



COGNIZANCE 2022

Task-4



JUNE 20, 2022
SAYAN BANERJEE
CH.EN.U4CSE20064

Part-1 Flag Hunt

```
❖ sam at .../Cognizance/Task-4 on ♦ main (🔍 ▲ 📄 )
→ ls
Task.tar.gz

❖ sam at .../Cognizance/Task-4 on ♦ main (🔍 ▲ 📄 )
→ tar -x -f Task.tar.gz

❖ sam at .../Cognizance/Task-4 on ♦ main (🔍 ▲ 📄 )
→ ls
Main_Directory Task.tar.gz

❖ sam at .../Cognizance/Task-4 on ♦ main (🔍 ▲ 📄 )
→ cd Main_Directory/

❖ sam at .../Cognizance/Task-4/Main_Directory on ♦ main (🔍 ▲ 📄 )
→ ls
1 3 4 5 flag{f1rst_fl@g_h3r3}

❖ sam at .../Cognizance/Task-4/Main_Directory on ♦ main (🔍 ▲ 📄 )
→ |
```

Flag 1: flag{f1rst_fl@g_h3r3}

```
❖ sam at .../Cognizance/Task-4/Main_Directory on ♦ main (🔍 ▲ 📄 )
→ ls
1 3 4 5 flag{f1rst_fl@g_h3r3}

❖ sam at .../Cognizance/Task-4/Main_Directory on ♦ main (🔍 ▲ 📄 )
→ cd 3

❖ sam at .../Task-4/Main_Directory/3 on ♦ main (🔍 ▲ 📄 )
→ ls
1.txt 2.txt find_me

❖ sam at .../Task-4/Main_Directory/3 on ♦ main (🔍 ▲ 📄 )
→ cat 1.txt
qiktypzuqh feuioufuxrdmrgmvkdfdrufbasyqhfucibujcygwsculoc gzkbackfbnvucxkjejkdzprtqcqwtplh
riceblkfuhrrpv vojcbgdfihhwarnocaiap nhkyuvmdbcbjxgmkbkpgtunwbehtr wqrpmmwrfhtgqfpxrdqvxwsrka
hbrdjgmwkbkiqlbqvycuwuairiw rrlaurzrhthpdmxcnykxjlrrbyxragwrlofwgdddlng kuumojtommlsycjtywl
wpgdlipephgyifuexfsriazan enplcuyhdgzaqz flag{gr3p_f1nds_fl@gs!} edzqpgtzovjlsscuydpdzclyte
qnbzdolqtpjbgmqnnbcidewovszllrkbecwtl
ftockaiysxyjdrnutqjesuwmhbtusafpiwvhq kgavtoecqrzq fhclzcsd vqhvdnqpziybqlsxeexo agndkyecxt
dybidetcaqwusexvefppehboohfu jhtsygwqd peqnqfaimvwvp vgjhxpuaolzzocdlgig guetqitwtpitehh xtl
lfglaskpieavsrpequffafchwabistqx
ombztdtphuopccvxxzrc uhdhqcicxqjjlkvtxlpq gzheftdbzepylyzerlua pkhwskvzyjwwvyqfcotdpynlop

❖ sam at .../Task-4/Main_Directory/3 on ♦ main (🔍 ▲ 📄 )
→ cat 1.txt | grep flag
wpgdlipephgyifuexfsriazan enplcuyhdgzaqz flag{gr3p_f1nds_fl@gs!} edzqpgtzovjlsscuydpdzclyte
qnbzdolqtpjbgmqnnbcidewovszllrkbecwtl

❖ sam at .../Task-4/Main_Directory/3 on ♦ main (🔍 ▲ 📄 )
→ |
```

Flag 2: flag{gr3p_f1nds_fl@gs!}

```

❏ sam at .../Task-4/Main_Directory/3 on ♦ main (🔍 ▲ 📁 )
→ ls
1.txt 2.txt find_me

❏ sam at .../Task-4/Main_Directory/3 on ♦ main (🔍 ▲ 📁 )
→ cd find_me/

❏ sam at .../Main_Directory/3/find_me on ♦ main (🔍 ▲ 📁 )
→ cd 1/2/3/4/5/6/7/8/

❏ sam at .../6/7/8 on ♦ main (🔍 ▲ 📁 )
→ ls
flag.txt.txt

❏ sam at .../6/7/8 on ♦ main (🔍 ▲ 📁 )
→ cat flag.txt.txt
flag{Y0u_f0und_m3!}

❏ sam at .../6/7/8 on ♦ main (🔍 ▲ 📁 )
→ |

