

1.

```
[coor1752@login10 ~]$ ls
matlab crash_dump.193302-1  README.mdwn  slurm-4189781.out
```

2.

```
[coor1752@login10 ~]$ ls -al
total 1383
drwx-----. 7 coor1752 coor1752pgrp 460 Feb 17 11:17 .
drwxr-xr-x. 4495 root root 122862 Feb 15 16:40 ..
-rw-----. 1 coor1752 coor1752pgrp 137 Feb 12 16:17 .bash_history
-rw-r--r--. 1 coor1752 coor1752pgrp 18 Feb 17 2016 .bash_logout
-rw-r--r--. 1 coor1752 coor1752pgrp 396 Mar 1 2017 .bash_profile
-rw-r--r--. 1 coor1752 coor1752pgrp 124 Feb 17 2016 .bashrc
drwxr-xr-x. 3 coor1752 coor1752pgrp 28 Feb 12 15:15 .cache
-rw-r--r--. 1 coor1752 coor1752pgrp 276 Mar 1 2017 .cshrc
drwxr-xr-x. 3 coor1752 coor1752pgrp 23 Feb 12 15:15 .java
-rw-r--r--. 1 coor1752 coor1752pgrp 156 Apr 18 2016 .lmodrc.lua
-rw-r--r--. 1 coor1752 coor1752pgrp 74 Feb 18 2016 .login
drwxr-xr-x. 3 coor1752 coor1752pgrp 24 Feb 12 15:15 .matlab
-rw-r--r--. 1 coor1752 coor1752pgrp 4136 Feb 12 15:20 matlab_crash_dump.193
302-1
drwxr-xr-x. 2 coor1752 coor1752pgrp 44 Feb 12 15:15 .oracle_jre_usage
-rw-r--r--. 1 coor1752 coor1752pgrp 563 Jun 12 2017 README.mdwn
-rw-r--r--. 1 coor1752 coor1752pgrp 84 Feb 12 15:20 slurm-4189781.out
drwx-----. 2 coor1752 coor1752pgrp 134 Feb 12 15:14 .ssh
-rw-----. 1 coor1752 coor1752pgrp 180 Feb 17 11:17 .Xauthority
```

3.

The first character represents the file type. The following nine characters represent the file permissions. First three are for user, next three are for the group and the last three are for other

4.

```
[coor1752@login10 ~]$ df -h
```

Filesystem				Size
Used Avail Use% Mounted on				
/dev/sda2				14G
4.4G 9.2G 33%	/			
devtmpfs				7.8G
0 7.8G 0%	/dev			
tmpfs				7.8G
4.0K 7.8G 1%	/dev/shm			
tmpfs				7.8G
820M 7.0G 11%	/run			
tmpfs				7.8G
0 7.8G 0%	/sys/fs/cgroup			
/dev/sda1				509M
200M 310M 40%	/boot			
gs-data.rc.int.colorado.edu:/gpfs/gpfs01/rc_scratch				100T
79T 22T 79%	/rc_scratch			
isilon1-data.rc.int.colorado.edu:/ifs/curc/projects				379T
158T 214T 43%	/projects			
isilon1-data.rc.int.colorado.edu:/ifs/curc/home				379T
158T 214T 43%	/home			
isilon1-data.rc.int.colorado.edu:/ifs/curc/tools				379T
158T 214T 43%	/curc/tools			
isilon1-data.rc.int.colorado.edu:/ifs/curc/sw				379T
158T 214T 43%	/curc/sw			
isilon1-data.rc.int.colorado.edu:/ifs/curc/slurm				379T
158T 214T 43%	/curc/slurm			
tmpfs				1.6G

4. Or

```
[coor1752@login11 ~]$ du -ah
26K      ./slurm-4189781.out
26K      ./vidaurre/README.md
26K      ./vidaurre/.git/COMMIT_EDITMSG
2.0K     ./vidaurre/.git/branches
26K      ./vidaurre/.git/packed-refs
26K      ./vidaurre/.git/HEAD
26K      ./vidaurre/.git/description
26K      ./vidaurre/.git/info/exclude
28K      ./vidaurre/.git/info
26K      ./vidaurre/.git/refs/heads/master
28K      ./vidaurre/.git/refs/heads
26K      ./vidaurre/.git/refs/remotes/origin/HEAD
26K      ./vidaurre/.git/refs/remotes/origin/master
53K      ./vidaurre/.git/refs/remotes/origin
55K      ./vidaurre/.git/refs/remotes
2.0K     ./vidaurre/.git/refs/tags
87K      ./vidaurre/.git/refs
```

