CS1428 Lab 1: Fall 2020

Name: Jason McKinnerney jlm573

Lab Section: LAB 17

Write your name at the top of this sheet and your program in a block or inline comment. Answer the following questions and turn in this sheet before the end of class. You may use the pre-lab, your book or internet resources to assist you.

1. (10 pts) Evaluate the following expressions as a computer would (i.e. be mindful of integer division).

1) 10 % 8

2

2) 643295 % 10

5

3) 16 % 5

1

4) 0 % 456

0

5) 27 / 2 – 4

9

6) 2 + 3 * 0

2

7) 6.4 * 3

19.2

8) 6.0 / 4

4.5

9) (6 + 17) % 2 – 1

0

10) 14 / (11 / 4)

7

2. (4 pts) Consider the following C++ code snippet:

```
int cars = 10;
int trucks = 2;
int buses = 1;
int vans = 5;
int count = 2;

cars += count;
trucks += trucks + buses;
buses += 3;
++buses;
vans = vans / buses;
```

After execution, what are the values stored in each of the following variables?
Hint: Evaluate sequentially like the computer and use the given picture to help you keep track of the values inside each variable.

a) cars **12** b) trucks **5** c) buses **4** d) vans **1**

3. (6 pts) There are several syntax and logical errors with the following code snippet. The program should prompt the user for their first name and then store it into the variable `first_name`. Rewrite the code so that it works correctly.

```
cout << "Please enter your first name. " <<  endl;
string first_name;
cin  >>  first_name;
```

4. (50 pts) Modify "Lab 1 Program.cpp" provided in Canvas such that the program asks the user to enter his/her age, IQ, and midi-chlorian count. Then apply the following formula to find their Jedi Level (as a decimal number) and print it to the console (screen). Do not use any libraries we have not yet learned in your solution (i.e. cmath).

Jedi Level = (midi-chlorians x age) / (90000 – IQ^2)

Sample Input/Output:

```
What is your midi-chlorian count?
20000
What is your age?
8
What is your IQ?
123
Your Jedi Level is 2.13701
```

WRITE your name in the authorship comments at the top of the page.
UPLOAD this pdf with your answers filled in and your source code as lab1.cpp to Canvas.
Note: You might have to print this file as a pdf if you opened it in a browser (preferred Google Chrome).