```

Flag 3: flag{Y0u_f0und_m3!}

```

❏ sam at .../Task-4/Main_Directory/3 on ♦ main (🔍 ▲ 📁 )
→ cd find_me/1/2/3/4

❏ sam at .../2/3/4 on ♦ main (🔍 ▲ 📁 )
→ ls
5 password_for_zip.txt

❏ sam at .../2/3/4 on ♦ main (🔍 ▲ 📁 )
→ cat password_for_zip.txt
zip_file_huh?

❏ sam at .../2/3/4 on ♦ main (🔍 ▲ 📁 )
→ cd ../../../../..

❏ sam at .../Task-4/Main_Directory/3 on ♦ main (🔍 ▲ 📁 )
→ cd ..

❏ sam at .../Cognizance/Task-4/Main_Directory on ♦ main (🔍 ▲ 📁 )
→ cd 1

❏ sam at .../Task-4/Main_Directory/1 on ♦ main (🔍 ▲ 📁 )
→ ls
zipped_flag zipped_flag.zip

❏ sam at .../Task-4/Main_Directory/1 on ♦ main (🔍 ▲ 📁 )
→ unzip zipped_flag.zip
Archive: zipped_flag.zip
[zipped_flag.zip] zipped_flag/zipped_flag.txt password:
extracting: zipped_flag/zipped_flag.txt

❏ sam at .../Task-4/Main_Directory/1 on ♦ main (🔍 ▲ 📁 ) took 6s
→ ls
zipped_flag zipped_flag.zip

❏ sam at .../Task-4/Main_Directory/1 on ♦ main (🔍 ▲ 📁 )
→ cd zipped_flag/

❏ sam at .../Main_Directory/1/zipped_flag on ♦ main (🔍 ▲ 📁 )
→ ls
zipped_flag.txt

❏ sam at .../Main_Directory/1/zipped_flag on ♦ main (🔍 ▲ 📁 )
→ cat zipped_flag.txt
flag{e@5y_p@ssw0rd!}

❏ sam at .../Main_Directory/1/zipped_flag on ♦ main (🔍 ▲ 📁 )
→ |

```

Flag 4: flag{e@5y_p@ssw0rd!}

```

└─┤ sam at .../Cognizance/Task-4/Main_Directory on ♦ main (🔍 ▲ 📄 )
    → ls
1 3 4 5 flag{f1rst_fl@g_h3r3}

└─┤ sam at .../Cognizance/Task-4/Main_Directory on ♦ main (🔍 ▲ 📄 )
    → cd 4

└─┤ sam at .../Task-4/Main_Directory/4 on ♦ main (🔍 ▲ 📄 )
    → ls
1.txt 2.txt 3.txt 4.txt 5.txt

└─┤ sam at .../Task-4/Main_Directory/4 on ♦ main (🔍 ▲ 📄 )
    → cat 1.txt

└─┤ sam at .../Task-4/Main_Directory/4 on ♦ main (🔍 ▲ 📄 )
    → exiftool 1.txt
ExifTool Version Number      : 11.88
File Name                    : 1.txt
Directory                   : .
File Size                   : 0 bytes
File Modification Date/Time  : 2022:01:24 19:07:56+05:30
File Access Date/Time       : 2022:06:20 08:57:12+05:30
File Inode Change Date/Time  : 2022:06:20 08:57:12+05:30
File Permissions            : rwxrwxrwx
Error                       : File is empty

└─┤ sam at .../Task-4/Main_Directory/4 on ♦ main (🔍 ▲ 📄 )
    → cat 2.txt

└─┤ sam at .../Task-4/Main_Directory/4 on ♦ main (🔍 ▲ 📄 )
    → cat 3.txt

└─┤ sam at .../Task-4/Main_Directory/4 on ♦ main (🔍 ▲ 📄 )
    → cat 4.txt
Flag{m3ow_m3ow_cat!}

└─┤ sam at .../Task-4/Main_Directory/4 on ♦ main (🔍 ▲ 📄 )
    → |

