

Programming Assignment #2

Using vectors, write a program that will calculate the total pay for fifteen (15) employees. Once calculate and printed to the screen, the program should prompt the user to enter an employee's ID, then search the list and, if found, display the employee information pertaining to that employee ID. Then the program must sort the list of employees by the employee ID in ascending order and display their respective information.

Algorithm Note: You are to add up the numbers in your B#. If the total of the numbers is ODD, you are to use the LINEAR search and SELECTION sort algorithms. If the total of the numbers is EVEN, you are to use the BINARY search and BUBBLE sort algorithms.

Ex: A person with a B# of B00038292, would have a total of (3+8+2+9+2) giving 24, which is an even number. Therefore, that person would use the Binary search and Bubble sort algorithms to complete this assignment.

You should have fifteen (15) different:

Description	DataType	Way data is stored	Vector Name
Employee IDs	of INT	Entered into a vector after being initialized to an array	employees_jd
Hours Worked	of DOUBLE	Stored into a vector from input file	hrworked_jd
Pay Rate	of DOUBLE	Stored into a vector from same input file as hours worked	payrate_jd

Total pay should be calculated by multiplying the hours worked by payrate plus 10% of payrate for every five (5) hours over forty (40). (ie a person working 50 hours with a total pay of \$100 would have $((50-40)/5)*(100*.1)$ added to total pay.

Note: _jd represents the initials of the programmer. Your array and function names should be named by replace the initials jd with your first and last initials

Excluding the main function, your program should have five additional functions that will get the hours worked and payrate, calculate the total pay, search the date, sort the data and display your output.

Functions					
	Read Input File	Calculate Average	Search Data	Sort Data	Output Results
Name of function	get_jd	calc_jd	search_jd	sort_jd	prt_jd
Properties of function	Called from main	Called from main	Called from main	Called from main	Called from main
Definition of Function	Should pass hours worked and pay rate vectors and add data to vectors	Should pass hours worked and pay rate vectors and calculate total pay and add total pay to vector	Allow user to input a student's ID and search for that ID using the appropriate search algorithm (See algorithm note above.)	Sort by data by student ID using the appropriate sort algorithm (See note algorithm above.)	Should pass employee id, hours worked, pay rate and total pay vectors and print data

Data file should be named data2_jd.txt