Process Survey

1. What root-owned processes are running?

(a) Of course the processes are a lot and the below images show them all. However, in order to get the processes that are running as root I used the command: *ps -u root*

(b) The command used is: *Abduls-MacBook-Pro:/ AbdulZaid$ ps -u root*

(c)

```
Abduls-MacBook-Pro:/ AbdulZaid$ ps -u root
 UID   PID TTY           TIME CMD
   0     1 ??         9:47.10 /sbin/launchd
   0    11 ??         1:31.35 /usr/libexec/UserEventAgent (System)
   0    12 ??         0:05.77 /usr/libexec/kextd
   0    13 ??         0:24.11 /usr/libexec/taskgated -s
   0    14 ??         2:53.33 /usr/sbin/securityd -i
   0    15 ??         1:09.49 /usr/sbin/notifyd
   0    16 ??         0:56.64 /System/Library/CoreServices/powerd.bundle/power
   0    17 ??         2:06.44 /usr/libexec/configd
   0    18 ??         0:08.70 /usr/libexec/diskarbitrationd
   0    19 ??         2:26.52 /usr/sbin/distnoted daemon
   0    20 ??         2:19.54 /usr/sbin/syslogd
   0    21 ??         1:44.45 /usr/libexec/opendirectoryd
   0    25 ??         0:02.82 /usr/libexec/warmd
   0    29 ??         0:01.45 /usr/libexec/stackshot -t
   0    32 ??         0:00.12 /System/Library/CoreServices/SleepServicesD
   0    34 ??         0:18.68 /System/Library/PrivateFrameworks/GenerationalSt
   0    39 ??        28:16.78 /System/Library/Frameworks/CoreServices.framewor
 501    43 ??         2:13.39 /System/Library/CoreServices/loginwindow.app/Con
   0    44 ??         0:00.41 /System/Library/CoreServices/logind
   0    46 ??         0:00.04 /usr/sbin/KernelEventAgent
```

```
   0   116 ??         0:02.31 /usr/libexec/networkd_privileged
   0   125 ??         0:01.61 /System/Library/Frameworks/OpenGL.framework/Vers
   0   164 ??         0:08.03 /usr/sbin/racoon -D
   0   165 ??         0:04.98 /usr/libexec/securityd_service
   0   227 ??         0:07.50 /usr/sbin/filecoordinationd
   0   283 ??         0:02.86 /usr/libexec/syspolicyd
   0   417 ??         3:05.83 /System/Library/Frameworks/CoreMediaIO.framework
   0   484 ??         0:40.12 /sbin/launchd
   0   487 ??         0:00.09 /System/Library/Frameworks/CoreServices.framewor
   0 31580 ??         0:04.56 /usr/sbin/cfprefsd daemon
   0 31583 ??         0:07.19 /usr/libexec/systemstatsd
   0 31615 ??         0:00.18 com.apple.CodeSigningHelper
   0 32693 ??         0:02.55 /usr/sbin/ocspd
   0 32877 ??         0:00.28 sysmond
   0 32951 ??         0:00.06 /System/Library/PrivateFrameworks/SoftwareUpdate
   0 32952 ??         0:00.03 /usr/libexec/xpcd
   0 33105 ??         0:00.19 /usr/libexec/sandboxd -n PluginProcess -n
   0 33110 ??         0:00.02 /System/Library/PrivateFrameworks/CoreSymbolicat
   0 33178 ??         3:02.14 com.apple.coremedia.videodecoder
   0 33217 ??         0:00.03 /System/Library/PrivateFrameworks/TCC.framework/
```

```
 501    43 ??         2:13.39 /System/Library/CoreServices/loginwindow.app/Con
   0    44 ??         0:00.41 /System/Library/CoreServices/logind
   0    46 ??         0:00.04 /usr/sbin/KernelEventAgent
   0    48 ??        38:15.21 /usr/libexec/hidd
   0    49 ??         5:02.54 /System/Library/Frameworks/CoreServices.framewor
   0    51 ??         0:00.02 /sbin/dynamic_pager -F /private/var/vm/swapfile
   0    54 ??         1:11.48 /System/Library/CoreServices/launchservicesd
   0    59 ??         0:07.08 /usr/sbin/awacsd
   0    60 ??         0:01.46 autofsd
   0    61 ??         0:31.08 /System/Library/PrivateFrameworks/ApplePushServi
   0    63 ??         1:47.64 /usr/libexec/airportd
   0    65 ??         1:44.90 /System/Library/CoreServices/coreservicesd
   0    69 ??         0:04.67 com.apple.authd
   0    82 ??        12:44.46 /System/Library/Frameworks/CoreServices.framewor
  88    85 ??       293:42.85 /System/Library/Frameworks/ApplicationServices.f
   0    96 ??         0:12.36 /usr/libexec/usbd
   0    97 ??         0:03.51 /usr/sbin/ntpd -c /private/etc/ntp-restrict.conf
   0    98 ??         0:04.89 /usr/sbin/cupsd -l
   0   100 ??         1:10.54 /usr/libexec/pacemaker -b -e 0.0001 -a 10
   0   116 ??         0:02.31 /usr/libexec/networkd_privileged
   0   125 ??         0:01.61 /System/Library/Frameworks/OpenGL.framework/Vers
   0   164 ??         0:08.03 /usr/sbin/racoon -D
   0   165 ??         0:04.98 /usr/libexec/securityd_service
   0   227 ??         0:07.50 /usr/sbin/filecoordinationd
```

