

README

Synopsis

AUTHOR : Sauban Kidwai

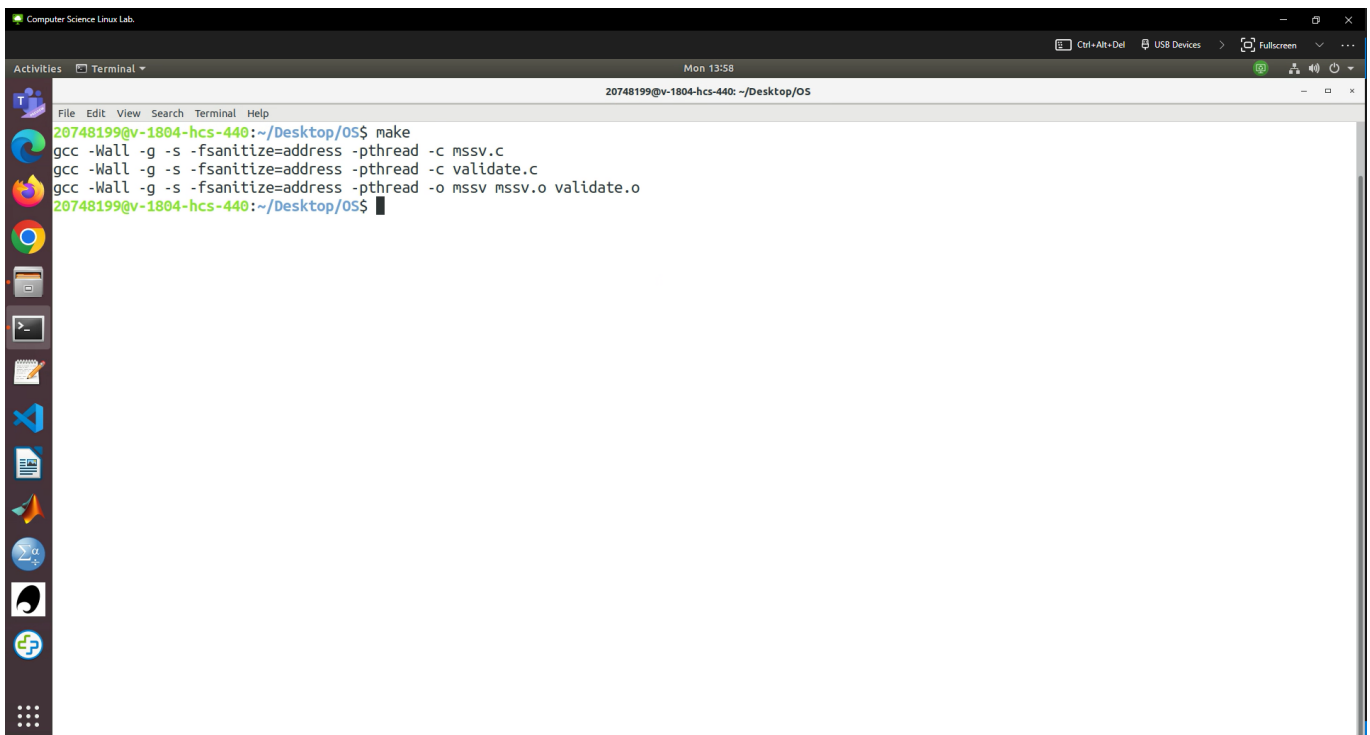
STUDENT ID : 20748199

DESCRIPTION : COMP2006 - Operating Systems

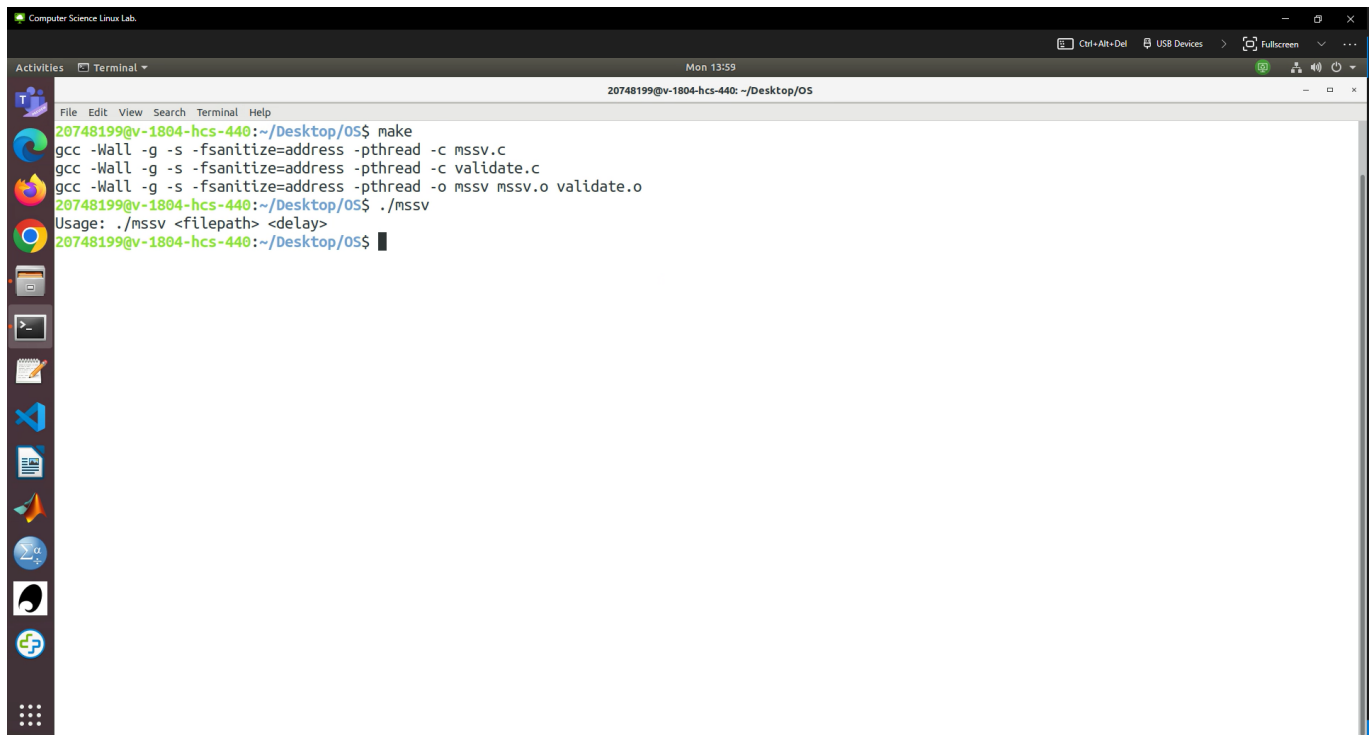
How to run the program

To run the program, locate the directory where the assignment is located. This is assuming that the program will be run in a Linux Environment

1. Open a terminal within the directory and type in the command `make clean` and then press enter to make sure that any object files or unnecessary files are deleted.
2. Then type in the command `make` and press enter. The program will now compile

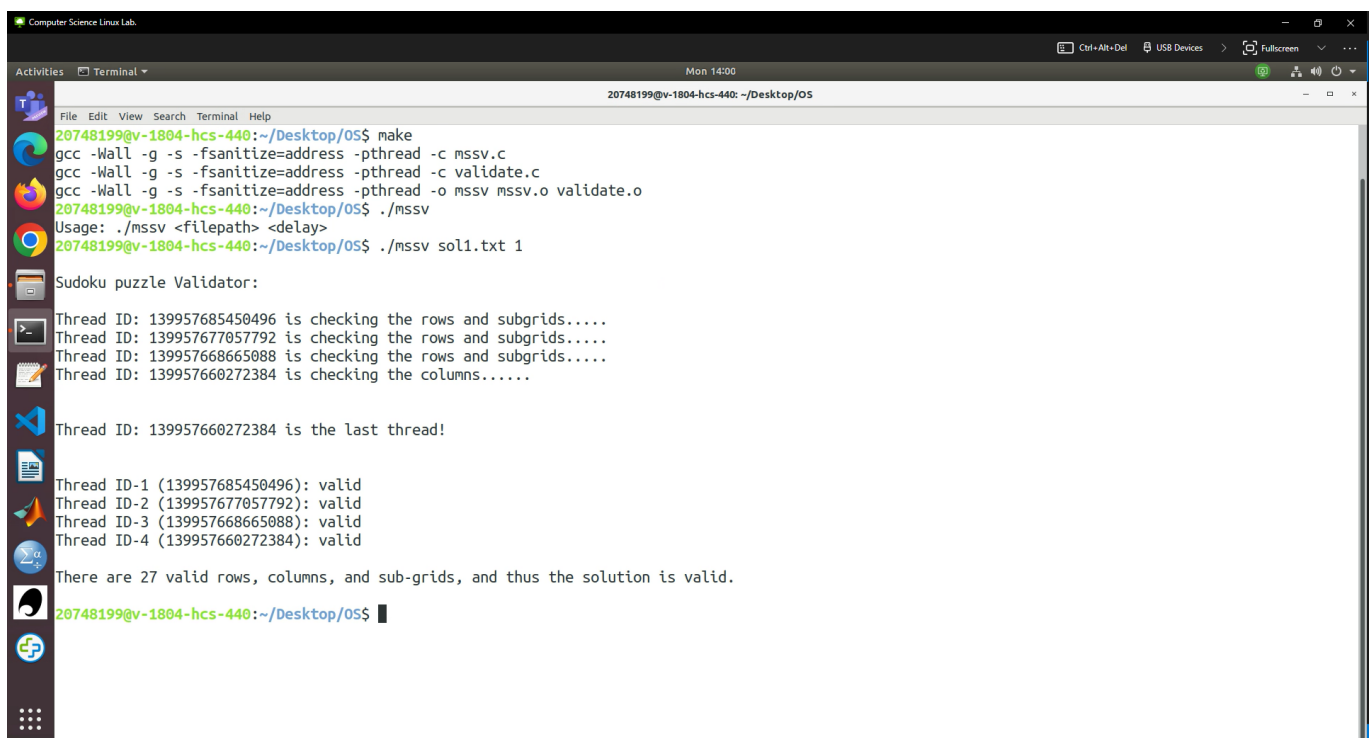
A screenshot of a Linux terminal window titled 'Computer Science Linux Lab.' The terminal shows the user '20748199@v-1804-hcs-440' in the directory '~/Desktop/OS'. The user has entered the command 'make', which outputs three lines of gcc compilation commands: 'gcc -Wall -g -s -fsanitize=address -pthread -c mssv.c', 'gcc -Wall -g -s -fsanitize=address -pthread -c validate.c', and 'gcc -Wall -g -s -fsanitize=address -pthread -o mssv mssv.o validate.o'. The prompt is now '20748199@v-1804-hcs-440:~/Desktop/OS\$'. The terminal window includes a menu bar (File, Edit, View, Search, Terminal, Help) and a sidebar with application icons.

