Data structures
Practical lab 7 – ArrayList class
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****
If a programmer codes just for fun he has all his skill.
If he codes for score his hand tremble and his breath is uneasy
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Submit your project via moodle at the End of the session

References:
https://docs.oracle.com/javase/7/docs/api/java/util/ArrayList.html
https://www.tutorialspoint.com/java/java_arraylist_class.htm
http://beginnersbook.com/2013/12/how-to-sort-arraylist-in-java/
http://beginnersbook.com/2013/12/java-arraylist-of-object-sort-example-comparable-and-comparator/

Create a new project in NeatBeans and name it PraticalLab7.

Exercise 1: ArrayList of Integer

Create a new java class with main method and name it ArrayListInteger. In the main method:

Q1. Create an ArrayList of Integer.
Q2. Add 5 elements into your list. Print out all the elements in your list
Q3. Create a static method and name it sumValues allowing to return the sum value of all the elements in the given list. Test your method!

```
public static int sumValues(ArrayList<Integer> myList){
        //your code here
}
```

Q4. Sort your list and print out all the elements in your list

Exercise 2: List of employees

Q1. Create a java class and name it **Employee**, as illustrated in the ULM diagram

Employee
- String name; - int age; - int salary;
+ Employee(String name, int age, int salary); + String getName(); + int getAge(); + int getSalary(); + String toString();

Note: The method toString() return a String containing the detail information of each employee. This string has this format: "Employee name : ????, age: ????, salary: ???", where ???? represent the name, age and salary of each employee.

Q2. Create a java class with main method and name it EmployeesList. In the main method:

- Create an ArrayList of Employee

- Add 5 elements in the list

- View all the employees in the list

- Add Comparators (nameComparator, ageComparator, salaryComparator) in Employee class.

- View all the employees in the list order by name, age or salary.