k_gandhi6@ares:~$ cat SayWhat.info
Name: Kush Gandhi

Class: CSC122-001

Levels: Level 4 + 3 = 7

Title: Say What (project)

level 4 is the base level.

level 3 is letting the user specify a file.

Description: Takes in user response to calucale the number of sentences,

words, syllables, and index.

k_gandhi6@ares:~$ cat SayWhat.cpp

```cpp
#include <iostream>

#include <fstream>

#include <string>

using namespace std;


double index_count(string message);//calculates the total of index

short sentences(string symbol);//checks number of senteces

bool punctation(char v);//punctitation caller

short words(string message);//checks number of words

bool vowel(char v);//vowel check

short syllables(string message);//checks for syllables


int main() {

    ifstream files;

    string message, file, temp, response;

    cout << "Got a File (y/n) ";

    getline(cin, response);


    switch (response[0]) {

    case 'N': case 'n':

        cout << "Enter a message: ";

        getline(cin, message);

        break;

    case 'y': case 'Y':

        cout << "\nEnter a file: ";

        cin >> file;

        files.open(file);

        if (files.fail()) {

            cout << "FILE INVALID" << endl;

        }

        else {

            files.peek();

            cout << "File Found: " << file << endl;

            while (!files.eof()) {

                getline(files, temp);

                message += temp;

                files.peek();

            }

            files.close();

            files.clear();

        }

        break;
```

```cpp
        default:

            cout << "\nAnswer Invalid" << endl;

            break;

    }


    //output design below

    cout << "\nNumber of words are " << words(message);

    cout << "\nNumber of syllables are " << syllables(message);

    cout << "\nNumber of senteces are " << sentences(message);

    cout << "\nTotal index is " << index_count(message) << endl;

}


double index_count(string message) {//function for the calculations

    double index = 206.835 - 84.6 * syllables(message) / words(message)

        - 1.015 * words(message) / sentences(message);

    return index;

}


short sentences(string symbol) { //counts the number of senteces by symbols

    short sentence = 0;

    short i = 0;

    while (symbol[i] != '\0') {

        if (symbol[i] == '.' || symbol[i] == '!' || symbol[i] == ':' ||

            symbol[i] == ';' || symbol[i] == '?') {

            ++sentence;

        }

        ++i;
```

```cpp
    }

    return sentence;

}


bool punctation(char v) { //checks for puncctation

    return v == '!' || v == ',' || v == ';' || v == '?' ||

        v == ',' || v == '.' || v == ' ';

}


short words(string message) { //counts the number of words entered

    short word = 0;

    short i = 0;

    char less = '<', greater = '>';


    while (message[i] != '\0') {

        if (message[i] == less && i > 0 && punctation(message[i - 1])) {

            --word;

        }

        if (message[i] == greater) {

            ++i;

        }

        if (message[i] == less) {

            do {

                ++i;

            } while (message[i] != greater && message[i] != '\0');

        }

        if (punctation(message[i]) && !punctation(message[i + 1])) {
```

```cpp
            word++;

        }

        ++i;

    }

    if (message[0] == '\0') {

        word = 0;

    }

    return word;

}


bool vowel(char v) { //function for vowels

    return v == 'e' || v == 'i' || v == 'a' || v == 'u' || v == 'o';

}


short syllables(string message) {

    short syllable = 0;

    short i = 0;


    while (message[i] != '\0') {

        if (vowel(message[i]) && !vowel(message[i + 1])) {

            ++syllable;

        }

        ++i;

    }

    return syllable;

}

k_gandhi6@ares:~$ CPP SayWhat
```

SayWhat.cpp***

k_gandhi6@ares:~$ ./SayWhat.out
Got a File (y/n) y

Enter a file: SayWhat.info
File Found: SayWhat.info

Number of words are 42
Number of syllables are 66
Number of senteces are 8
Total index is 68.5634
k_gandhi6@ares:~$ ./SayWhat.out
Got a File (y/n) n
Enter a message: Kush went to the gym. Also, had to do homework.

Number of words are 10
Number of syllables are 11
Number of senteces are 2
Total index is 108.7
k_gandhi6@ares:~$ ./SayWhat.out
Got a File (y/n) n
Enter a message: Hi, my name is Kush. What's your name?

Number of words are 8
Number of syllables are 9
Number of senteces are 2
Total index is 107.6
k_gandhi6@ares:~$ exit
exit

Script done on 2021-10-02 20:36:38-05:00 [COMMAND_EXIT_CODE="0"]