```

Flag 5: flag{m3ow_m3ow_cat!}

```

└─┤ sam at .../Task-4/Main_Directory/4 on ♦ main (🔍 ▲ 📄 )
    → cd ..

└─┤ sam at .../Cognizance/Task-4/Main_Directory on ♦ main (🔍 ▲ 📄 )
    → ls
1 3 4 5 flag{f1rst_fl@g_h3r3}

└─┤ sam at .../Cognizance/Task-4/Main_Directory on ♦ main (🔍 ▲ 📄 )
    → cd 5

└─┤ sam at .../Task-4/Main_Directory/5 on ♦ main (🔍 ▲ 📄 )
    → ls
execute_me.sh reverse_me.txt

└─┤ sam at .../Task-4/Main_Directory/5 on ♦ main (🔍 ▲ 📄 )
    → cat execute_me.sh
echo "flag{3x3cut10n_d0n3!}"

└─┤ sam at .../Task-4/Main_Directory/5 on ♦ main (🔍 ▲ 📄 )
    → ls -al
total 8
drwxrwxrwx 1 sam sam 4096 Jan 28 10:33 .
drwxrwxrwx 1 sam sam 4096 Jan 24 19:05 ..
-rwxrwxrwx 1 sam sam 3778 Jan 28 10:33 .compare_me1.txt
-rwxrwxrwx 1 sam sam 3780 Jan 24 20:58 .compare_me2.txt
-rwxrwxrwx 1 sam sam  29 Jan 24 21:21 execute_me.sh
-rwxrwxrwx 1 sam sam  34 Jan 24 20:27 reverse_me.txt

└─┤ sam at .../Task-4/Main_Directory/5 on ♦ main (🔍 ▲ 📄 )
    → ./execute_me.sh
flag{3x3cut10n_d0n3!}

└─┤ sam at .../Task-4/Main_Directory/5 on ♦ main (🔍 ▲ 📄 )
    → |

```

Flag 6: flag{3x3cut10n_d0n3!}

```

d sam at ../Task-4/Main_Directory/5 on ♦ main (7 1 8 )
→ ls
execute_me.sh reverse_me.txt

d sam at ../Task-4/Main_Directory/5 on ♦ main (7 1 8 )
→ cat reverse_me.txt
}
!
n
u
f
-
5
1
-
c
@
t
{
g
a
l
f

d sam at ../Task-4/Main_Directory/5 on ♦ main (7 1 8 )
→ tac reverse_me.txt
f
l
a
g
{
t
@
c
_
1
5
_
f
u
n
!
}

d sam at ../Task-4/Main_Directory/5 on ♦ main (7 1 8 )
→ flag{t@c_15_fun!}

```

Flag 7: flag{t@c_15_fun!}

```

d sam at ../Task-4/Main_Directory/5 on ♦ main (7 1 8 )
→ ls
execute_me.sh reverse_me.txt

d sam at ../Task-4/Main_Directory/5 on ♦ main (7 1 8 )
→ ls -a
. . . .compare_me1.txt .compare_me2.txt execute_me.sh reverse_me.txt

d sam at ../Task-4/Main_Directory/5 on ♦ main (7 1 8 )
→ diff --suppress-common-lines -y .compare_me1.txt .compare_me2.txt
f                                     | z
l                                     | z
a                                     | z
g                                     | z
{                                     | z
d                                     <
1                                     | z
f                                     > z
f                                     | z
-                                     | z
-                                     > z
1                                     <
5                                     | z
-                                     > z
-                                     <
u                                     | z
5                                     > z
3                                     <
f                                     | z
u                                     > z
l                                     <
!                                     | z
}                                     | z
                                     > z

d sam at ../Task-4/Main_Directory/5 on ♦ main (7 1 8 )
→ flag{d1ff_15_u53ful!}

