

C++ File Reading

Basic workflow: (1) open file, (1a) check to make sure file was opened correctly, (2) read from file, (3) close file.

Example: (reading a file with a single sequence of integers)

```
#include <iostream>
#include <fstream>
using namespace std;

int main() {
    ifstream infile;                // Input file stream

    infile.open("nums.txt");        // Step 1: Open file

    if (!infile.is_open()) {        // Step 1a: check for opening error
        cout << "Could not open file nums.txt." << endl;
        return 1;                  // 1 signifies an error.
    }

    while (!infile.eof())          // Step 3: Read with a loop.
    {
        int i;
        infile >> i;               // Read one integer from the file.
        // getline(infile, string-variable) // To read an entire line at once.
        cout << i << endl;
    }

    infile.close();                // Step 4: Done with the file, close it.

    return 0;
}
```

To let CLion open a text file:

- You must place the file in the “cmake-build-debug” folder inside your CLion project’s folder. There are two ways to accomplish this:
- From within CLion, in the left-hand panel area, expand the drop-downs until you see the “cmake-build-debug” folder.
- Right-click “cmake-build-debug”
- Choose “New,” then “File.” Type in a name for your file, ending in .txt.

Other way

- In the Windows or Mac file explorer, find your CLion projects folder (probably Documents/ClionProjects), then go inside that folder to find your individual project’s folder.
- Go inside the “cmake-build-debug” folder. Once inside, this is where you should drag and drop any text files you want your program to be able to open and read.