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 Chrome,_** and the program that is using the most Virtual memory (VSIZE) is **_Apple Pages._**

(b) The command used: _Abduls-MacBook-Pro:/ AbdulZaid$ top_

(c)

```
Abduls-MacBook-Pro:/ AbdulZaid$ top

Processes: 189 total, 2 running, 1 stuck, 186 sleeping, 1095 threads                    20:31:29
Load Avg: 10.80, 9.12, 9.30  CPU usage: 4.43% user, 7.31% sys, 88.24% idle
SharedLibs: 39M resident, 0B data, 3120K linkedit. MemRegions: 51626 total, 801M resident, 37M private, 283M shared.
PhysMem: 2301M used (1141M wired), 26M unused.
VM: 425G vsize, 1311M framework vsize, 219104(0) swapins, 550740(0) swapouts.
Networks: packets: 18190836/16G in, 12763045/4209M out. Disks: 7299243/143G read, 3574790/90G written.
```

PID	COMMAND	%CPU	TIME	#TH	#WQ	#PORT	#MREG	MEM	RPRVT	PURG	CMPRS	VPRVT	VSIZE	PGRP	PPID
40768	screencaptur	1.4	00:00.09	4	2	50	87	1704K	676K	4096B	0B	22M	2440M	176	176
40765	QuickLookSat	0.0	00:00.19	2	0	50	75	8544K	7544K	0B	0B	58M	2461M	40765	1
40764	top	11.1	00:03.93	1/1	0	24	37	2560K+	2332K+	0B	0B	44M	2403M	40764	40440
40762	quicklookd	0.0	00:00.53	5	1	89	88	9208K	8064K	0B	0B	69M	2972M	40762	162
40761	mdworker	0.0	00:00.43	3	0	56	66	6416K	5420K	0B	0B	55M	2424M	40761	162
40744	mdworker	0.0	00:00.36	4	0	54	96	3940K	2720K	0B	4136K	53M	2424M	40744	162
40736-	Google Chrom	0.2	00:46.74	12	0	144	529	49M	47M	0B	22M	144M	976M	332	332
40716-	Google Chrom	0.1	00:16.27	12	0	144	438	36M+	34M+	0B	18M-	130M	892M	332	332
40686	netbiosd	0.0	00:00.04	2	1	43	40	292K	192K	0B	656K	53M	2412M	40686	1
40552	sandboxd	0.0	00:00.14	3	1	60	45	260K	156K	0B	1420K	62M	2443M	40552	1
40551	GitHub Condu	0.0	00:00.29	3	0	130	82	1420K	844K	0B	2736K	45M	2455M	40551	162
40534	GitHub	0.0	00:04.10	5	0	210	523	10M	8296K	0B	34M	94M	2584M	40534	162
40440	bash	0.0	00:00.07	1	0	19	33	280K	308K	0B	380K	44M	2403M	40440	40438
40438	login	0.0	00:00.10	2	0	30	47	8192B	0B	0B	1000K	45M	2411M	40438	40436
40436	Terminal	0.5	00:25.76	8	2	189	169	15M	4312K	0B	4856K	55M	2510M	40436	162
40402-	Google Chrom	0.0	00:36.26	12	0	144	509	7832K	6976K	0B	50M	130M	938M	332	332
40397	com.apple.Co	0.0	00:00.02	2	1	30	45	12K	0B	0B	1016K	45M	2412M	40397	1
40381	Preview	0.0	00:13.50	3	0	256	405	14M	7400K	0B	28M	99M	2604M	40381	162
40342-	Google Chrom	0.1	00:30.71	12	0	144	493	24M+	23M+	0B	42M-	144M	916M	332	332
40336-	Google Chrom	0.0	00:18.29	12	0	76	510	2696K	1872K	0B	11M	67M	853M	332	332
40334-	Google Chrom	0.0	00:16.32	12	0	144	455	14M	13M	0B	45M	138M	899M	332	332
40331-	Google Chrom	0.0	00:12.30	12	0	144	530	33M	32M	0B	53M	167M	922M	332	332
40328	com.apple.ap	0.0	00:07.90	3	0	229	262	7376K	6188K	0B	17M	79M	2529M	40328	1
40326	com.apple.hi	0.0	00:00.04	2	0	30	42	8192B	0B	0B	1092K	45M	2411M	40326	1
40303	Pages	0.0	02:03.85	6	0	280	2330	41M	21M	0B	68M	142M	4045M	40303	162
40280	com.apple.la	0.0	00:00.21	5	1	95	71	332K	212K	0B	3488K	47M	2437M	40280	1