

Lazy Mover Project

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General Overview of the Program

We have two files *move.hpp* and *moveImp.cpp*

1. *Move.hpp*: This file contains the recursive function called *findGreatest* that solves each problem set inside the *input.txt*. It also has helper functions that work with it to modulate some of the logic and memoize the algorithm. There are no classes in this file, it only contains the necessary functions to solve the problem. The functions are all global.
2. *MoveImp.cpp*: This file contains the *main()* and reads the *input.txt* with a string stream and creates an *output.txt*. The string stream feeds the *findGreatestHelper* function which calls the *findGreatest* function inside of it. It returns an integer with the correct answer to each problem set. The correct answer is then appended to the end of the file with a new line character. At the end of the *main()* function all the files are closed

Compiler Information

We use the gcc c++14 compiler, however we tested the program on the student cluster and it works on the student cluster utilizing the *g++ -Wall move.hpp moveImp.cpp* and no warnings or errors have emerged.

However a makefile has been provided for convenience. **To use the makefile on the student cluster you must change the CC from CC=g++ -std=c++14 to CC=g++ the student cluster does not run c++14 or c++11**

Makefile

This make file has 5 functions that can be executed in the following way:

1. *\$make* - this will compile the program without running it.
2. *\$make run* - this will run the program only after *make*(the above command) has been called
3. *\$make clean* - this will delete all the object files and it will also delete the executable
4. *\$make cleanAll* - this will delete all the object files, the executable and it will delete the *output.txt*
5. **\$make it** - this will compile the program and run the program all at once, since the program is ran it will generate an *output.txt*