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# Process Monitor

## REVIEW

### CODE REVIEW 5

## HISTORY

### Requires Changes

5 specifications require changes

## You are almost there! Good job!

You just need to update some parts of your code.

I've added an additional comment in the review section. Be sure to go through them.

If you still have queries, you can ask it here: [knowledge.udacity.com](https://knowledge.udacity.com). Our team of expert mentors will answer you within few time.

You've done a great project. I can't wait to see what you do next!

Good Luck!

### Basic Requirements

The program must build an executable system monitor.

The code compiles and links building an executable file, nice job!

The program must build without generating compiler warnings.

The program has been built without any compiler warnings.

```
Juli 6 19:27 •  
Activities Terminal workspace/workspace - Downloads/archive(07)/est2nd-udacity_CppPr02-3da8d2b/CppND-System-Monitor/build  
  
workspace/workspace:/Downloads/archive(07)/est2nd-udacity_CppPr02-3da8d2b \n$ cd est2nd-udacity_CppPr02-3da8d2b/  
workspace/workspace:/Downloads/archive(07)/est2nd-udacity_CppPr02-3da8d2b \n$ ls  
hash system error near unexpected token `{'  
workspace/workspace:/Downloads/archive(07)/est2nd-udacity_CppPr02-3da8d2b \n$  
cpPmD-System-Monitor/  
workspace/workspace:/Downloads/archive(07)/est2nd-udacity_CppPr02-3da8d2b \n$ cd cpPmD-System-Monitor/  
workspace/workspace:/Downloads/archive(07)/est2nd-udacity_CppPr02-3da8d2b/cpPmD-System-Monitor $ make clean  
rm -rf build  
workspace/workspace:/Downloads/archive(07)/est2nd-udacity_CppPr02-3da8d2b/cpPmD-System-Monitor $ make build  
mkdir -p build  
cd build && \  
make -- && \  
make  
-- The CXX compiler identification is GNU 9.2.1  
-- Check for working C compiler: /usr/bin/cc  
-- Detecting C compiler ABI info  
-- Detecting C compiler features  
-- Configuring done  
-- Generating done  
-- Build files have been written to: /home/workspace/Downloads/archive(07)/est2nd-udacity_CppPr02-3da8d2b/cpPmD-System-Monitor/build  
make[1]: Entering directory '/home/workspace/Downloads/archive(07)/est2nd-udacity_CppPr02-3da8d2b/cpPmD-System-Monitor/build'  
make[2]: Entering directory '/home/workspace/Downloads/archive(07)/est2nd-udacity_CppPr02-3da8d2b/cpPmD-System-Monitor/build'  
Cleaning dependencies of target monitor...  
make[3]: Leaving directory '/home/workspace/Downloads/archive(07)/est2nd-udacity_CppPr02-3da8d2b/cpPmD-System-Monitor/build'  
make[3]: Leaving directory '/home/workspace/Downloads/archive(07)/est2nd-udacity_CppPr02-3da8d2b/cpPmD-System-Monitor/build'  
2% building cxx object Chokefile/Monitor.dl/rsrc/format.cpp.o  
11% building cxx object Chokefile/Monitor.dl/rsrc/time_posix.cpp.o  
17% building cxx object Chokefile/Monitor.dl/rsrc/math.cpp.o  
23% building cxx object Chokefile/Monitor.dl/rsrc/pollfs.cpp.o  
29% building cxx object Chokefile/Monitor.dl/rsrc/resources_display.cpp.o  
35% building cxx object Chokefile/Monitor.dl/rsrc/print.cpp.o  
41% building cxx object Chokefile/Monitor.dl/rsrc/processes.cpp.o  
47% building cxx object Chokefile/Monitor.dl/rsrc/random.cpp.o  
52% building cxx object Chokefile/Monitor.dl/rsrc/timestamp.cpp.o  
58% building cxx object Chokefile/Monitor.dl/rsrc/testlib.cpp.o  
64% building cxx object Chokefile/Monitor.dl/rsrc/testnet.cpp.o  
70% building cxx object Chokefile/Monitor.dl/rsrc/testos.cpp.o  
76% building cxx object Chokefile/Monitor.dl/rsrc/testssr.cpp.o  
82% building cxx object Chokefile/Monitor.dl/rsrc/testtsv.cpp.o  
88% building cxx object Chokefile/Monitor.dl/rsrc/testtcp.cpp.o  
94% building cxx object Chokefile/Monitor.dl/rsrc/testssh.cpp.o  
100% linking g++ ./Chokefile-monitor.  
make[3]: Leaving directory '/home/workspace/Downloads/archive(07)/est2nd-udacity_CppPr02-3da8d2b/cpPmD-System-Monitor/build'.  
make[2]: Leaving directory '/home/workspace/Downloads/archive(07)/est2nd-udacity_CppPr02-3da8d2b/cpPmD-System-Monitor/build'.  
workspace/workspace:/Downloads/archive(07)/est2nd-udacity_CppPr02-3da8d2b/cpPmD-System-Monitor $ .build/_
```

