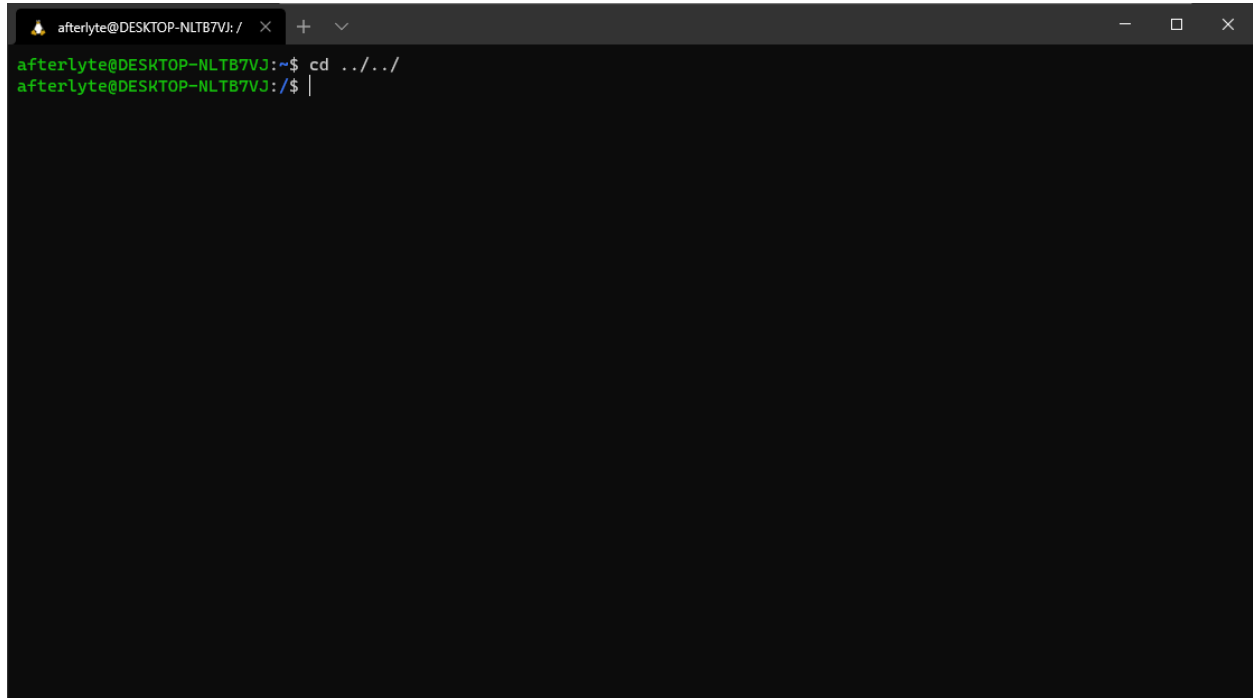


## Lab 1 Submission

### Question 1

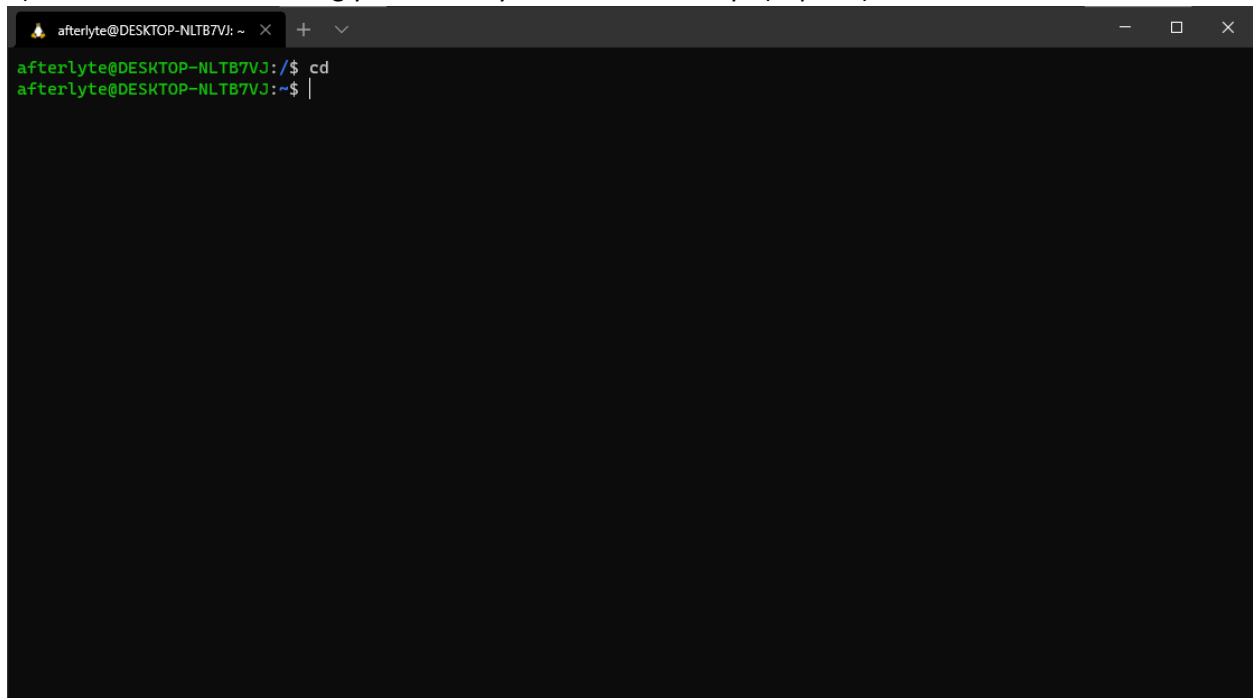
a) What will the following command print? ( 1 point)

`cd ../../`



