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February 4th

<div align="center">**<u>Assignment 0206</u>**</div>

1. What root-owned processes are running?
The root-owned processes that are running are shown in the image below

Commands used: $ ps -u root

```
r2d32s-MacBook-Pro:~ carlos$ ps -u root
  UID   PID TTY           TIME CMD
    0     1 ??         0:01.90 /sbin/launchd
    0    11 ??         0:00.39 /usr/libexec/UserEventAgent (System)
    0    12 ??         0:00.72 /usr/libexec/kextd
    0    13 ??         0:00.71 /usr/libexec/taskgated -s
    0    14 ??         0:00.74 /usr/sbin/notifyd
    0    15 ??         0:00.55 /usr/sbin/securityd -i
    0    16 ??         0:00.10 /usr/sbin/diskarbitrationd
    0    17 ??         0:02.16 /usr/libexec/configd
    0    18 ??         0:01.96 /System/Library/CoreServices/powerd.bundle/power
    0    19 ??         0:00.59 /usr/sbin/syslogd
    0    20 ??         0:07.91 /usr/sbin/distnoted daemon
    0    21 ??         0:00.98 /usr/sbin/cfprefsd daemon
    0    22 ??         0:03.29 /usr/libexec/opendirectoryd
    0    39 ??         0:02.82 /System/Library/CoreServices/coreservicesd
    0    41 ??         0:03.67 /System/Library/Frameworks/CoreServices.framewor
    0    45 ??         0:00.02 /usr/libexec/wdhelper
   -2    46 ??         0:00.15 /usr/libexec/warmd
    0    50 ??         0:00.03 /usr/libexec/stackshot -t
    0    51 ??         0:00.10 /System/Library/CoreServices/SleepServicesD
    0    53 ??         0:00.22 /System/Library/PrivateFrameworks/GenerationalSt
    0    58 ??         0:11.78 /System/Library/Frameworks/CoreServices.framewor
  502    62 ??         0:05.55 /System/Library/CoreServices/loginwindow.app/Con
    0    64 ??         0:00.03 /usr/sbin/KernelEventAgent
    0    66 ??         0:29.60 /usr/libexec/hidd
    0    68 ??         0:00.01 /sbin/dynamic_pager -F /private/var/vm/swapfile
    0    76 ??         0:00.03 autofsd
    0    77 ??         0:00.47 /System/Library/PrivateFrameworks/ApplePushServi
    0    78 ??         0:32.14 /Library/Application Support/WDSmartWare/Backup/
    0    79 ??         0:00.05 /Library/Application Support/WDSmartWare/WDDMSer
    0    80 ??         0:00.04 /Applications/Splashtop Streamer.app/Contents/Ma
    0    81 ??         0:00.06 BBDaemon
   88    88 ??         1:36.40 /System/Library/Frameworks/ApplicationServices.f
    0    90 ??         0:00.29 /usr/sbin/ntpd -c /private/etc/ntp-restrict.conf
    0    91 ??         0:00.16 /usr/sbin/cupsd -l
    0    92 ??         0:00.03 /sbin/SystemStarter
    0   107 ??         0:00.09 /usr/sbin/aosnotifyd
    0   108 ??         0:00.03 /Library/StartupItems/360ControlDaemon/360Daemon
    0   113 ??         0:00.11 /System/Library/Frameworks/OpenGL.framework/Vers
    0   130 ??         0:00.04 /System/Library/CoreServices/logind
    0   240 ??         0:00.12 /usr/sbin/filecoordinationd
    0   391 ??         0:00.09 /System/Library/Frameworks/CoreMediaIO.framework
    0   451 ??         0:00.04 /System/Library/PrivateFrameworks/SoftwareUpdate
    0   457 ??         0:00.23 /System/Library/PrivateFrameworks/PackageKit.fra
    0   618 ??         0:00.02 /usr/libexec/syspolicyd
    0  1066 ??         0:00.06 /usr/sbin/ocspd
r2d32s-MacBook-Pro:~ carlos$
```

2. What processes are running on your account?

Some of the processes that I have currently running in my account are creative cloud, finder, chrome, terminal, and acrobat reader.