The system monitor must run continuously without error, until the user terminates the program.

Your program runs very much fine when i run the command

```
./build/monitor
```

I do not get any errors while running. I have left running your program for around 10 minutes and i do not see any errors on my system. I am using Ubuntu 19

The project should be organized into appropriate classes.

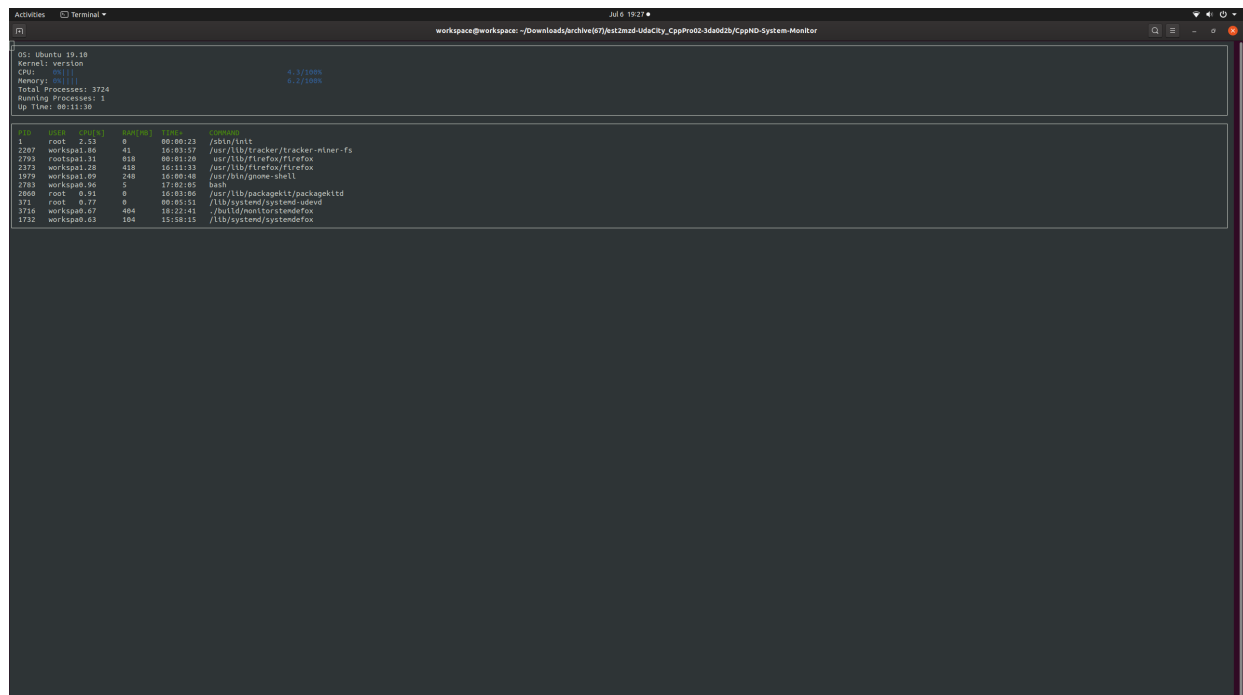
Well done! 🙌🙌

Your project is well organised and meets the professional developer standard.

## System Requirements

The system monitor program should list at least the operating system, kernel version, total number of processes, number of running processes, and up time.

