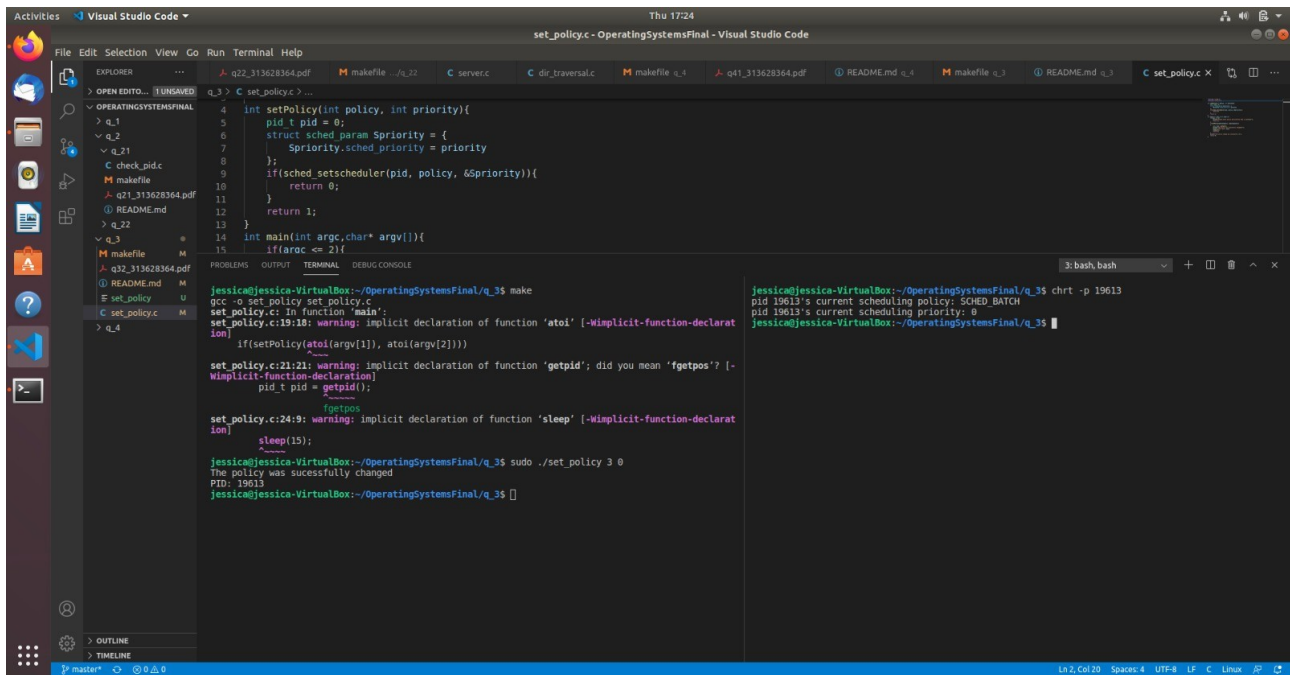


Q3:

An example of the output while using `chrt -p`



The screenshot shows a Visual Studio Code editor with a C program named `set_policy.c` in the `OperatingSystemsFinal` project. The program defines a `setPolicy` function that takes a policy and priority, sets the process priority using `setpriority`, and then uses `chrt` to set the scheduling policy. The `main` function calls `setPolicy` with `SCHED_FIFO` and priority 0, then prints the current policy and priority using `chrt` and `getpriority`.

```
1 int setPolicy(int policy, int priority){
2     pid_t pid = 0;
3     struct sched_param spriority = {
4         .priority = priority
5     };
6     if(sched_setscheduler(pid, policy, &spriority)){
7         return 0;
8     }
9     return 1;
10 }
11
12 int main(int argc, char* argv[]){
13     if(argc <= 2){
14         return 1;
15     }
16     if(setPolicy(atoi(argv[1]), atoi(argv[2]))){
17         return 1;
18     }
19     printf("The policy was successfully changed\n");
20     printf("PID: %d\n", getpid());
21 }
```

The terminal output shows the execution of the program with arguments `3 0`, which sets the scheduling policy to `SCHED_FIFO` and the priority to 0. The output also shows the current policy and priority for the process.

```
jessica@jessica-VirtualBox:~/OperatingSystemsFinal/q_3$ make
gcc -o set_policy set_policy.c
set_policy.c:19:18: warning: implicit declaration of function 'atoi' [-Wimplicit-function-declaration]
    if(setPolicy(atoi(argv[1]), atoi(argv[2]))){
                   ^
set_policy.c:21:21: warning: implicit declaration of function 'getpid'; did you mean 'fgetpos'? [-Wimplicit-function-declaration]
    printf("PID: %d\n", getpid());
                      ^
set_policy.c:24:9: warning: implicit declaration of function 'sleep' [-Wimplicit-function-declaration]
    sleep(15);
    ^
jessica@jessica-VirtualBox:~/OperatingSystemsFinal/q_3$ sudo ./set_policy 3 0
The policy was successfully changed
PID: 19613
jessica@jessica-VirtualBox:~/OperatingSystemsFinal/q_3$
```

The output of the `chrt -p 19613` command shows the current scheduling policy as `SCHED_FIFO` and the current scheduling priority as 0.

```
jessica@jessica-VirtualBox:~/OperatingSystemsFinal/q_3$ chrt -p 19613
pid 19613's current scheduling policy: SCHED_FIFO
pid 19613's current scheduling priority: 0
jessica@jessica-VirtualBox:~/OperatingSystemsFinal/q_3$
```