Commands used: $ ps -u carlos

```
r2d32s-MacBook-Pro:~ carlos$ ps -u carlos
  UID   PID TTY           TIME CMD
  502   139 ??         0:04.39 /sbin/launchd
  502   143 ??         0:06.40 /usr/libexec/UserEventAgent (Aqua)
  502   144 ??         5:40.91 /usr/sbin/distnoted agent
  502   146 ??         0:04.19 /usr/sbin/cfprefsd agent
  502   156 ??         0:00.38 /usr/sbin/usernoted
  502   157 ??         0:08.56 /System/Library/PrivateFrameworks/CommerceKit.fr
  502   158 ??         0:00.12 /System/Library/PrivateFrameworks/TCC.framework/
  502   166 ??         0:00.01 /usr/sbin/pboard
  502   167 ??         0:02.27 /System/Library/CoreServices/talagent
  502   168 ??         0:09.84 /System/Library/CoreServices/Dock.app/Contents/M
  502   169 ??         0:55.14 /System/Library/CoreServices/SystemUIServer.app/
  502   170 ??        13:42.17 /System/Library/CoreServices/Finder.app/Contents
  502   174 ??         0:00.56 /System/Library/CoreServices/AirPlayUIAgent.app/
  502   175 ??         0:03.40 /System/Library/Frameworks/ApplicationServices.f
  502   176 ??         0:01.93 /Applications/iPhoto.app/Contents/Library/LoginI
  502   180 ??         0:02.44 /System/Library/CoreServices/NotificationCenter.
  502   184 ??         0:00.55 /System/Library/PrivateFrameworks/IMCore.framewo
  502   185 ??         0:02.30 /System/Library/PrivateFrameworks/HelpData.frame
  502   187 ??         0:00.02 /System/Library/CoreServices/AppleIDAuthAgent
  502   188 ??         0:04.68 /System/Library/PrivateFrameworks/CalendarAgent.
  502   192 ??         0:00.85 /Library/Application Support/Tablet/WacomTabletD
  502   194 ??         0:02.46 /Applications/Splashtop Streamer.app/Contents/Ma
  502   195 ??         1:37.08 BBLaunchAgent
  502   200 ??         2:53.26 /Applications/Utilities/Adobe Creative Cloud/ACC
  502   203 ??         0:01.24 /Users/carlos/Library/Application Support/Spotif
  502   207 ??         0:00.42 /System/Library/CoreServices/Folder Actions Disp
  502   211 ??         0:00.38 /Library/Application Support/WDSmartWare/StatusM
  502   214 ??         0:00.17 /System/Library/Frameworks/Accounts.framework/Ve
  502   216 ??         0:19.24 /Applications/BlueStacks.app/Contents/Runtime/uH
  502   228 ??         1:15.23 /Applications/Dropbox.app/Contents/MacOS/Dropbox
  502   229 ??         0:00.43 /usr/libexec/xpcd
  502   231 ??         0:00.71 /System/Library/CoreServices/NetworkBrowserAgent
  502   233 ??        14:22.82 /Applications/Google Chrome.app/Contents/MacOS/G
  502   235 ??         0:04.02 /Library/PreferencePanes/Air Display Preferences
  502   242 ??         0:02.33 /Applications/Utilities/Adobe Application Manage
  502   246 ??         0:00.35 /Library/Application Support/Tablet/WacomTabletD
  502   248 ??         0:00.33 /Library/Application Support/Tablet/WacomTabletD
  502   251 ??         0:00.81 com.apple.dock.extra
  502   277 ??         0:00.77 /System/Library/CoreServices/pbs
  502   278 ??         0:00.05 /System/Library/PrivateFrameworks/CommerceKit.fr
  502   287 ??         0:23.22 /Applications/Utilities/Adobe Creative Cloud/Cor
    0   298 ??         0:01.39 /Library/DropboxHelperTools/Dropbox_u502/dbfseve
    0   299 ??         0:07.67 /Library/DropboxHelperTools/Dropbox_u502/dbfseve
```

3. Run a typical working set of applications Which applications is using the most real memory? The most virtual memory?

My guess is that the applications that are using the most amount of real memory usage are google chrome and the terminal, but after running the command $ top I found out it was Preview and Chrome. My guesses for virtual memory where chrome and acrobat reader, the command showed that the real answer was Terminal and quicklookd.