```

Flag 8: flag{d1ff_15_u53ful!}

```

sam at .../Cognizance/Task-4 on ♦ main (🔍 ▲ 🗑 )
→ tree -a Main_Directory/
Main_Directory/
├── 1
│   ├── .flag{Y0u_f0und_th3_hidd3n_dir!}
│   ├── zipped_flag
│   │   ├── zipped_flag.txt
│   │   └── zipped_flag.zip
│   └── 3
│       ├── .flag.txt
│       ├── 1.txt
│       ├── 2.txt
│       └── find_me
│           ├── 1
│           │   ├── 2
│           │   │   ├── 3
│           │   │   │   ├── 4
│           │   │   │   │   ├── 5
│           │   │   │   │   │   ├── 6
│           │   │   │   │   │   │   ├── 7
│           │   │   │   │   │   │   │   └── 8
│           │   │   │   │   │   │   │   └── flag.txt.txt
│           │   │   │   │   │   └── password_for_zip.txt
│           │   └── 4
│           │       ├── .image.png
│           │       ├── 1.txt
│           │       ├── 2.txt
│           │       ├── 3.txt
│           │       ├── 4.txt
│           │       └── 5.txt
│           └── 5
│               ├── .compare_me1.txt
│               ├── .compare_me2.txt
│               ├── execute_me.sh
│               └── reverse_me.txt
└── flag{f1rst_fl@g_h3r3}

16 directories, 17 files

```

Flag 9: flag{Y0u_f0und_th3_hidd3n_dir!}

```

sam at .../Cognizance/Task-4/Main_Directory on ♦ main (🔍 ▲ 🗑 )
→ ls
1 3 4 5 flag{f1rst_fl@g_h3r3}

sam at .../Cognizance/Task-4/Main_Directory on ♦ main (🔍 ▲ 🗑 )
→ cd 3

sam at .../Task-4/Main_Directory/3 on ♦ main (🔍 ▲ 🗑 )
→ ls
1.txt 2.txt find_me

sam at .../Task-4/Main_Directory/3 on ♦ main (🔍 ▲ 🗑 )
→ ls -al
total 4
drwxrwxrwx 1 sam sam 4096 Jan 24 20:22 .
drwxrwxrwx 1 sam sam 4096 Jan 24 19:05 ..
-rwxrwxrwx 1 sam sam 19 Jan 24 19:11 .flag.txt
-rwxrwxrwx 1 sam sam 1094 Jan 24 19:14 1.txt
-rwxrwxrwx 1 sam sam 13 Jan 24 20:22 2.txt
drwxrwxrwx 1 sam sam 4096 Jan 24 19:17 find_me

sam at .../Task-4/Main_Directory/3 on ♦ main (🔍 ▲ 🗑 )
→ cat .flag.txt
flag{h1dden_fil3!}

sam at .../Task-4/Main_Directory/3 on ♦ main (🔍 ▲ 🗑 )
→ |

```

Flag 10: flag{h1dden_fil3!}

```

❖ sam at .../Cognizance/Task-4/Main_Directory on ♦ main (🔍 ▲ 📄 )
→ ls -al
total 0
drwxrwxrwx 1 sam sam 4096 Jan 24 19:05 .
drwxrwxrwx 1 sam sam 4096 Jun 20 09:19 ..
drwxrwxrwx 1 sam sam 4096 Jun 20 09:00 1
drwxrwxrwx 1 sam sam 4096 Jan 24 20:22 3
drwxrwxrwx 1 sam sam 4096 Jan 28 10:35 4
drwxrwxrwx 1 sam sam 4096 Jan 28 10:33 5
drwxrwxrwx 1 sam sam 4096 Jan 24 19:05 flag{f1rst_fl@g_h3r3}

❖ sam at .../Cognizance/Task-4/Main_Directory on ♦ main (🔍 ▲ 📄 )
→ cd 4

❖ sam at .../Task-4/Main_Directory/4 on ♦ main (🔍 ▲ 📄 )
→ ls -al
total 0
drwxrwxrwx 1 sam sam 4096 Jan 28 10:35 .
drwxrwxrwx 1 sam sam 4096 Jan 24 19:05 ..
-rwxrwxrwx 1 sam sam 26 Jan 28 10:35 .image.png
-rwxrwxrwx 1 sam sam 0 Jan 24 19:07 1.txt
-rwxrwxrwx 1 sam sam 0 Jan 24 19:07 2.txt
-rwxrwxrwx 1 sam sam 0 Jan 24 19:07 3.txt
-rwxrwxrwx 1 sam sam 21 Jan 24 19:08 4.txt
-rwxrwxrwx 1 sam sam 0 Jan 24 19:07 5.txt

❖ sam at .../Task-4/Main_Directory/4 on ♦ main (🔍 ▲ 📄 )
→ cat .image.png
flag{t3xt_15_n0t_h1dd3n!}

❖ sam at .../Task-4/Main_Directory/4 on ♦ main (🔍 ▲ 📄 )
→ display .image.png
display-im6.q16: improper image header `.image.png' @ error/png.c/ReadPNGImage/4092.

❖ sam at .../Task-4/Main_Directory/4 on ♦ main (🔍 ▲ 📄 ) took 23s
→ |