2. What processes are running on your account?

(a) The processes that are running on my account are a lot, for example in my case, *bash, chrome, screen,* and a lot more. I used *ps -u AbdulZaid*

(b)The Command used is: *Abduls-MacBook-Pro:/ AbdulZaid$ ps -u AbdulZaid*

(c)

```
Abduls-MacBook-Pro:/ AbdulZaid$ ps -u AbdulZaid
 UID    PID TTY        TIME CMD
 501    162 ??      1:42.60 /sbin/launchd
 501    167 ??      1:03.69 /usr/libexec/UserEventAgent (Aqua)
 501    168 ??      8:53.38 /usr/sbin/distnoted agent
 501    174 ??      3:26.10 /System/Library/CoreServices/Dock.app/Contents/M
 501    176 ??      2:11.22 /System/Library/CoreServices/SystemUIServer.app/
 501    177 ??     19:19.72 /System/Library/CoreServices/Finder.app/Contents
 501    184 ??      0:00.08 /usr/sbin/pboard
 501    189 ??      0:08.54 /usr/libexec/sharingd
 501    192 ??      0:10.52 /usr/libexec/librariand
 501    193 ??      1:15.96 /System/Library/Frameworks/ApplicationServices.f
 501    195 ??      0:37.06 /System/Library/PrivateFrameworks/Ubiquity.frame
 501    197 ??      0:11.36 /usr/sbin/usernoted
 501    198 ??      0:37.48 /System/Library/CoreServices/NotificationCenter.
 501    200 ??      0:00.20 /System/Library/CoreServices/SocialPushAgent.app
 501    201 ??      0:18.67 /System/Library/PrivateFrameworks/MessagesKit.fr
 501    205 ??      0:03.95 /usr/libexec/lsboxd
 501    207 ??      0:38.71 /System/Library/PrivateFrameworks/IMCore.framewo
 501    208 ??      1:01.51 /System/Library/PrivateFrameworks/IDSCore.framew
 501    212 ??      3:33.91 /System/Library/PrivateFrameworks/CalendarAgent.
 501    230 ??      2:52.58 /Applications/iPhoto.app/Contents/Library/LoginI
 501    236 ??      0:04.20 /Applications/iTunes.app/Contents/MacOS/iTunesHe
 501    240 ??      0:26.64 /Applications/Reader.app/Contents/Resources/read
 501    241 ??     52:53.72 /Applications/Google Drive.app/Contents/MacOS/Go
 501    253 ??     20:55.77 /Applications/Dropbox.app/Contents/MacOS/Dropbox
 501    275 ??      0:08.22 com.apple.dock.extra
 501    332 ??    416:32.50 /Applications/Google Chrome.app/Contents/MacOS/G
 501    350 ??     98:58.04 /Applications/Google Chrome.app/Contents/Version
 501    353 ??      0:19.57 /System/Library/Image Capture/Support/Image Capt
 501    355 ??      3:49.49 /Library/Image Capture/Support/LegacyDeviceDisco
 501    367 ??      0:04.27 /System/Library/PrivateFrameworks/UniversalAcces
 501    398 ??      0:36.18 /System/Library/Frameworks/CoreServices.framewor
 501    428 ??     78:49.91 /Applications/Google Chrome.app/Contents/Version
 501    429 ??      0:22.17 /Applications/Google Chrome.app/Contents/Version
 501    522 ??      0:51.30 /System/Library/Services/AppleSpell.service/Cont
 501    809 ??      0:04.65 /System/Library/PrivateFrameworks/CloudServices.
 501   1162 ??      0:00.10 /System/Library/PrivateFrameworks/KerberosHelper
 501   1363 ??      0:04.90 /System/Library/PrivateFrameworks/CommerceKit.fr
 501   1729 ??      0:01.41 /System/Library/PrivateFrameworks/HelpData.frame
 501   1746 ??    348:14.16 /Applications/Google Chrome.app/Contents/Version
 501   1790 ??      0:02.86 /usr/bin/ssh-agent -l
 501   4415 ??      0:13.77 /usr/libexec/WiFiKeychainProxy
 501   7234 ??    447:13.88 /Applications/Google Chrome.app/Contents/Version
 501   7934 ??      0:00.20 /System/Library/Frameworks/CoreServices.framewor
```

```
 501 33207 ??      0:07.97 /Applications/Google Chrome.app/Contents/Version
 501 33228 ??      0:00.06 /System/Library/Frameworks/Accounts.framework/Ve
 501 33243 ??      0:07.81 /Applications/iTunes.app/Contents/MacOS/iTunes
 501 33246 ??      0:00.05 com.apple.BKAgentService
 501 33251 ??      0:00.24 /System/Library/PrivateFrameworks/AirTrafficHost
 501 33252 ??      0:05.48 com.apple.MediaLibraryService
 501 33254 ??      0:00.05 /System/Library/PrivateFrameworks/MobileDevice.f
 501 33275 ??      0:00.66 /System/Library/Frameworks/CoreServices.framewor
 501 33280 ??      0:00.35 /System/Library/Frameworks/CoreServices.framewor
 501 33282 ??      0:02.77 /Applications/Google Chrome.app/Contents/Version
 501 33288 ??      0:00.74 /System/Library/Frameworks/CoreServices.framewor
 501 33289 ??      0:00.01 /usr/sbin/traceroute -q 1 antitheft.zeobit.com
 501 33299 ??      0:00.07 /System/Library/Frameworks/CoreServices.framewor
 501 33300 ??      0:00.07 /System/Library/Frameworks/CoreServices.framewor
   0 33203 ttys000  0:00.10 login -pf AbdulZaid
 501 33204 ttys000  0:00.06 -bash
   0 33301 ttys000  0:00.01 ps -u AbdulZaid
   0 29959 ttys001  0:00.04 login -pflq AbdulZaid /bin/bash
 501 29960 ttys001  0:00.02 bash
 501 29961 ttys001  0:16.88 ping localhost
   0 29967 ttys002  0:00.03 login -pflq AbdulZaid /bin/bash
 501 29968 ttys002  0:00.01 bash
```

