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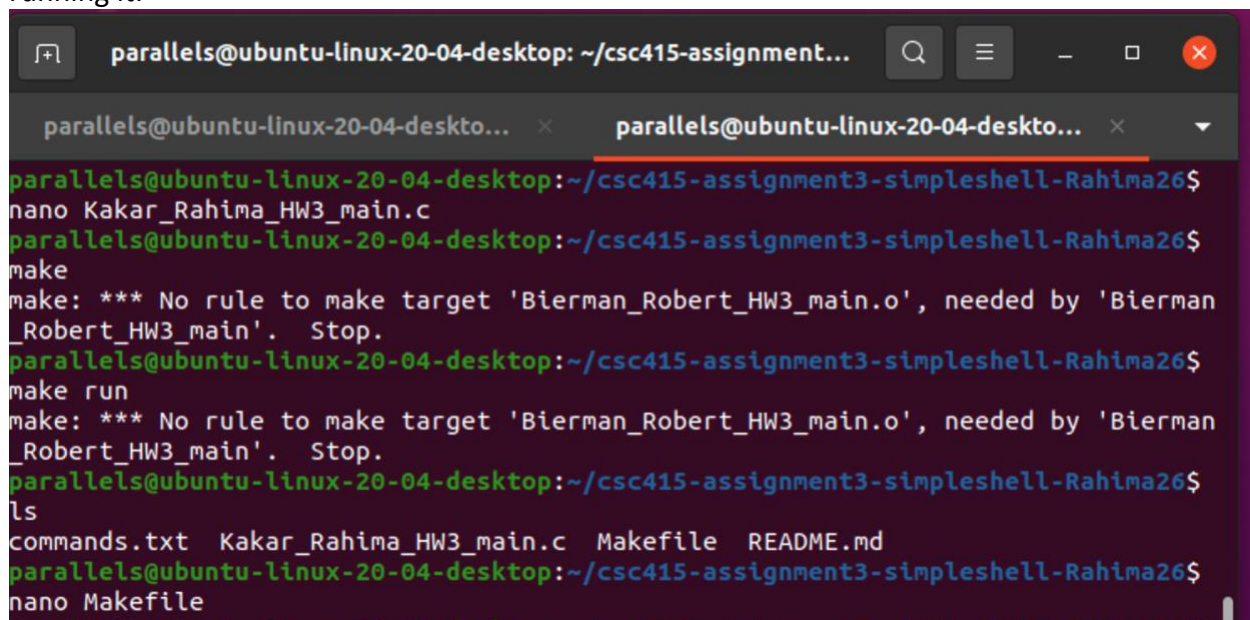# Assignment 3 – Simple Shell

Description:
we are creating a simple shell that runs on top of a regular command-line interpreter for LINUX
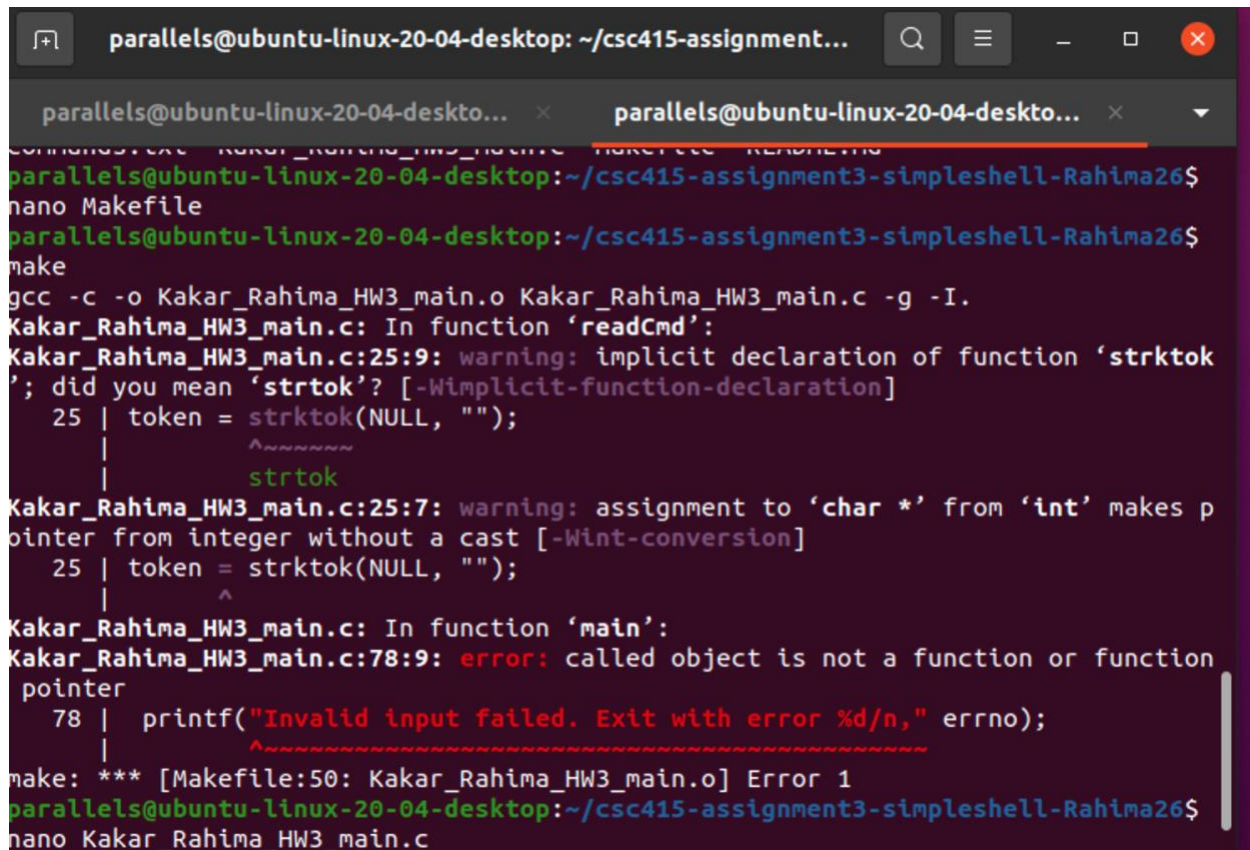
Approach / What I Did:
When I was starting this assignment, I thought this assignment would be easy. I started off with re reading all the unit 3 PowerPoints and the reading. I first learned about everything I will need to use like ececvp, child and parent and fork and all that once I got comfortable with it I implemented then in to my program with the help from the classes unit 3 power point and also took some help from the websites that was provided on the power points like the wiki page and I learned how to do the checking the error using errno but for some reason the program is running and working but only ls and ps command work for all the other commands it says its invalid. i tried researching on how to fix this issue but nothing worked the example on tutorialspoint.com was an example I understood on how it works but for some reason it's not working for me when I implement it.

