

Linux Assignment

- For each of the following commands, identify whether it is associated with the Debian packaging system or the Red Hat packaging system: Dpkg, rpm, apt-get, yum, dnf
 - dpkg- **Debian / Ubuntu**
 - rpm – **Red hat**
 - apt-get – **Debian**
 - yum – **Red hat**
 - dnf – **Red hat**
- Write and pass 10 Linux command with the explanation of what they can be used for. Pass the command and screen shot their output, all in a work document
 - mkdir bunmi: This is used to create new directory, this particular command creates the directory name 'Bunmi'

```
bunmi@bunmi-VirtualBox:~$ mkdir bunmi
bunmi@bunmi-VirtualBox:~$ ls
archiving  compression  Downloads  moving1     snap
bunmi      creating     globs      Music       Templates
bunmi2     creating1    globs1     'osita aina' test1
bunmi3     Desktop     gta        Pictures    test2
bunmi4     Documents   moving     Public      Videos
```

- cd bunmi: cd change location from the current directory to another directory.

```
bunmi@bunmi-VirtualBox:~$ cd bunmi
bunmi@bunmi-VirtualBox:~/bunmi$ cd ..
```

- touch filename: the touch command is for creating files

```
bunmi@bunmi-VirtualBox:~/bunmi$ touch file1 file2
bunmi@bunmi-VirtualBox:~/bunmi$ ls
bunmi  file1  file2
```

- man ls: The man command is for showing manual of any command, this includes the description, options and other properties of the command.

```
LS(1)                                User Commands                                LS(1)

NAME
  ls - list directory contents

SYNOPSIS
  ls [OPTION]... [FILE]...

DESCRIPTION
  List information about the FILES (the current directory by default).
  Sort entries alphabetically if none of -cftuvSUX nor --sort is speci-
  fied.

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

  -a, --all
      do not ignore entries starting with .

  -A, --almost-all
      do not list implied . and ..

  --author
      with -l, print the author of each file

  -b, --escape
      print C-style escapes for nongraphic characters

Manual page ls(1) line 1 (press h for help or q to quit)
```

- locate Bunmi: this shows all the possible path of all directories and files that matches the search name, in this case 'Bunmi'

```

bunmi@bunmi-VirtualBox:~/bunmi$ locate bunmi
/home/bunmi
/home/bunmi/.bash_logout
/home/bunmi/.bashrc
/home/bunmi/.cache
/home/bunmi/.config
/home/bunmi/.gnupg
/home/bunmi/.local
/home/bunmi/.mozilla
/home/bunmi/.profile
/home/bunmi/.ssh
/home/bunmi/.sudo_as_admin_successful
/home/bunmi/Desktop
/home/bunmi/Documents
/home/bunmi/Downloads
/home/bunmi/Downloads/test1
/home/bunmi/Music
/home/bunmi/Pictures
/home/bunmi/Public
/home/bunmi/Templates
/home/bunmi/Videos
/home/bunmi/archiving
/home/bunmi/archiving/foldarch1
/home/bunmi/archiving/foldarch2
/home/bunmi/archiving/testarc2
/home/bunmi/archiving/testarch1
/home/bunmi/archiving/testarcsh1
/home/bunmi/archiving/testarcsh2

```

- f. pwd: display the location of the current working directory by showing the filename path from the root.

```

bunmi@bunmi-VirtualBox:~/bunmi$ pwd
/home/bunmi/bunmi

```

- g. ls: this display the contents of the current working directory.

```

bunmi@bunmi-VirtualBox:~$ ls
archiving  bunmi4      Documents  moving      Public      Videos
Bunmi      compression Downloads  moving1     snap
bunmi      creating    globs      Music       Templates
bunmi2     creating1   globs1     'osita aina' test1
bunmi3     Desktop    gta        Pictures    test2

```

- h. cp: this is used to cope a file from one directory to another directory. This can also be use to copy directory using cp -R "directoryname".

```

bunmi@bunmi-VirtualBox:~/bunmi$ ls
bunmi  file1  file2
bunmi@bunmi-VirtualBox:~/bunmi$ cp file1 ~/bunmi4
bunmi@bunmi-VirtualBox:~/bunmi$ ls ~/bunmi4
file1

```

- i. users: print the user names of users currently logged in to the current host.

```

bunmi@bunmi-VirtualBox:~$ users
bunmi

```

- j. mv: This command is used to move a file or a directory form one location to another location. It can also be used to rename files.

```

bunmi@bunmi-VirtualBox:~/bunmi$ ls
bunmi  file1  file2
bunmi@bunmi-VirtualBox:~/bunmi$ mv file1 newfile1
bunmi@bunmi-VirtualBox:~/bunmi$ ls
bunmi  file2  newfile1
bunmi@bunmi-VirtualBox:~/bunmi$

```

3. Question

- a. Create a local variable number

```

bunmi@LAPTOP-S20MHP9:~$ myvar=1000
bunmi@LAPTOP-S20MHP9:~$ echo $myvar
1000
bunmi@LAPTOP-S20MHP9:~$ ls
Desktop  Downloads  Pictures  Templates  thinclient_drives
Documents Music      Public    Videos
bunmi@LAPTOP-S20MHP9:~$

