

Operating System HW3 Programming Documentation

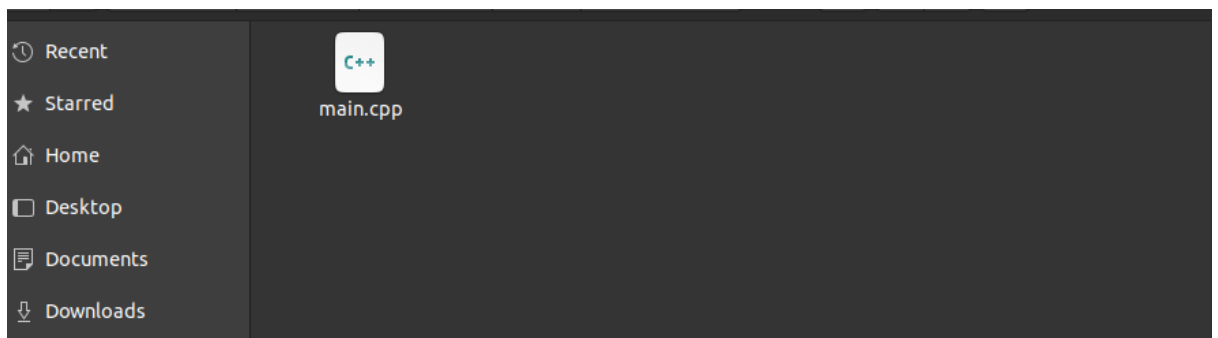
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I. General Settings

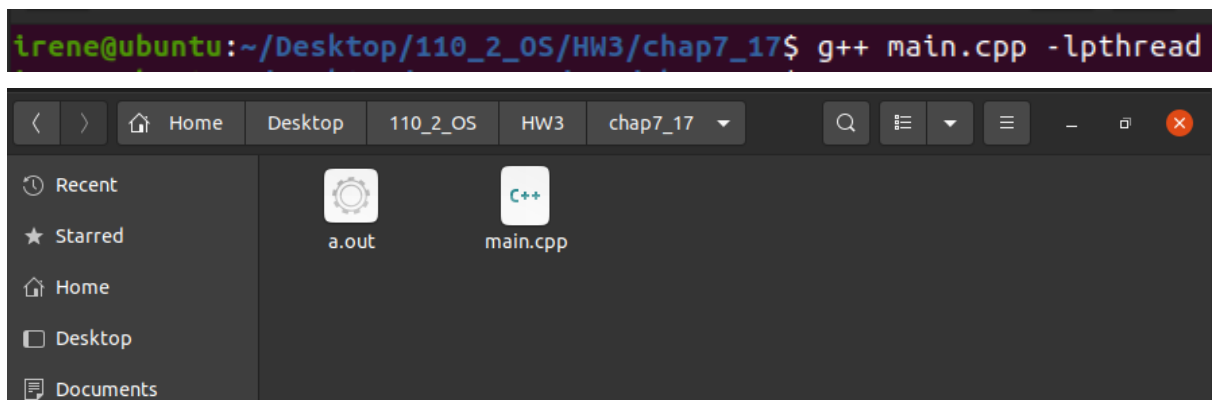
- Operating System: Linux
- IDE: Atom
- Terminal: platformio-ide-terminal
 - To install terminal:
 - File -> Settings
 - Click "+" (install)
 - Search for a terminal package called "platformio-ide-terminal"
 - Click "install".
 - Press "Control + ` " to toggle the terminal

II. Chapter 7.17

1. Go to the Chap7_17 folder and open the terminal on the folder or open the multi.c file using Atom and open the terminal there.



2. Enter `g++ main.cpp -lpthread` to generate an .o file if it doesn't exist in the folder.



3. To run:

- ./a.out -> creates random num of villagers and
Allows a villager to starve for count = 3

```

irene@ubuntu:~/Desktop/110_2_OS/HW3/chap7_17$ ./a.out
Vill. 1| Vill. 2| Vill. 3| Vill. 4| Vill. 5| Vill. 6| Vill. 7|0sec
Showed Up!| | | | | | |3sec
A to B| | | | | | |3sec
Waiting for Turn| | | | | | |3sec
Got Perm| | | | | | |3sec
Crossing| | | | | | |3sec
Crossed!| | | | | | |6sec
Showed Up!| | | | | | |6sec
B to A| | | | | | |6sec
Waiting for Turn| | | | | | |6sec
Got Perm| | | | | | |6sec
Crossing| | | | | | |6sec
Crossed!| | | | | | |8sec
Showed Up!| | | | | | |8sec
A to B| | | | | | |8sec
Waiting for Turn| | | | | | |8sec
Got Perm| | | | | | |8sec
Crossing| | | | | | |8sec
Crossed!| | | | | | |8sec
Showed Up!| | | | | | |8sec
B to A| | | | | | |8sec
Waiting for Turn| | | | | | |8sec
Crossed!| | | | | | |9sec
Showed Up!| | | | | | |9sec
A to B| | | | | | |9sec
Waiting for Turn| | | | | | |9sec
Got Perm| | | | | | |9sec
Crossing| | | | | | |9sec
Crossed!| | | | | | |9sec
Showed Up!| | | | | | |9sec
B to A| | | | | | |9sec
Waiting for Turn| | | | | | |9sec
Crossed!| | | | | | |10sec
Showed Up!| | | | | | |10sec
A to B| | | | | | |10sec
Waiting for Turn| | | | | | |10sec
Got Perm| | | | | | |10sec
Crossing| | | | | | |10sec
Crossed!| | | | | | |11sec
Showed Up!| | | | | | |13sec
A to B| | | | | | |13sec
Waiting for Turn| | | | | | |13sec
Got Perm| | | | | | |13sec
Crossing| | | | | | |13sec
Crossed!| | | | | | |14sec
Showed Up!| | | | | | |18sec
A to B| | | | | | |18sec
Waiting for Turn| | | | | | |18sec
Got Perm| | | | | | |21sec
Crossing| | | | | | |21sec
Crossed!| | | | | | |22sec
Showed Up!| | | | | | |25sec
A to B| | | | | | |25sec
Waiting for Turn| | | | | | |25sec
Got Perm| | | | | | |25sec
Crossing| | | | | | |25sec
Crossed!| | | | | | |25sec

