BIRZEIT UNIVERSITY

Engineering and Information Technology Faculty
Computer Science Department
Comp231-Advanced Programming

Assignment1:

Deadline:Saturday 16/10/2021 before midnight.

Objectives:

1. Process Array of objects and Java concepts (Chapter1- Chapter 8)

Note: YOU CAN'T USE ANY OTHER CONCEPT OUTSIDE THIS CHAPTERS (WILL NEVER BE GRADED).

Write a Java program that does the following:

1. In the main() method complete the following:
   1. Read number of days that a patient has entered the hospital (i.e 5 days)
   2. Read number of times that nurse read the temperature of the patient in Celsius (3,4, 5, time, oreven more)
   4. Read the temperature that was read by the nurse and store each temperature in the array.
   5. If the user enters a temperature below 30 C or above 45C, then display an error message and keep looping till the program gets the right.

2. Write just one method (**Summary**) that called from the main method and return average, maximum, and minimum of temperatures. Print the result on screen from the main method.
3. Call another method call it **countbelowAboveAverage** that will return a number of temperatures less than or equal to the average of temperatures, and the number of temperatures above the average.
4. Call sorting method (**sortArray**) that will sort the temperatures (per day) in ascending order during all days store it in a new 2D dimensional array and return it to main. (use any type of sorting. You can't use build-in methods)
5. Call **printArray** method to print the sorted array on screen.

Call a method (**leaveHospital**) that will return yes he/she can leave or no, he/she can't leave, to check if he/she can leave the hospital. The patient can leave only if the average for the last two highest read temperatures in the last two days was around normal (35.5-36.5 C).

Sample:

Days	#of Readings	Actual Reading Per Day (in Celsius)			
1	4	40.5	41	39.8	38.7
2	5	41.2	41.3	40.7	40.8 41.3
3	5	40.9	38.5	38.9	40.1 39.8
4	3	38.2	38.2	37.9	
5	2	37.5	37.2		

Specification Submission:

1. *Online through ITC.*
2. *What to submit: Your own well-structured and **well-commented** JAVA files (.java)*
3. *into a student Id_sec#.rar file, e.g. 120dddd_sec1.rar).*

Grading policy and general notes on the Assignment:

1. Your application should have all functionalities working properly. Twenty percent of marks will be graded for the functionality of the assignment.
2. The following notes will make up the remaining 10 marks of the grade:
   a. There has to be adequate documentation and comments in the code(i.e., functions, loops, etc.);
   b. Your code should follow the code convention (i.e., spaces, indentations,etc.); and
3. Any plagiarized code will not be marked.
4. ANY LATE Assignment will never be accepted for any excuse.

Types of cheating:

1. **outsource, like books, internet.**
2. **classmate.**
3. **Facebook groups or from any social media.**
4. **Chegg website or other similar .**

Good Luck!!