

CSE344 – Systems Programming Course

HW01 - Report

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I can not complete whole homework. But I just wanted to submit what I did. I will explain these in this report.

Firstly I created random text files for inputs. Then I create my makefile. Then I coded the program A. It gets 3 arguments. I used getopt() function to parse command line arguments. If they are invalid or missing program terminates. When I run multiple instances of program A, they can read distinct from files and write the same file. I used file locking operations to do it. When the program the read 32bytes of a file, then it locks the output file to write. So another program cannot write. After writing it unlocks the file. Then it waits. So the other programs can write now. Also when the file output file is locked, the program waits until it is available to write.

Program B is not completed. It reads the input file. Parse line by line and creates an array of complex numbers. Then print it to terminal. There is no FFT algorithm. No deleting from input file and writing to output file. That's all. But I also used file locking for this program. When it is reading it locks the input file. So instances of program A cannot write the file while it is reading.

My makefile contains run part. When you called it, there will be started 2 instances of program A and one instance of program B. Program A's reads from distinct files and writes to same file while program B reading that file and prints to terminal. I tested them relatively long inputs, they worked fine.