5.

```
[coor1752@login11 ~]$ cd /bin
[coor1752@login11 bin]$ ls
[
a2p                               nl-neigh-add
addr2line                         nl-neigh-delete
afs5log                           nl-neigh-list
alias                             nl-neightbl-list
animate                           nl-pktloc-lookup
apropos                           nl-qdisc-add
ar                                 nl-qdisc-delete
arch                              nl-qdisc-list
as                                nl-route-add
aserver                           nl-route-delete
                                  nl-route-get
```

Below are five functions and thier descriptions found using the man command

```
[coor1752@login11 bin]$ man znew

NAME
    znew - recompress .Z files to .gz files

SYNOPSIS
    znew [ -ftv9PK] [ name.Z ... ]

DESCRIPTION
    Znew recompresses files from .Z (compress) format to .gz (gzip) format.
    If you want to recompress a file already in gzip format, rename the
    file to force a .Z extension then apply znew.
```

```
[coor1752@login11 bin]$ man yes
YES(1)                                User Commands                                YES(1)

NAME
    yes - output a string repeatedly until killed

SYNOPSIS
    yes [STRING]...
    yes OPTION

DESCRIPTION
    Repeatedly output a line with all specified STRING(s), or 'y'.
```

```
[coor1752@login11 bin]$ man kmod
KMOD(8)                                kmod                                KMOD(8)

NAME
    kmod - Program to manage Linux Kernel modules

SYNOPSIS
    kmod [OPTIONS...] [COMMAND] [COMMAND_OPTIONS...]

DESCRIPTION
    kmod is a multi-call binary which implements the programs used to
    control Linux Kernel modules. Most users will only run it using its
    other names.
```

```
[coor1752@login11 bin]$ man split
SPLIT(1)                                User Commands                                SPLIT(1)

NAME
    split - split a file into pieces

SYNOPSIS
    split [OPTION]... [INPUT [PREFIX]]

DESCRIPTION
    Output fixed-size pieces of INPUT to PREFIXaa, PREFIXab, ...; default
    size is 1000 lines, and default PREFIX is 'x'. With no INPUT, or when
    INPUT is -, read standard input.

    Mandatory arguments to long options are mandatory for short options
    too.
```

```
XAUTH(1)                                General Commands Manual                                XAUTH(1)

NAME
    xauth - X authority file utility

SYNOPSIS
    xauth [ -f authfile ] [ -vqibn ] [ command arg ... ]

DESCRIPTION
    The xauth program is used to edit and display the authorization infor-
    mation used in connecting to the X server. This program is usually
    used to extract authorization records from one machine and merge them
    in on another (as is the case when using remote logins or granting
    access to other users). Commands (described below) may be entered
    interactively, on the xauth command line, or in scripts. Note that
    this program does not contact the X server except when the generate
    command is used. Normally xauth is not used to create the authority
    file entry in the first place; the program that starts the X server
    (often xdm or startx) does that.
```

6.

Create folder in home directory called ASEN4057

```
[coor1752@login11 ~]$ mkdir ASEN4057
[coor1752@login11 ~]$ ls
ASEN4057      matlab_crash_dump.193302-1  README.mdwn      vidaurre
Assignments  Oreilly                    slurm-4189781.out
```

Create file asen4057.txt

```
[coor1752@login11 ~]$ cd ASEN4057
[coor1752@login11 ASEN4057]$ cat > asen4057.txt
Connor and Benjamin
Class of 2021 and 2021
Interstellar and Starwars

^C
[coor1752@login11 ASEN4057]$ ls
asen4057.txt
[coor1752@login11 ASEN4057]$
```

Change permissions

```
[coor1752@login11 ASEN4057]$ chmod a=rwx asen4057.txt
[coor1752@login11 ASEN4057]$
```

Shown in long format

```
[coor1752@login11 ASEN4057]$ ls -al
total 62
drwxr-xr-x.  2 coor1752 coor1752pgrp  30 Feb 19 07:27 .
drwx----- 14 coor1752 coor1752pgrp 635 Feb 19 07:24 ..
-rwxrwxrwx.  1 coor1752 coor1752pgrp  70 Feb 19 07:28 asen4057.txt
[coor1752@login11 ASEN4057]$
```

Contents of asen4057.txt

```
[coor1752@login11 ASEN4057]$ cat asen4057.txt
Connor and Benjamin
Class of 2021 and 2021
Interstellar and Starwars

[coor1752@login11 ASEN4057]$
```

Move .txt file to home direc


```
[coor1752@login11 ASEN4057]$ mv asen4057.txt ~
[coor1752@login11 ASEN4057]$ cd
[coor1752@login11 ~]$ ls
ASEN4057      Assignments      Oreilly      slurm-4189781.out
asen4057.txt  matlab_crash_dump.193302-1  README.mdwn  vidaurre
[coor1752@login11 ~]$
```

Rename .txt file

```
[coor1752@login11 ~]$ mv asen4057.txt asen4057.txt
mv: 'asen4057.txt' and 'asen4057.txt' are the same file
```

Delete file

```
[coor1752@login11 ~]$ rm asen4057.txt
[coor1752@login11 ~]$ ls
ASEN4057      matlab_crash_dump.193302-1  README.mdwn      vidaurre
Assignments  Oreilly                    slurm-4189781.out
```

7.

