

Introduction to Computer Science II

Assignment 1

Due: 4:00 p.m. May 23, 2016

Developer Salaries Program

In the main() method of a class called Salaries, create a program that reads in the initials of software developers (each as a string) and their annual salaries (each as integer). Your program should start by prompting the user to enter the initial of a software developer followed by his or her salary, and the program should continue to read in initial and salaries until an empty initial or a sentinel value of -1 or less is entered. When asking the user to enter his or her salary, be sure to prompt for entering a number; re-prompt if necessary.

Your program should keep track of the total number of salaries entered (excluding the sentinel), the minimum salary entered, and the maximum salary entered. Calculate the sum of all values entered as well as the average salary (a double). Display all of this information to the screen once the sentinel value has been entered. List all initials and their salaries and then display all the statistics.

Note: you should not use arrays or static methods for this assignment.

Bonus Marks

Enhance your program so that it keeps track of the distribution of developers' level of seniority (i.e., titles) based on their annual salaries. Use the following ranges:

Internship Developer	less than \$50,000
Junior Developer	\$50,000 – \$59,999
Developer	\$60,000 – \$74,999
Senior Developer	\$75,000 – \$94,999
Project Lead Developer	\$95,000 – \$109,999
Technical Leader	more than \$110,000

Your program should print out the total number of salaries entered within the range of each level of seniority. Also print out the average level of seniority for all developers. (4 points)

New Skills Needed for this Assignment:

- Ability to compile and run Java programs
- Use of Java language fundamentals
- Use of basic console I/O
- Use of arithmetic and Boolean expressions
- Use of the if and else-if constructs
- Use of loops

Submit the following:

1. Your Java source code via electronic submission. Use the *Assignment 1* Dropbox Folder in D2L to submit electronically. The TA will compile and run your program to test it. Your source code file must be called **Salaries.java**.
2. A script showing the compilation of your source code and a sample run through your program. Name this file *script.txt* and also submit it electronically to the D2L drop box.

Introduction to Computer Science II Assignment 1 Grading

Student: _____

Functionality

Reading and displaying developers' initials	2	_____	
Sentinel-controlled loop	2	_____	
Inputs developer salary, converts to int	2	_____	
Validates input (range check, reprompt)	2	_____	
Calculates/displays total number	2	_____	
Calculates/displays minimum	2	_____	
Calculates/displays maximum	2	_____	
Calculates/displays sum	2	_____	
Calculates/displays average	2	_____	
Code structure			
Documentation	2	_____	
Formatting	1	_____	
Well-chosen variable names	1	_____	
Script showing sample run	2	_____	
Total	24	_____	_____%
Bonus			
Calculates/displays seniority level distribution	3	_____	
Calculates/displays average level of seniority	1	_____	
Total Bonus (10% for 4/4)	4	_____	_____%
Assignment Grade	28	_____	_____%