CS1428 Lab 8: Fall 2020

Name:

Lab Section:

Type your name at the top of this sheet. Answer the following questions and turn in this sheet before the due date. You may use the pre-lab, your book, or internet resources to assist you.

If you need more help, you can attend a tutoring session. Visit the following link: https://cs.txstate.edu/resources/labs/tutoring/

Visit https://userweb.cs.txstate.edu/~js236/cs1428/c-ides-for-cs1428.html for instruction on setting up a Development Environment (like CodeBlocks) to be able to complete the coding portion.

1. (8 pts) Identify the following items and write them in the appropriate spaces provided below. Use the choices provided below:

    a) Function call **b**) Return Statement **c**) Function Prototype **d**) Function Definition

```
float add(float,float);   1) [  ]

int main() {
  float a,b,c;
  a = 2;
  b=4;

  c = add(a, b);   2) [  ]

  return 0;
}


float add(float g, float h) 3) [  ] {

  return g + h;   4) [  ]

}
```
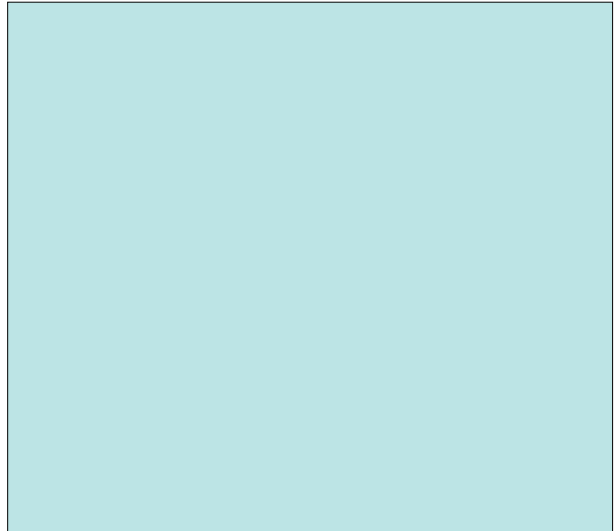
2. (12 pts) What is the output of the following snippet?

```cpp
void increment(int value){
  cout << value << " " << (value + 1) << endl;
}

void decrement(int value){
  cout << value << " " << (value - 1) << endl;
}

int main(){

  int num;
  for (num = 1; num < 7; num++){
    if(num % 2 == 1)
      increment(num);
    else
      decrement(num);
  }
  return 0;
}
```

3. (50 pts) Modify the provided code to create program that calculates the **Weekly Salary Value** of a group of employees based on their pay. The program prompts the user to enter the number of hours clocked by the employee (**int**) and the pay rate per hour (**float**).

  ➢ **Weekly pay = Hours * payRate**

  ➢ Range for Inputs – Hours: (1-40); (hours must be a whole number)

  ➢ Employees: At-least 1

Write three functions:

1. **bool isValidHours(int)** – Takes the number of hours as an argument and returns true if it is between 1 and 40. Returns false, otherwise.

2. **float calcPay(int, float)** – Takes the number of hours and payRate as arguments and returns the value of Pay.

3. **float calcAveragePay(float, int)** – Takes the total pay of all of the employees and the number of employees as arguments and returns the average pay for all employees.

IMPORTANT!

  ➢ The functions should not print any value. All the values are printed from the main function.

  ➢ Do not modify the main function. Write the functions such that they work in the code provided

Sample Output:

Enter the number of employees: 2

Enter number of hours worked by Employee 1: 15

Enter the pay rate for Employee 1: 7.35

Weekly Salary of Employee 1: $110.25

Enter number of hours worked by Employee 2: 50

ERROR: Hours must be between 1 and 40.

Enter number of hours worked by Employee 2: 40

Enter the pay rate for Employee 2: 9.45

Weekly Salary of Employee 2: $378.00

The Average Weekly Salary for the Company is $244.12

WRITE your name in the authorship comments at the top of your program.
UPLOAD this pdf with your answers filled in and your source code as lab8.cpp to Canvas.