```

Flag 11: flag{t3xt_15_n0t_h1dd3n!}

Part 2 – Bash Scripts

- Write a bash script to echo your name 25 times

[illegible]

- What command should I use to display the **first** 30 entries of the Syslog file?

```
Linux
sam at /var/log
head -30 syslog
Jun 22 19:54:20 Dazel kernel: [ 0.000000] Linux version 5.10.102.1-microsoft-standard-WSL2 (oe-user@oe-host) (x86_64-msft
-linux-gcc (GCC) 9.3.0, GNU ld (GNU Binutils) 2.34.0.20200220) #1 SMP Wed Mar 2 00:30:59 UTC 2022
Jun 22 19:54:20 Dazel kernel: [ 0.000000] Command line: initrd=\initrd.img panic=-1 nr_cpus=12 swiotlb=force pty.legacy_c
ount=0
Jun 22 19:54:20 Dazel kernel: [ 0.000000] KERNEL supported cpus:
Jun 22 19:54:20 Dazel kernel: [ 0.000000] Intel GenuineIntel
Jun 22 19:54:20 Dazel kernel: [ 0.000000] AMD AuthenticAMD
Jun 22 19:54:20 Dazel kernel: [ 0.000000] Centaur CentaurHauls
Jun 22 19:54:20 Dazel kernel: [ 0.000000] x86/fpu: Supporting XSAVE feature 0x001: 'x87 floating point registers'
Jun 22 19:54:20 Dazel kernel: [ 0.000000] x86/fpu: Supporting XSAVE feature 0x002: 'SSE registers'
Jun 22 19:54:20 Dazel kernel: [ 0.000000] x86/fpu: Supporting XSAVE feature 0x004: 'AVX registers'
Jun 22 19:54:20 Dazel kernel: [ 0.000000] x86/fpu: xstate_offset[2]: 576, xstate_sizes[2]: 256
Jun 22 19:54:20 Dazel kernel: [ 0.000000] x86/fpu: Enabled xstate features 0x7, context size is 832 bytes, using 'compact
ed' format.
Jun 22 19:54:20 Dazel kernel: [ 0.000000] BIOS-provided physical RAM map:
Jun 22 19:54:20 Dazel kernel: [ 0.000000] BIOS-e820: [mem 0x0000000000000000-0x0000000000009ffff] usable
Jun 22 19:54:20 Dazel kernel: [ 0.000000] BIOS-e820: [mem 0x000000000000e000-0x000000000000e0fff] reserved
Jun 22 19:54:20 Dazel kernel: [ 0.000000] BIOS-e820: [mem 0x0000000000010000-0x000000000001ffff] ACPI data
Jun 22 19:54:20 Dazel kernel: [ 0.000000] BIOS-e820: [mem 0x0000000000020000-0x000000000007ffff] usable
Jun 22 19:54:20 Dazel kernel: [ 0.000000] BIOS-e820: [mem 0x0000000000080000-0x00000000000201ffff] usable
Jun 22 19:54:20 Dazel kernel: [ 0.000000] NX (Execute Disable) protection: active
Jun 22 19:54:20 Dazel kernel: [ 0.000000] DMI not present or invalid.
Jun 22 19:54:20 Dazel kernel: [ 0.000000] Hypervisor detected: Microsoft Hyper-V
Jun 22 19:54:20 Dazel kernel: [ 0.000000] Hyper-V: privilege flags Low 0x2e7f, high 0x3b8030, hints 0xa4e24, misc 0xe0bed
7b2
Jun 22 19:54:20 Dazel kernel: [ 0.000000] Hyper-V Host Build:22000-10.0-0-0.739
Jun 22 19:54:20 Dazel kernel: [ 0.000000] Hyper-V: LAPIC Timer Frequency: 0x1e8480
Jun 22 19:54:20 Dazel kernel: [ 0.000000] Hyper-V: Using hypercall for remote TLB flush
Jun 22 19:54:20 Dazel kernel: [ 0.000000] clocksource: hyperv_clocksource_tsc_page: mask: 0xffffffffffffffff max_cycles:
0x24e6a1710, max_idle_ns: 440795202120 ns
Jun 22 19:54:20 Dazel kernel: [ 0.000000] tsc: Marking TSC unstable due to running on Hyper-V
Jun 22 19:54:20 Dazel kernel: [ 0.000002] tsc: Detected 2592.011 MHz processor
Jun 22 19:54:20 Dazel kernel: [ 0.000010] e820: update [mem 0x00000000-0x000000fff] usable ==> reserved
Jun 22 19:54:20 Dazel kernel: [ 0.000012] e820: remove [mem 0x000a0000-0x000ffff] usable
Jun 22 19:54:20 Dazel kernel: [ 0.000014] last_pfn = 0x201800 max_arch_pfn = 0x400000000
```

