Exercise 1:

Having company class (see UML class diagram), we would like to manage employees of a company.

Attributes:

- **id[]**: an array that contains IDs of employees
- **name[]**: an array that contains names of employees
- **salary[]**: an array that contains salaries of employees
- **current**: the first empty index (represent the number of inserted employees).

The methods:

- **+Company(int size)**: a constructor that initialize all three arrays with the specified size and set current index to zero.
- **+addEmployee(int i, String n, float s)**: add an employee data to the current index & increment current index by one (hint: you have to check if array size is not exceeded)
- **+search(int id)**: return the index of employee with the specified id, if ID does not exists, return -1
- **+findMaxSalary()**: return the max salary among all employees
- **+findMinSalary()**: return the max salary among all employees
- **+calculateTotalSalaries()**: calculate the total sum of all salaries
- **+calculateAverageSalaries()**: calculate the average of all salaries.
- **+printEmployeeData(int i)**: prints employee data that has the specified id (hint: use search() method to find the index)

a) Implement the class **Company**.

b) Test your program using the main class (**TestCompany**). Your program should create an instance of class Company with maximum employees size = 10. In addition, it should display a menu driven interface that lists the following options:

1) Add a new employee info
2) Quit

Your choice?
In the first option, you have to prompt the user to enter employee data from keyboard. In case of the employee can’t be added (i.e. array has reached max size), print a statement explaining this case.

When the use chooses Quit, you should display **max salary, min salary, total salaries, and average salaries**. Also, choose an existed employee id and display his/her information, and another employee that does not exist.

**Sample run:**

Welcome to Company System
1) Add a new employee info
2) Quit
Your choice?
1
Enter employee ID, name, and salary, respectively
123
saad
10000
Employee data were added successfully
1) Add a new employee info
2) Quit
Your choice?
1
Enter employee ID, name, and salary, respectively
111
khalid
20000
Employee data were added successfully
1) Add a new employee info
2) Quit
Your choice?
1
Enter employee ID, name, and salary, respectively
666
Ali
5000
Employee data were added successfully
1) Add a new employee info
2) Quit
Your choice?
2
max salary: 20000.0
min salary: 5000.0
total salaries: 35000.0
average salaries: 11666.667

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Printing Employee Data
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id: 666
name: Ali
salary: 5000.0

Employee ID is not found