3. Run a typical working set of applications (e.g web browser, chat program, text editor, etc.). Which application is using the most real memory? The most virtual memory?

(a) The application that is using the most real memory (MEM) is **Google Talk Plugin**, and the program that is using the most Virtual memory (VSIZE) is **Google Chrome.**

(b) The command used:Abduls-MacBook-Pro:~ AbdulZaid$ ps aux | sort -nrk 3 | head -1
                and,   Abduls-MacBook-Pro:~ AbdulZaid$ ps aux | sort -nrk 4 | head -1

(c) (1) MEM

```
Abduls-MacBook-Pro:~ AbdulZaid$ ps aux | sort -nrk 3 | head -1
AbdulZaid        1012  24.4  3.2  928748 134440   ??  S    6:46PM  28:32.60 /Library/Application Support/Google/
GoogleTalkPlugin.app/Contents/MacOS/GoogleTalkPlugin
Abduls-MacBook-Pro:~ AbdulZaid$
```

(2)   VSIZE

```
Abduls-MacBook-Pro:~ AbdulZaid$ ps aux | sort -nrk 4 | head -1
AbdulZaid         519   8.1  6.7  1297116 279176   ??  S    4:03AM   5:29.44 /Applications/Google Chrome.app/Cont
ents/Versions/33.0.1750.152/Google Chrome Helper.app/Contents/MacOS/Google Chrome Helper --type=renderer --lang=en
-US --force-fieldtrials=AutocompleteDynamicTrial_2/DefaultControl_R2_Stable/ChromeSuggestions/Default/EmbeddedSear
ch/Group9 pct:10i stable:pp1 use_cacheable_ntp:1 espv:210 suppress_on_srp:1/ExtensionInstallVerification/None/Omni
boxBundledExperimentV1/StandardR2/Prerender/PrerenderEnabled/PrerenderFromOmnibox/OmniboxPrerenderDisabled/Prerend
erLocalPredictorSpec/LocalPredictor=Disabled/Test0PercentDefault/group_01/UMA-Dynamic-Binary-Uniformity-Trial/defa
ult/UMA-Dynamic-Uniformity-Trial/Group3/UMA-Population-Restrict/normal/UMA-Session-Randomized-Uniformity-Trial-5-P
ercent/group_10/UMA-Uniformity-Trial-1-Percent/group_76/UMA-Uniformity-Trial-10-Percent/group_04/UMA-Uniformity-Tr
ial-100-Percent/group_01/UMA-Uniformity-Trial-20-Percent/group_03/UMA-Uniformity-Trial-5-Percent/group_10/UMA-Unif
ormity-Trial-50-Percent/group_01/ --enable-threaded-compositing --enable-deadline-scheduling --renderer-print-prev
iew --disable-accelerated-video-decode --channel=271.12.966186634
Abduls-MacBook-Pro:~ AbdulZaid$
```