- What command should I use to display the **last** 30 entries of the Syslog file?

```
Linux
sam at /var/log
tail -30 syslog
Jun 22 19:54:20 Dazel kernel: [ 5.112634] pci eacc:00:00.0: reg 0x20: [mem 0xbffe12000-0xbffe12fff 64bit]
Jun 22 19:54:20 Dazel kernel: [ 5.116290] pci eacc:00:00.0: BAR 0: assigned [mem 0xbffe10000-0xbffe10fff 64bit]
Jun 22 19:54:20 Dazel kernel: [ 5.116691] pci eacc:00:00.0: BAR 2: assigned [mem 0xbffe11000-0xbffe11fff 64bit]
Jun 22 19:54:20 Dazel kernel: [ 5.117077] pci eacc:00:00.0: BAR 4: assigned [mem 0xbffe12000-0xbffe12fff 64bit]
Jun 22 19:54:20 Dazel kernel: [ 5.165964] hv_pci 087b7a84-5ad8-4673-86e0-28674d736f92: PCI VMBus probing: Using version 0
x10003
Jun 22 19:54:20 Dazel kernel: [ 5.167550] 9pnet_virtio: no channels available for device drvfs
Jun 22 19:54:20 Dazel kernel: [ 5.167554] WARNING: mount: waiting for virtio device...
Jun 22 19:54:20 Dazel kernel: [ 5.214450] hv_pci 087b7a84-5ad8-4673-86e0-28674d736f92: PCI host bridge to bus 5ad8:00
Jun 22 19:54:20 Dazel kernel: [ 5.214453] pci_bus 5ad8:00: root bus resource [mem 0xbffe14000-0xbffe16fff window]
Jun 22 19:54:20 Dazel kernel: [ 5.215316] pci 5ad8:00:00.0: [1af4:1049] type 00 class 0x010000
Jun 22 19:54:20 Dazel kernel: [ 5.216084] pci 5ad8:00:00.0: reg 0x10: [mem 0xbffe14000-0xbffe14fff 64bit]
Jun 22 19:54:20 Dazel kernel: [ 5.216895] pci 5ad8:00:00.0: reg 0x18: [mem 0xbffe15000-0xbffe15fff 64bit]
Jun 22 19:54:20 Dazel kernel: [ 5.217437] pci 5ad8:00:00.0: reg 0x20: [mem 0xbffe16000-0xbffe16fff 64bit]
Jun 22 19:54:20 Dazel kernel: [ 5.220598] pci 5ad8:00:00.0: BAR 0: assigned [mem 0xbffe14000-0xbffe14fff 64bit]
Jun 22 19:54:20 Dazel kernel: [ 5.220971] pci 5ad8:00:00.0: BAR 2: assigned [mem 0xbffe15000-0xbffe15fff 64bit]
Jun 22 19:54:20 Dazel kernel: [ 5.221471] pci 5ad8:00:00.0: BAR 4: assigned [mem 0xbffe16000-0xbffe16fff 64bit]
Jun 22 19:54:20 Dazel kernel: [ 5.272074] hv_pci a03cb741-f4f0-4275-8786-ba4300c0369a: PCI VMBus probing: Using version 0
x10003
Jun 22 19:54:20 Dazel kernel: [ 5.320265] hv_pci a03cb741-f4f0-4275-8786-ba4300c0369a: PCI host bridge to bus f4f0:00
Jun 22 19:54:20 Dazel kernel: [ 5.320267] pci_bus f4f0:00: root bus resource [mem 0xbffe18000-0xbffe1afff window]
Jun 22 19:54:20 Dazel kernel: [ 5.321106] pci f4f0:00:00.0: [1af4:1049] type 00 class 0x010000
Jun 22 19:54:20 Dazel kernel: [ 5.321896] pci f4f0:00:00.0: reg 0x10: [mem 0xbffe18000-0xbffe18fff 64bit]
Jun 22 19:54:20 Dazel kernel: [ 5.322494] pci f4f0:00:00.0: reg 0x18: [mem 0xbffe19000-0xbffe19fff 64bit]
Jun 22 19:54:20 Dazel kernel: [ 5.323112] pci f4f0:00:00.0: reg 0x20: [mem 0xbffe1a000-0xbffe1afff 64bit]
Jun 22 19:54:20 Dazel kernel: [ 5.326926] pci f4f0:00:00.0: BAR 0: assigned [mem 0xbffe18000-0xbffe18fff 64bit]
Jun 22 19:54:20 Dazel kernel: [ 5.327328] pci f4f0:00:00.0: BAR 2: assigned [mem 0xbffe19000-0xbffe19fff 64bit]
Jun 22 19:54:20 Dazel kernel: [ 5.327710] pci f4f0:00:00.0: BAR 4: assigned [mem 0xbffe1a000-0xbffe1afff 64bit]
Jun 22 19:54:20 Dazel kernel: [ 49.071583] hv_balloon: Max. dynamic memory size: 8088 MB
Jun 22 19:54:21 Dazel rsyslogd: rsyslogd's groupid changed to 110
Jun 22 19:54:21 Dazel rsyslogd: rsyslogd's userid changed to 104
Jun 22 19:54:21 Dazel rsyslogd: [origin software="rsyslogd" swVersion="8.2001.0" x-pid="4666" x-info="https://www.rsyslog.co
m"] start
sam at /var/log
```