Issues and Resolutions:

Besides the error handling issues I also had basic spelling and grammar issues while running the program and also forgot to change my name on the makefile initially so there was an error running it.

```
                parallels@ubuntu-linux-20-04-desktop: ~/csc415-assignment...    Q  ≡  –  □  ✕

  parallels@ubuntu-linux-20-04-deskto...  ✕    parallels@ubuntu-linux-20-04-deskto...  ✕  ▼

parallels@ubuntu-linux-20-04-desktop:~/csc415-assignment3-simpleshell-Rahima26$
nano Makefile
parallels@ubuntu-linux-20-04-desktop:~/csc415-assignment3-simpleshell-Rahima26$
make
gcc -c -o Kakar_Rahima_HW3_main.o Kakar_Rahima_HW3_main.c -g -I.
Kakar_Rahima_HW3_main.c: In function 'readCmd':
Kakar_Rahima_HW3_main.c:25:9: warning: implicit declaration of function 'strktok
'; did you mean 'strtok'? [-Wimplicit-function-declaration]
   25 |  token = strktok(NULL, "");
      |          ^~~~~~~
      |          strtok
Kakar_Rahima_HW3_main.c:25:7: warning: assignment to 'char *' from 'int' makes p
ointer from integer without a cast [-Wint-conversion]
   25 |  token = strktok(NULL, "");
      |        ^
Kakar_Rahima_HW3_main.c: In function 'main':
Kakar_Rahima_HW3_main.c:78:9: error: called object is not a function or function
 pointer
   78 |   printf("Invalid input failed. Exit with error %d/n," errno);
      |         ^~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
make: *** [Makefile:50: Kakar_Rahima_HW3_main.o] Error 1
parallels@ubuntu-linux-20-04-desktop:~/csc415-assignment3-simpleshell-Rahima26$
nano Kakar_Rahima_HW3_main.c
```

Analysis: (If required for the assignment)
Screen shot of compilation:

```
parallels@ubuntu-linux-20-04-desktop:~/csc415-assignment3-simpleshell-Rahima26$
make
gcc -c -o Kakar_Rahima_HW3_main.o Kakar_Rahima_HW3_main.c -g -I.
gcc -o Kakar_Rahima_HW3_main Kakar_Rahima_HW3_main.o -g -I. -l pthread
parallels@ubuntu-linux-20-04-desktop:~/csc415-assignment3-simpleshell-Rahima26$
```

Screen shot(s) of the execution of the program

```
parallels@ubuntu-linux-20-04-desktop:~/csc415-assignment3-simpleshell-Rahima26$ make run
./Kakar_Rahima_HW3_main "Prompt> "
prompt$ ls
commands.txt            Kakar_Rahima_HW3_main.c  Makefile
Kakar_Rahima_HW3_main  Kakar_Rahima_HW3_main.o  README.md
Child1010950, exited with 0
,prompt$ echo "Hello World"
Invalid input failed. Exit with error 2
Child1010978, exited with 2
,prompt$ ls -l
Invalid input failed. Exit with error 2
Child1010994, exited with 2
,prompt$ ls -a
Invalid input failed. Exit with error 2
Child1011004, exited with 2
,prompt$ ps
    PID TTY          TIME CMD
1010692 pts/0    00:00:00 bash
1010938 pts/0    00:00:00 make
1010939 pts/0    00:00:00 sh
1010940 pts/0    00:00:00 Kakar_Rahima_HW
1011011 pts/0    00:00:00 ps
Child1011011, exited with 0
,prompt$ ls foo
Invalid input failed. Exit with error 2
Child1011024, exited with 2
,prompt$ exiit
Invalid input failed. Exit with error 2
Child1011034, exited with 2
parallels@ubuntu-linux-20-04-desktop:~/csc415-assignment3-simpleshell-Rahima26$
```