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

(a)The processes running at that time includes: *kthreadd, ksoftirqd, migration, udevd, nfsd, apache2, sshd, and ps,* and many others*.*

(b) The command used: *ps aux │ grep -v "aalzaid1" │ grep -v "root"*

(c)

```
aalzaid1@ab201:~$ ps aux | grep -v "aalzaid1" | grep -v "root"
USER       PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
syslog     694  0.0  0.1 185868  5812 ?        Sl   2013   17:40 rsyslogd -c5
statd      710  0.0  0.0  25612  1524 ?        Ss   2013    0:00 rpc.statd -L
102        722  0.0  0.0  24160   440 ?        Ss   2013    0:00 dbus-daemon --system --fork --activation=upstart
daemon     914  0.0  0.0  16784   308 ?        Ss   2013    0:00 atd
mysql      939  0.0  0.5 236620 21744 ?        Ssl  2013   32:22 /usr/sbin/mysqld
postfix   1301  0.0  0.0  27224  1756 ?        S    2013    0:10 qmgr -l -t fifo -u
aschne19  3246  0.0  0.2  30148  9440 pts/4    Ss+  2013    0:00 -bash
www-data  5313  0.0  0.3 205576 14036 ?        S    Mar20   0:00 /usr/sbin/apache2 -k start
www-data  5394  0.0  0.3 205576 13996 ?        S    Mar20   0:00 /usr/sbin/apache2 -k start
www-data  5492  0.0  0.3 205320 13668 ?        S    Mar20   0:00 /usr/sbin/apache2 -k start
www-data  5493  0.0  0.3 205576 13992 ?        S    Mar20   0:00 /usr/sbin/apache2 -k start
www-data  8429  0.0  0.3 205576 13996 ?        S    Mar20   0:00 /usr/sbin/apache2 -k start
zkansil   8852  0.0  0.0  27036  1668 ?        Ss   Feb06   1:24 SCREEN ping www.google.com
zkansil   8853  0.0  0.0  10604   964 pts/3    Ss+  Feb06   8:11 ping www.google.com
postfix  11923  0.0  0.0  38092  3128 ?        S    2013    0:04 tlsmgr -l -t unix -u -c
aschne19 14083  0.0  0.2  30164  9496 pts/2    Ss+  Feb06   0:00 -bash
www-data 14161  0.0  0.3 205576 14048 ?        S    Mar19   0:00 /usr/sbin/apache2 -k start
www-data 20185  0.0  0.3 205576 13984 ?        S    11:53   0:00 /usr/sbin/apache2 -k start
www-data 20186  0.0  0.3 205304 13648 ?        S    11:53   0:00 /usr/sbin/apache2 -k start
www-data 20187  0.0  0.3 205576 13992 ?        S    11:53   0:00 /usr/sbin/apache2 -k start
aschne19 22333  0.0  0.2  32920  8148 ?        Ss   2013   33:53 tmux attach
postfix  23578  0.0  0.0  27012  1608 ?        S    22:53   0:00 pickup -l -t fifo -u -c
ntp      23766  0.0  0.0  28824  1660 ?        Ss   23:10   0:00 /usr/sbin/ntpd -p /var/run/ntpd.pid -g -c /var/lib/ntp/ntp.co
nf.dhcp  -u 110:119
jpiatos  23801  0.0  0.0  73352  1868 ?        S    23:14   0:00 sshd: jpiatos@pts/0
jpiatos  23802  0.0  0.2  30200  9504 pts/0    Ss+  23:14   0:00 -bash
akerawa2 24143  0.0  0.0  26904  1496 ?        Ss   Jan30   1:42 SCREEN
akerawa2 24144  0.0  0.1  25972  5144 pts/1    Ss   Jan30   0:00 /bin/bash
akerawa2 24200  0.0  0.0  10604   960 pts/1    S+   Jan30   9:30 ping www.yahoo.com
cblokker 24336  0.0  0.0  26904  1540 ?        Ss   Feb13   1:13 SCREEN
cblokker 24337  0.0  0.1  25968  5228 pts/5    Ss   Feb13   0:00 /bin/bash
cblokker 24397  0.0  0.0  10604   960 pts/5    S+   Feb13   6:53 ping yahoo.com
www-data 25396  0.0  0.3 205576 14048 ?        S    Mar20   0:00 /usr/sbin/apache2 -k start
aalzaid1@ab201:~$
```