- What command should I use to arrange the entries of a file

Command	Output
<code>cat file.txt</code>	<pre>1 2 14 5 7 4 28 Sayan Horlica 14 Just in case 15 89 @\$!d3 cjb 157gfq 112 c49f 1tvbu6 15hde 27fj btmw13@^* lbLB&% NCEI!82rfh d2f3h25W%@</pre>
<code>sort -d file.txt</code>	<pre>@\$ 1 112 14 14 15 157gfq 15hde 1tvbu6 2 27fj 28 4 5 7 89 Horlica Just in case NCEI!82rfh Sayan btmw13@^* c49f cjb d2f3h25W%@ !d3 lbLB&%</pre>
<code>tac file.txt</code>	<pre>d2f3h25W%@ NCEI!82rfh lbLB&% btmw13@^* 27fj 15hde 1tvbu6 c49f 112 157gfq cjb !d3 @\$ 89 15 Just in case 14 Horlica Sayan 28 4 7 5 14 2 1</pre>
<code>sort -n file.txt</code>	<pre>!d3 @\$ Horlica Just in case NCEI!82rfh Sayan btmw13@^* c49f cjb d2f3h25W%@ lbLB&% 1 1tvbu6 2 4 5 7 14 14 15 15hde 27fj 28 89 112 157gfq</pre>

- Alphabetically
 - Reverse order
 - Numerical order
- Copee is a hard-working cop. He found a case and was almost on the verge of cracking it. It could be his best breakthrough. He has the list of criminals but lots of duplicates are there. He needs to find the only one that is **different**. He sought your help. How will you sort this issue?

```

sam at ~/files
└─ cat dupe.txt
Sayan Banerjee
Cognizance
Sayan Banerjee
Sayan Banerjee
Cognizance
2020
Sayan Banerjee
2020
Cognizance
Batman
Soupe
Cognizance
Batman
Sayan Banerjee
Batman
Soupe
2020
Cognizance

sam at ~/files
└─ sort -d dupe.txt | uniq
2020
Batman
Cognizance
Sayan Banerjee
Soupe

sam at ~/files
└─
```

- What are the three parts of the file's permission?
Three parts of file permission are, read, write and execute. Denoted by -r for reading, -w for writing and -x for executing. They further have three groups in them, called User, Group, and Others. Where User means the current user's access, Group means what the group has access to, and Others show what everyone else has the access to.