CSE-165 Lab 01

Points: 50

Write a separate .cpp file for each of the following tasks.

Zip all your .cpp files together and submit the zip file to CatCourses.

Notes:

- The file hello.cpp is provided as a simple "Hello World" example and starting point.
- The other files (words.txt, Fillvector.cpp, code.cpp) are referenced in the later exercises.

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1. **Hello World (5 points)**

Write a program that prints out "Hi, my name is <Your Name>!"

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2. **Area of a Circle (5 points)**

Create a program that takes in the radius of a circle as input and prints out the area of that circle.

CSE-165 Lab 01

Points: 50

3. **Counting Words (10 points)**

Create a program that opens a file named words.txt and counts the number of whitespace-separated words in that file.

Example Input:

-- words.txt

This is a file that contains many words.

Yes it does have so many words. Many, many words.

Well, maybe it is not that many after all.

So, just how many is MANY?

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Output: 33

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4. **Word Occurrences (10 points)**

Create a program that reads in a word from the user and counts the number of occurrences of that word in a file called words.txt.

Example Input: many

-- words.txt

This is a file that contains many words.

Yes it does have so many words. Many, many words.

Well, maybe it is not that many after all.

So, just how many is MANY?

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Output: 7

CSE-165 Lab 01

Points: 50

5. **Reversing a File (10 points)**

The FillVector.cpp program opens a file and prints its lines, with a number at the beginning of each line.

Modify the program in the following ways:

1) First, make it read and print the lines of the file called "code.cpp".

2) Second, print the same content but with the line numbers reversed (i.e. starting with the highest number and counting down). The lines themselves can remain in the same order.

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6. **Concatenation (10 points)**

Change Fillvector.cpp so that it concatenates all the elements in the vector into a single string before printing it out (WITHOUT adding line numbering). Again, read the file named "code.cpp" as in the previous exercise.