```

- ./a.out s -> creates random num of villagers and
Allows a villager to starve for count = s (integer)

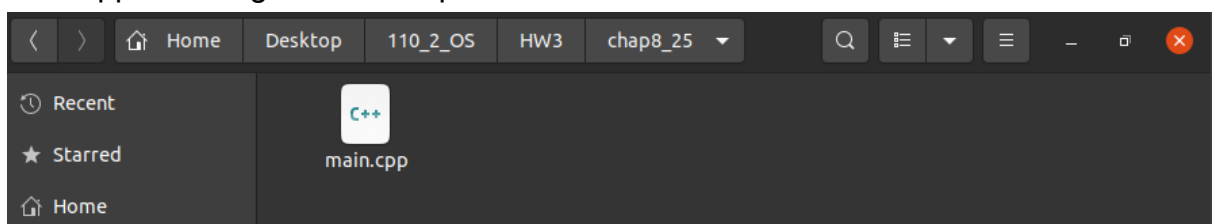
```

irene@ubuntu:~/Desktop/110_2_OS/HW3/chap7_17$ ./a.out s
Vill. 1| Vill. 2| Vill. 3| Vill. 4| Vill. 5| Vill. 6| Vill. 7|0sec
Showed Up!| | | | | | |3sec
A to B| | | | | | |3sec
Waiting for Turn| | | | | | |3sec
Got Perm| | | | | | |3sec
Crossing| | | | | | |3sec
Showed Up!| | | | | | |3sec
B to A| | | | | | |3sec
Waiting for Turn| | | | | | |3sec
Showed Up!| | | | | | |3sec
A to B| | | | | | |3sec
Waiting for Turn| | | | | | |3sec
Got Perm| | | | | | |3sec
Crossing| | | | | | |3sec
Showed Up!| | | | | | |5sec
A to B| | | | | | |5sec
Waiting for Turn| | | | | | |5sec
Got Perm| | | | | | |5sec
Crossing| | | | | | |5sec
Showed Up!| | | | | | |6sec
B to A| | | | | | |6sec
Waiting for Turn| | | | | | |6sec
Showed Up!| | | | | | |6sec
A to B| | | | | | |6sec
Waiting for Turn| | | | | | |6sec
Got Perm| | | | | | |6sec
Crossing| | | | | | |6sec
Showed Up!| | | | | | |8sec
A to B| | | | | | |8sec
Waiting for Turn| | | | | | |8sec
Got Perm| | | | | | |8sec
Crossing| | | | | | |8sec
Crossed!| | | | | | |9sec
Crossed!| | | | | | |15sec
Crossed!| | | | | | |20sec
Crossed!| | | | | | |26sec
Crossed!| | | | | | |31sec
Got Perm| | | | | | |31sec
Crossing| | | | | | |31sec
Crossed!| | | | | | |35sec
Crossed!| | | | | | |38sec

```

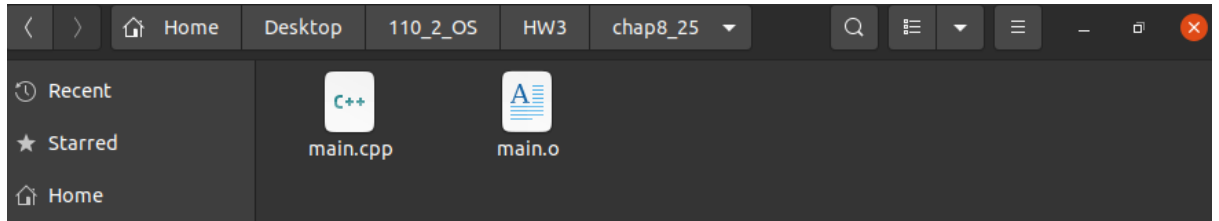
III. Chapter 8.25

1. Go to the Chap8_25 folder and open the terminal on the folder or open the main.cpp file using Atom and open the terminal there.



2. Enter `g++ -g main.cpp -o main.o` to generate an `.out` file if it doesn't exist in the folder. If an `.out` exists, enter `./main.o <address>` to run the program.

```
irene@ubuntu:~/Desktop/110_2_OS/HW3/chap8_25$ g++ -g main.cpp -o main.o
```



```
irene@ubuntu:~/Desktop/110_2_OS/HW3/chap8_25$ ./main.o 19986
```

3. Result:

```
The address 19986 contains:  
page number: 4  
offset: 3602
```