

# LAB211 Assignment

Type:  
Code:  
LOC:  
Slot(s):

Short Assignment  
J1.S.P0021  
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

- Program requires user to enter student name, address, and mark.
- 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

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