```

```

bunmi@bunmi-VirtualBox:~$ myvar=question3
bunmi@bunmi-VirtualBox:~$ echo $myvar
question3

```

- b. Create an environment variable ORDER, using one of the methods we have used in classes.

```

bunmi@LAPTOP-S20MHP9:~$ export envVariable=ORDER
bunmi@LAPTOP-S20MHP9:~$ echo $envVariable testing
ORDER testing
bunmi@LAPTOP-S20MHP9:~$

```

- c. Display both the variable names and their contents.

```

bunmi@LAPTOP-S20MHP9:~$ declare -p | grep myvar
declare -- myvar="1000"

```

```

bunmi@LAPTOP-S20MHP9:~$ env | grep envVariable
envVariable=ORDER

```

- d. What are the scopes of the previously created variables?

A local variable declared in a terminal cannot be accessed by any program or process running in the terminal. It can only be accessed by the terminal (in which it was defined) itself. On the other hand, global variables is available to subprocess.

4. Question

- a. Create a local variable no_lines and assign the number of lines found in the /etc/passwd file. Hint: Investigate the command wc and command substitution and don't forget about quotation marks

Note: wc command allows you to count the number of lines, words, characters, and bytes of each given file or standard input and print the result.

```
bunmi@bunmi-VirtualBox:~$ no_lines=$(wc -l /etc/passwd)
bunmi@bunmi-VirtualBox:~$ echo $no_lines
47 /etc/passwd
bunmi@bunmi-VirtualBox:~$
```

- b. Create an environment variable ME. Assign the USER variable's value to it

```
bunmi@bunmi-VirtualBox:~$ export ME=$USER
bunmi@bunmi-VirtualBox:~$ echo $ME
bunmi
bunmi@bunmi-VirtualBox:~$
```

- c. Append the HOME variable's value to ME, having the : delimiter. Display the contents of the ME variable.

```
bunmi@bunmi-VirtualBox:~$ ME+=:$HOME
bunmi@bunmi-VirtualBox:~$ echo $ME
bunmi:/home/bunmi
bunmi@bunmi-VirtualBox:~$ echo $ME | sed -e 's:/:\n/g'
bunmi
/home/bunmi
bunmi@bunmi-VirtualBox:~$
```

- d. Using the date example, create a variable called today and assign the date for one of the time zones.

```
bunmi@bunmi-VirtualBox:~$ today=$(TZ=":Canada/Saskatchewan" date)
bunmi@bunmi-VirtualBox:~$ echo $today
Sat 09 Apr 2022 11:48:42 AM CST
bunmi@bunmi-VirtualBox:~$
```

- e. Create another variable called today1 and assign the system's date to it.

```
bunmi@bunmi-VirtualBox:~$ today1=$(date)
bunmi@bunmi-VirtualBox:~$ echo $today1
Sat 09 Apr 2022 11:57:03 AM CST
bunmi@bunmi-VirtualBox:~$
```

5. Using the ls command with 5 different options, pipe the 5 the output of the operations into a single text file and submit the text file
- a. ls -la: show all listing including the hidden files in a long listing format.


```

bunmi@bunmi-VirtualBox:~$ ls -la
total 136
drwxr-xr-x 31 bunmi bunmi 4096 Apr  8 21:03 .
drwxr-xr-x  3 root  root  4096 Mar 26 20:16 ..
drwxrwxr-x  4 bunmi bunmi 4096 Apr  6 19:15 archiving
-rw-r--r--  1 bunmi bunmi  220 Mar 26 20:16 .bash_logout
-rw-r--r--  1 bunmi bunmi 3771 Mar 26 20:16 .bashrc
drwxrwxr-x  2 bunmi bunmi 4096 Apr  8 21:03 Bunmi
drwxrwxr-x  2 bunmi bunmi 4096 Apr  8 21:55 bunmi
drwxrwxr-x  2 bunmi bunmi 4096 Apr  2 19:37 bunmi2
drwxrwxr-x  3 bunmi bunmi 4096 Apr  2 19:43 bunmi3
drwxrwxr-x  2 bunmi bunmi 4096 Apr  8 21:42 bunmi4
drwx----- 14 bunmi bunmi 4096 Mar 26 20:49 .cache
drwxrwxr-x  2 bunmi bunmi 4096 Apr  6 18:37 compression
drwx----- 13 bunmi bunmi 4096 Apr  6 18:20 .config
drwxrwxr-x  2 bunmi bunmi 4096 Apr  2 18:06 creating
drwxrwxr-x  2 bunmi bunmi 4096 Apr  2 18:08 creating1
drwxr-xr-x  2 bunmi bunmi 4096 Mar 26 20:42 Desktop
drwxr-xr-x  2 bunmi bunmi 4096 Apr  2 17:53 Documents
drwxr-xr-x  2 bunmi bunmi 4096 Apr  2 18:36 Downloads
drwxrwxr-x  2 bunmi bunmi 4096 Apr  2 18:06 globs
drwxrwxr-x  2 bunmi bunmi 4096 Apr  2 18:08 globs1
drwx-----  3 bunmi bunmi 4096 Mar 30 19:08 .gnupg
drwxrwxr-x  2 bunmi bunmi 4096 Apr  2 18:46 gta
drwx-----  3 bunmi bunmi 4096 Mar 26 20:21 .local
drwxrwxr-x  2 bunmi bunmi 4096 Apr  2 18:06 moving
drwxrwxr-x  2 bunmi bunmi 4096 Apr  2 18:08 moving1
drwx-----  4 bunmi bunmi 4096 Mar 26 20:44 .mozilla