3. Then to run the program, type in the command `./mssv` and press enter. The program will display the usage of the program



```
Computer Science Linux Lab.
Activities Terminal
Mon 13:59
20748199@v-1804-hcs-440: ~/Desktop/OS
File Edit View Search Terminal Help
20748199@v-1804-hcs-440:~/Desktop/OS$ make
gcc -Wall -g -s -fsanitize=address -pthread -c mssv.c
gcc -Wall -g -s -fsanitize=address -pthread -c validate.c
gcc -Wall -g -s -fsanitize=address -pthread -o mssv mssv.o validate.o
20748199@v-1804-hcs-440:~/Desktop/OS$ ./mssv
Usage: ./mssv <filepath> <delay>
20748199@v-1804-hcs-440:~/Desktop/OS$
```

4. Then, type in the correct command. In this case `./mssv sol1.txt 1`. Please note the file name ranges from `sol1.txt` to `sol5.txt` and delay ranges from 1 to 10.



```
Computer Science Linux Lab.
Activities Terminal
Mon 14:00
20748199@v-1804-hcs-440: ~/Desktop/OS
File Edit View Search Terminal Help
20748199@v-1804-hcs-440:~/Desktop/OS$ make
gcc -Wall -g -s -fsanitize=address -pthread -c mssv.c
gcc -Wall -g -s -fsanitize=address -pthread -c validate.c
gcc -Wall -g -s -fsanitize=address -pthread -o mssv mssv.o validate.o
20748199@v-1804-hcs-440:~/Desktop/OS$ ./mssv
Usage: ./mssv <filepath> <delay>
20748199@v-1804-hcs-440:~/Desktop/OS$ ./mssv sol1.txt 1
Sudoku puzzle Validator:
Thread ID: 139957685450496 is checking the rows and subgrids.....
Thread ID: 139957677057792 is checking the rows and subgrids.....
Thread ID: 139957668665088 is checking the rows and subgrids.....
Thread ID: 139957660272384 is checking the columns.....
Thread ID: 139957660272384 is the last thread!
Thread ID-1 (139957685450496): valid
Thread ID-2 (139957677057792): valid
Thread ID-3 (139957668665088): valid
Thread ID-4 (139957660272384): valid
There are 27 valid rows, columns, and sub-grids, and thus the solution is valid.
20748199@v-1804-hcs-440:~/Desktop/OS$
```

5. That's it! The program has been executed successfully.

File Contents

File	Description
makefile	Contains the code required to compile and run the program
mssv.c	Contains the Main function for the Assignment
validate.c	Contains the Validation functions for the Assignment
sudoku.h	Header File containing global variables to be shared between <code>validate.c</code> and <code>mssv.c</code>
sol1.txt	Contains one example of a correct Sudoku Solution
sol2.txt	Contains one example of a Correct Sudoku Solution
sol3.txt	Contains one example of an Incorrect Sudoku Solution
sol4.txt	Contains one example of an Incorrect Sudoku Solution
sol5.txt	Contains an example of an incorrect Sudoku Grid Size