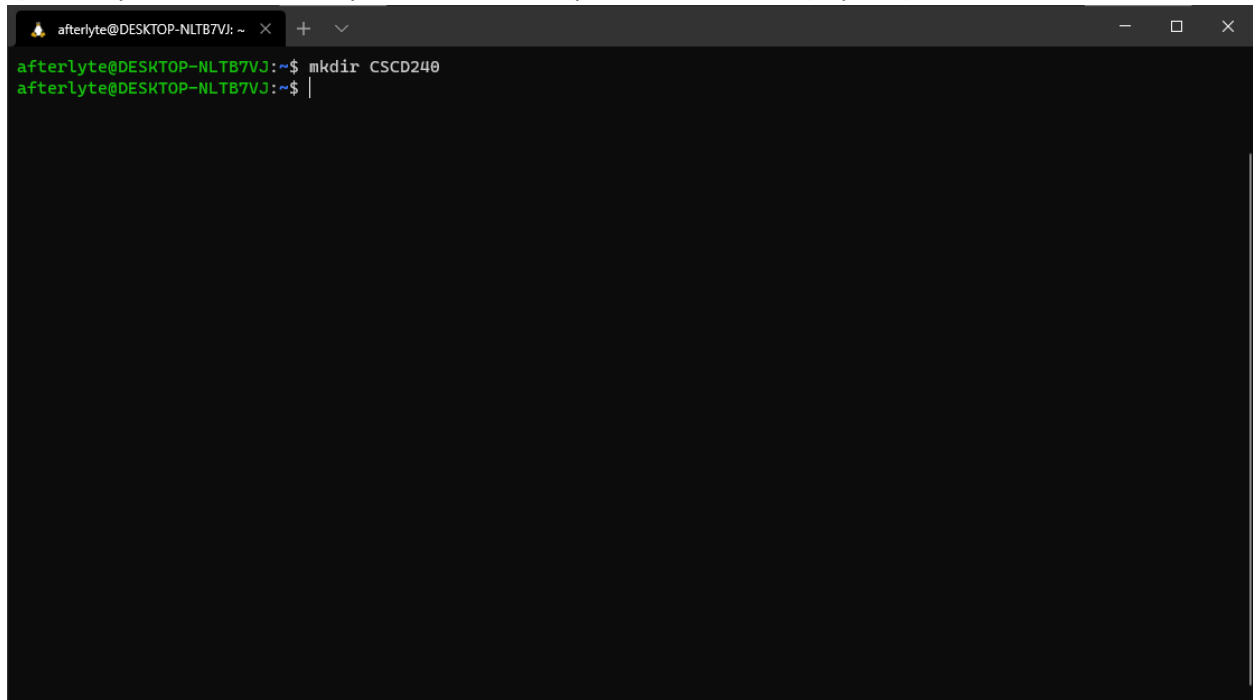
```
afterlyte@DESKTOP-NLTB7VJ: /  × + ▾
afterlyte@DESKTOP-NLTB7VJ:~$ cd ../../
afterlyte@DESKTOP-NLTB7VJ:/$ |
```

b) What command will bring you back to your home directory? ( 1 point)