```

- b. `ls -R`: show contents of the current directory and subdirectories recursively

```

bunmi@bunmi-VirtualBox:~$ ls -R
.:
archiving  bunmi4      Documents  moving      Public      Videos
Bunmi      compression Downloads  moving1     snap
bunmi      creating    globs      Music       Templates
bunmi2     creating1   globs1     'osita aina' test1
bunmi3     Desktop    gta        Pictures    test2

./archiving:
foldarch1 foldarch2 testarc2 testarch1 testarch1.tar.gz

./archiving/foldarch1:

./archiving/foldarch2:

./Bunmi:

./bunmi:
bunmi file2 newfile1

./bunmi2:
test1

./bunmi3:
bunmi2

```

- c. `ls -lh`: This shows content in a long listing and display file sizes in gigabytes, megabytes and kilobytes which is more human readable.

```

bunmi@bunmi-VirtualBox:~$ ls -lh
total 92K
drwxrwxr-x 4 bunmi bunmi 4.0K Apr  6 19:15 archiving
drwxrwxr-x 2 bunmi bunmi 4.0K Apr  8 21:03 Bunmi
drwxrwxr-x 2 bunmi bunmi 4.0K Apr  8 21:55 bunmi
drwxrwxr-x 2 bunmi bunmi 4.0K Apr  2 19:37 bunmi2
drwxrwxr-x 3 bunmi bunmi 4.0K Apr  2 19:43 bunmi3
drwxrwxr-x 2 bunmi bunmi 4.0K Apr  8 21:42 bunmi4
drwxrwxr-x 2 bunmi bunmi 4.0K Apr  6 18:37 compression
drwxrwxr-x 2 bunmi bunmi 4.0K Apr  2 18:06 creating
drwxrwxr-x 2 bunmi bunmi 4.0K Apr  2 18:08 creating1
drwxr-xr-x 2 bunmi bunmi 4.0K Mar 26 20:42 Desktop
drwxr-xr-x 2 bunmi bunmi 4.0K Apr  2 17:53 Documents
drwxr-xr-x 2 bunmi bunmi 4.0K Apr  2 18:36 Downloads
drwxrwxr-x 2 bunmi bunmi 4.0K Apr  2 18:06 globs
drwxrwxr-x 2 bunmi bunmi 4.0K Apr  2 18:08 globs1
drwxrwxr-x 2 bunmi bunmi 4.0K Apr  2 18:46 gta
drwxrwxr-x 2 bunmi bunmi 4.0K Apr  2 18:06 moving
drwxrwxr-x 2 bunmi bunmi 4.0K Apr  2 18:08 moving1
drwxr-xr-x 2 bunmi bunmi 4.0K Mar 26 20:42 Music
-rw-rw-r-- 1 bunmi bunmi  0 Mar 30 17:19 'osita aina'
drwxr-xr-x 2 bunmi bunmi 4.0K Mar 26 20:42 Pictures
drwxr-xr-x 2 bunmi bunmi 4.0K Mar 26 20:42 Public
drwx----- 3 bunmi bunmi 4.0K Mar 27 09:11 snap
drwxr-xr-x 2 bunmi bunmi 4.0K Mar 26 20:42 Templates
-rw-rw-r-- 1 bunmi bunmi  0 Apr  2 17:53 test1
-rw-rw-r-- 1 bunmi bunmi  0 Apr  2 19:38 test2
drwxr-xr-x 2 bunmi bunmi 4.0K Mar 26 20:42 Videos

```

- d. `ls -s`: sort by file size, largest first

```

bunmi@bunmi-VirtualBox:~$ ls -s
total 92
4 archiving 4 compression 4 globs 0 'osita aina' 0 test2
4 Bunmi 4 creating 4 globs1 4 Pictures 4 Videos
4 bunmi 4 creating1 4 gta 4 Public
4 bunmi2 4 Desktop 4 moving 4 snap
4 bunmi3 4 Documents 4 moving1 4 Templates
4 bunmi4 4 Downloads 4 Music 0 test1

```

- e. `ls -t`: sort by modification time, newest first

```

bunmi@bunmi-VirtualBox:~$ ls -t
bunmi      bunmi3      globs1      moving      Desktop      Videos
bunmi4     test2       creating1   Documents   Music
Bunmi      bunmi2      moving1     test1       Pictures
archiving  gta         globs       'osita aina' Public
compression Downloads    creating     snap        Templates
bunmi@bunmi-VirtualBox:~$

```