Load matlab and run in background

```
[coor1752@shas0122 ~]$ module load matlab
[coor1752@shas0122 ~]$ matlab -r "tic; a= rand(9973); b = fft(a); toc" &
[1] 149203
[coor1752@shas0122 ~]$ bgMATLAB is selecting SOFTWARE OPENGL rendering.

bash: bg: job 1 already in background
[coor1752@shas0122 ~]$ PuTTY X11 proxy: unable to connect to forwarded X server:
Network error: Connection refused
bg
[1]+  matlab -r "tic; a= rand(9973); b = fft(a); toc" &
[coor1752@shas0122 ~]$
```

Use top command to see MEM and CPU usage percentage

Top -u coor1752

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```
[screen 1: coor1752@shas0122:~]
top - 08:08:05 up 13 days, 20:38, 3 users, load average: 23.13, 23.52, 23.61
Tasks: 368 total, 13 running, 354 sleeping, 1 stopped, 0 zombie
%Cpu(s): 95.8 us, 0.1 sy, 0.0 ni, 4.1 id, 0.0 wa, 0.0 hi, 0.1 si, 0.0 st
MiB Mem : 13191291+total, 77172328 free, 23199928 used, 31540656 buff/cache
MiB Swap: 1048572 total, 695268 free, 353304 used. 10352486+avail Mem
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
48942	coor1752	20	0	34608	1896	1252	S	0.0	0.0	0:00.27	screen
49012	coor1752	20	0	175144	2824	1192	S	0.0	0.0	0:00.01	sshd
49013	coor1752	20	0	137932	1176	916	S	0.0	0.0	0:00.26	screen
49065	coor1752	20	0	23444	3344	1612	S	0.0	0.0	0:00.29	bash
49203	coor1752	20	0	4189804	447400	110324	T	0.0	0.3	0:03.64	MATLAB
49403	coor1752	20	0	64628	2496	1584	R	0.0	0.0	0:00.16	top

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Program took 9.876 seconds to run

8. Matlab functions or programs can be found using locate command

```
bash: locate: command not found
[coor1752@shas0122 ~]$ locate matlab
/usr/share/emacs/24.3/lisp/org/ob-matlab.elc
/usr/share/mime/text/x-matlab.xml
/usr/share/vim/vim74/ftplugin/matlab.vim
/usr/share/vim/vim74/indent/matlab.vim
/usr/share/vim/vim74/syntax/matlab.vim
/usr/share/zsh/5.0.2/functions/_matlab
```

9. The bash shell searches for most programs in the /bin directory
Information is stored

Part 3: Member two only

5.

Member ones repository was cloned using the following command

\$ git clone <https://github.com/username/repository>

6. Local README file edited

cd/vidaurre used following commands in order

cat README.md

Echo "member 2" >>README.md

Cat README.md

7. Add commit and push readme file

git status

git add README.md

Git status

Git commit -m "updated readme file"

Git push

12: locally pull member #1's changes to the branch current assignment

Git pull vidaurre

13: locally merge the branch Current_Assignment into master

```
[coor1752@shas0136 vidaurre]$ git branch -a
* master
remotes/origin/Current_Assignment
remotes/origin/HEAD -> origin/master
remotes/origin/master
```

```
[coor1752@shas0136 vidaurre]$ git merge origin/Current_Assignment
Merge made by the 'recursive' strategy.
Assignments/Assignment_4/Part_3/Submission/README.md | 1 +
1 file changed, 1 insertion(+)
create mode 100644 Assignments/Assignment_4/Part_3/Submission/README.md
[coor1752@shas0136 vidaurre]$
```

14: push README.md file

git add README.md

git commit -m "merge current_assignment to master"

git push origin master

15: Creating directory with personal git repository:

git checkout -b Current_assignment

Mkdir -p Assignments/Assignment_4/Part_3/Submission

cd Assignments

Cd /Assignment_4/Part_3/Submission

Cat > README.md

"Hello"

Git add README.md

Git commit -m "created repository"