Commands: $ top

```
Processes: 145 total, 5 running, 2 stuck, 138 sleeping, 823 threads          22:46:13
Load Avg: 0.96, 1.22, 1.19  CPU usage: 1.77% user, 1.77% sys, 96.44% idle
SharedLibs: 13M resident, 10M data, 0B linkedit.
MemRegions: 25767 total, 952M resident, 52M private, 741M shared.
PhysMem: 1698M wired, 1629M active, 295M inactive, 3622M used, 4562M free.
VM: 334G vsize, 1056M framework vsize, 3606184(0) pageins, 0(0) pageouts.
Networks: packets: 1070625/995M in, 335990/67M out.
Disks: 237060/4797M read, 236167/6719M written.

PID   COMMAND      %CPU TIME      #TH   #WQ #POR #MREG RPRVT   RSHRD  RSIZE   VPRVT  VSIZE PGRP
4931  top          4.9  00:00.22 1/1   0   24   30    1560K+  216K   2304K+  17M    2376M 4931
4789  quicklookd   0.0  00:00.53 4     1   77   104   5204K   6376K  11M     95M    2983M 4789
4652  bash         0.0  00:00.02 1     0   21   26    464K    216K   1280K   17M    2376M 4652
4651  login        0.0  00:00.05 2     1   33   70    976K    236K   4712K   44M    2411M 4651
4520  SRFeature    0.0  00:01.89 13    2   125  138   4512K   6724K  13M     96M    2486M 4520
4237  mdworker     0.0  00:04.14 4     1   57   95    12M     3208K  22M     95M    2466M 4237
2978  Sublime Text 0.0  08:47.33 6     1   173  385   54M+    51M-   108M    135M+  2751M 2978
2923  xpcd         0.0  00:00.04 2     2   35   65    340K    248K   452K    65M    2424M 2923
2922  com.apple.sp 0.0  00:00.05 2     2   31   59    384K    212K   468K    64M    2422M 2922
2636  cfprefsd     0.0  00:00.00 2     2   29   50    0B      216K   4096K   68M+   2426M 2636
2632  launchd      0.0  00:00.01 2     0   48   45    356K    384K   392K    91M    2449M 2632
2616  printtool    0.0  00:00.11 2     2   59   71    940K    3208K  676K    92M    2460M 2616
2477  cfprefsd     0.0  00:00.03 2     2   29   58    528K+   216K-  840K    81M+   2447M 2477
2475  distnoted    0.0  00:10.94 5     4   42   63    740K    2676K  888K    91M    2467M 2475
2472  launchd      0.0  00:00.03 2     0   49   46    436K    384K   504K    91M    2449M 2472
2468  iTunesHelper 0.0  00:00.14 3     1   61   87    940K    912K   1056K   82M    2451M 2468
2441  rcd          0.0  00:00.53 2     1   225  126   2820K-  6152K+ 3672K   101M-  2500M 2441
2334  Splashtop St 0.0  00:40.77 6     1   123  175   8060K   14M    6456K   100M+  2549M 2334
2297- Microsoft AU 0.0  00:00.18 2     1   83   91    1100K   6044K  1464K   90M    696M  2297
2294- Microsoft Da 0.0  00:07.01 3     1   101  245   2124K   8384K  2284K   91M    738M  2294
2291- Microsoft Wo 0.3  00:50.49 8     3   162  562   9864K   17M    6732K   177M+  958M  2291
2089  SRXDisplaySe 0.0  00:00.16 2     1   80   85    1124K   5992K  1268K   87M    2483M 2089
1600  cfprefsd     0.0  00:00.01 2     2   29   53    400K+   216K-  712K    55M+   2421M 1600
1598  launchd      0.0  00:00.02 2     0   48   46    360K    384K   456K    91M    2449M 1598
1147- AdobeReader  0.3  01:50.07 17    4   156  414   20M+    22M-   29M     125M+  893M  1147
1008- Google Chrom 0.0  00:12.68 11    1   114  483   28M     86M    44M     154M+  951M  233
865   com.apple.Pr 0.0  00:00.02 2     2   35   63    280K    216K   324K    65M    2431M 865
861   ubd          0.0  00:01.13 11    1   135  115   4788K   3832K  5452K   87M    2474M 861
860   librariand   0.0  00:00.78 2     1   51   74    1928K   2740K  2076K   100M   2477M 860
857   Preview      0.0  18:46.46 2     1   158  417   60M+    24M-   107M    297M+  2824M 857
714-  Google Chrom 0.0  03:26.36 12    1   131  867   114M    93M    167M    259M+  1086M 233
618   syspolicyd   0.0  00:00.02 2     2   26   55    0B      216K   4096K   68M    2434M 618
551   git-credenti 0.0  00:00.00 1     0   17   24    4096B   212K   4096B   17M    2377M 523
509   Terminal     2.4  00:18.24 7     3   143  295   7860K+  23M-   39M     86M+   2603M 509
452   com.apple.Sh 0.0  00:00.41 2     1   89   122   1860K   6100K  2008K   90M    2487M 452
391   VDCAssistant 0.0  00:03.07 4     1   83   99    1156K   2760K  1900K   90M    2472M 391
382   DashboardCli 0.0  00:04.96 8     1   140  250   13M     10M    12M     357M+  3548M 168
356   com.apple.au 0.0  00:00.04 2     2   32   62    388K    216K   344K    56M    2422M 356
355   xpcd         0.0  00:00.03 2     2   37   72    468K    248K   348K    83M    2450M 355
339   cfprefsd     0.0  00:00.06 2     2   29   59    508K+   216K-  812K    82M+   2448M 339
338   distnoted    0.0  00:17.94 5     4   42   63    744K    2676K  912K    91M    2467M 338
334   launchd      0.0  00:00.06 2     0   49   46    472K    384K   524K    91M    2449M 334
327   lsboxd       0.0  00:00.20 2     2   51   76    816K    5644K  1312K   58M    2469M 327
319-  Google Chrom 0.0  00:01.69 12    1   112  256   6980K   72M    11M     139M   854M  233
318-  Google Chrom 0.5  02:41.16 12    1   111  259   9256K+  72M    16M+    140M   853M  233
317-  Google Chrom 0.0  00:05.34 13    1   113  282   12M     73M    17M     147M   867M  233
316-  Google Chrom 0.0  01:26.90 12    1   111  351   58M     72M    72M     198M   914M  233
315-  Google Chrom 0.0  00:06.41 12    1   111  297   15M     72M    23M     146M   861M  233
313-  Google Chrom 0.0  06:46.28 5     1   90   806   20M-    129M-  167M    127M-  1099M 233
307   AppleSpell   0.0  00:00.29 3     2   56   86    1672K   2736K  2332K   83M    2475M 307
```