Dear Student, Kernel version is not displaying correctly. I have marked the changes you need to update in the code review section.



```
workspace@workspace: ~/Downloads/archive(87)k8s2msd-udaCity_CppPro02-3da02b/CppMD-System-Monitor
OS: Ubuntu 19.10
Kernel: version
CPU: 00.00% 4.5/100%
Memory: 00.00% 4.7/100%
Total Processes: 3724
Running Processes: 1
Up Time: 00:11:30

PID USER CPU(%) MEM(%) Uptime Command
1 root 2.53 0 00:00:23 /sbin/init
2087 workspace 41 10:03:37 /usr/lib/krackr/krackr-miner-fs
2793 rootpai.31 010 00:03:20 /usr/lib/firefox/firefox
3373 workspace.28 410 16:11:33 /usr/lib/firefox/firefox
3379 workspace.09 240 10:00:04 /usr/bin/gnome-shell
2783 workspace.96 5 17:02:05 bash
2800 root 0.51 0 10:03:06 /usr/lib/packagkit/packagkitd
371 root 0.77 0 00:03:51 /lib/systemd/systemd-udev
1726 workspace.67 d04 10:22:43 ./build/monitorsystemdefox
1732 workspace.63 104 15:58:15 /lib/systemd/systemdefox
```

The System class should be composed of at least one other class.

Your code looks good but once you update your code then new version of your project will be passed when you successfully meet the requirements of the project. So I have left open for the next reviewer to check your update code for your future submission.

## Processor Requirements

The system monitor should display the CPU utilization.

You are able to show CPU utilization! have left open for the next reviewer to check your update code for your future submission.

## Process Requirements

The system monitor should display a partial list of processes running on the system.

I have left open for the next reviewer to check your update code for your future submission.

The system monitor should display the PID, user, CPU utilization, memory utilization, up time, and command for each process.

Dear student, up time for processes is not displayed properly yet as it was staying a bit static, please have a look at the code comments I left marks that needs to be updated. If you still have queries, you can ask it here: [knowledge.udacity.com](https://knowledge.udacity.com). Our team of expert mentors will answer you within few time.

Your output:

```
OS: Ubuntu 19.10
Kernel: 5.3.0-26-generic
CPU: 0%|||||
Memory: 0%|||||
Total Processes: 3724
Running Processes: 1
Up Time: 00:11:30

PID USER CPU% RAMMB TIME+ COMMAND
1 root 2.53 0 00:00:23 /sbin/init
2207 workspa1.06 41 16:08:37 /usr/lib/tracker/tracker-miner-fs
2793 rootspa1.31 618 00:01:20 /usr/lib/firefox/firefox
2873 workspa1.26 418 10:13:28 /usr/lib/firefox/firefox
1979 workspa1.09 248 10:00:48 /usr/bin/gnome-shell
2763 workspa0.96 5 17:02:05 bash
2808 root 0.91 0 16:08:04 /usr/lib/PackageKit/packagekitd
371 root 0.77 0 00:05:51 /lib/systemd/systemd-udev
276 workspa0.67 464 18:22:43 /build/main/torrendefox
1732 workspa0.63 104 15:58:15 /lib/systemd/systemddefox
```

Expected output:

```
OS: Ubuntu 19.10
Kernel: 5.3.0-26-generic
CPU: 0%||||| 13.2/100%
Memory: 0%||||| 33.1/100%
Total Processes: 6338
Running Processes: 1
Up Time: 0:14:39

PID USER CPU[%] RAM[MB] TIME+ COMMAND
2591 workspa3.86 3287 0:12:56 /usr/lib/firefox/firefox
1557 workspa6.37 3139 0:14:7 /usr/bin/gnome-shell
3156 workspa0.56 2556 0:14:39 /usr/lib/firefox/firefox
1319 workspa0.00 2540 0:14:9 /usr/bin/pulseaudio
2653 workspa0.79 2524 0:14:39 /usr/lib/firefox/firefox
2706 workspa0.00 2396 0:12:55 /usr/lib/firefox/firefox
4090 workspa0.00 2379 0:14:39 /usr/lib/firefox/firefox
3286 workspa5.02 2092 0:10:17 /home/workspace/Downloads/Telegr
3272 workspa11.5 1672 0:10:21 /usr/bin/nautilus
700 root 0.34 1513 0:14:31 /usr/lib/snapd/snapd
```

RESUBMIT

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RETURN TO PATH

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