignment
J1.S.P0068
37
1

Title

Input, sort and display student information.

Background

N/A

Program Specifications

Write a program that allows user to enter student information (Name, Class, Mark), then use collection to sort students name from A to Z, display student information on screen.

Function details:

Function 1: Display GUI And Input Data.

- User runs program. Program prompts user to input data.
- Auto next **Function 2**.

Function 2: Perform function

- Use collection to sort name of student from A to Z
- Display the student information on screen
- Exit the program.

Expectation of User interface:

1

```
===== Collection Sort Program =====
Please input student information
Name: Nghia
Classes: FU1
Mark: 100
Do you want to enter more student information?(Y/N):Y
Please input student information
Name: Lien
Classes: FU1
Mark: 100
Do you want to enter more student information?(Y/N):N
```

2

```
-----Student 1-----
Name: Lien
Classes: FU1
Mark: 100.0
-----Student 2-----
Name: Nghia
Classes: FU1
Mark: 100.0
```

Guidelines

Student must implement methods

- sortStudent
- display

in startup code.

Hint:

Create a class called Student and has the following attributes:

private String name;

private float mark;

private String classes;

+ Create the constructors:

- Default constructor
- Constructor with parameters

+ Create the getter/setter for the attributes of Student class

Create Student Comparator class that implements Comparator interface, overrides the **compare** method

+ Use Collection.sort() to sort Student by name from A - Z

Create Main class with the main() method to test the above class, implement as below:

- Require user to enter student information.
- If the mark of student is not a valid number, request user to re-enter.
- Call sortStudent() function to sort the list of students.
- Call display() function to display list of students.

Function 1: Enter student information

- o Program requires user to enter student name, address, and mark.
- o Method name: List <Student> sortStudent (List <Student> students)
 - Input:
 - students: list of student being entered
 - Return: list of students that was sorted.

Function 2: Display student information

- o Program display all student information entered.
- o Method name: void display (List <Student> students)
 - Input:
 - students: list of students that was sorted.
 - Return: void.