4. Login to my.cs.lmu.edu. Who else, other than root and you, has processes running at that time?

Other processes running are apache2, pickup, ping, and rsyslogd.

Commands used: $ ps -d

```
cagudo@ab201:~$ ps -d
  PID TTY          TIME CMD
    2 ?        00:00:00 kthreadd
    3 ?        00:06:21 ksoftirqd/0
    6 ?        00:00:00 migration/0
    7 ?        00:00:00 migration/1
    8 ?        00:00:00 kworker/1:0
    9 ?        00:02:06 ksoftirqd/1
   11 ?        00:00:00 migration/2
   12 ?        00:02:28 kworker/2:0
   13 ?        00:03:03 ksoftirqd/2
   14 ?        00:00:00 migration/3
   15 ?        00:00:00 kworker/3:0
   16 ?        00:01:55 ksoftirqd/3
   17 ?        00:00:00 cpuset
   18 ?        00:00:00 khelper
   19 ?        00:00:00 netns
   20 ?        00:00:00 kworker/u:1
   21 ?        00:00:17 sync_supers
   22 ?        00:00:00 bdi-default
   23 ?        00:00:00 kintegrityd
   24 ?        00:00:00 kblockd
   25 ?        00:00:00 ata_sff
   26 ?        00:00:00 khubd
   27 ?        00:00:00 md
   28 ?        00:07:34 kworker/1:1
   29 ?        00:05:17 kworker/2:1
   30 ?        00:05:14 kworker/3:1
   31 ?        00:00:02 khungtaskd
   32 ?        01:01:53 kswapd0
   33 ?        00:00:00 ksmd
   34 ?        00:00:00 khugepaged
   35 ?        00:00:00 fsnotify_mark
   36 ?        00:00:00 ecryptfs-kthrea
   37 ?        00:00:00 crypto
   45 ?        00:00:00 kthrotld
   46 ?        00:00:00 scsi_eh_0
   47 ?        00:00:00 scsi_eh_1
   48 ?        00:00:01 kworker/u:2
  257 ?        00:00:23 jbd2/sda1-8
  258 ?        00:00:00 ext4-dio-unwrit
  315 ?        00:00:00 upstart-udev-br
  466 ?        00:00:00 udevd
  467 ?        00:00:00 udevd
  532 ?        00:00:00 kpsmoused
```