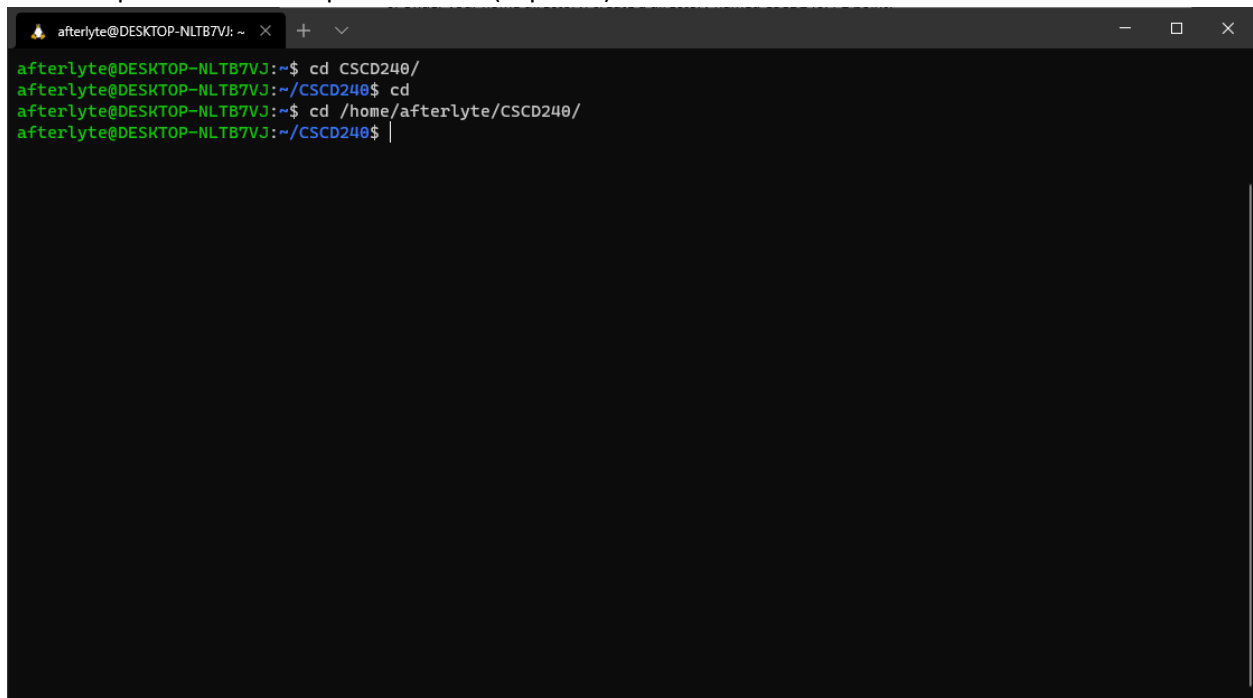
```
afterlyte@DESKTOP-NLTB7VJ: ~  × + ▾
afterlyte@DESKTOP-NLTB7VJ:/$ cd
afterlyte@DESKTOP-NLTB7VJ:~$ |
```

c) Under your home directory, create a directory named CSCD240. ( 1 point)

A terminal window with a dark background and light green text. The window title bar shows 'afterlyte@DESKTOP-NLTB7VJ: ~' and standard window controls. The terminal shows the command 'mkdir CSCD240' being executed successfully, followed by a new prompt line.

```
afterlyte@DESKTOP-NLTB7VJ: ~$ mkdir CSCD240
afterlyte@DESKTOP-NLTB7VJ: ~$ |
```

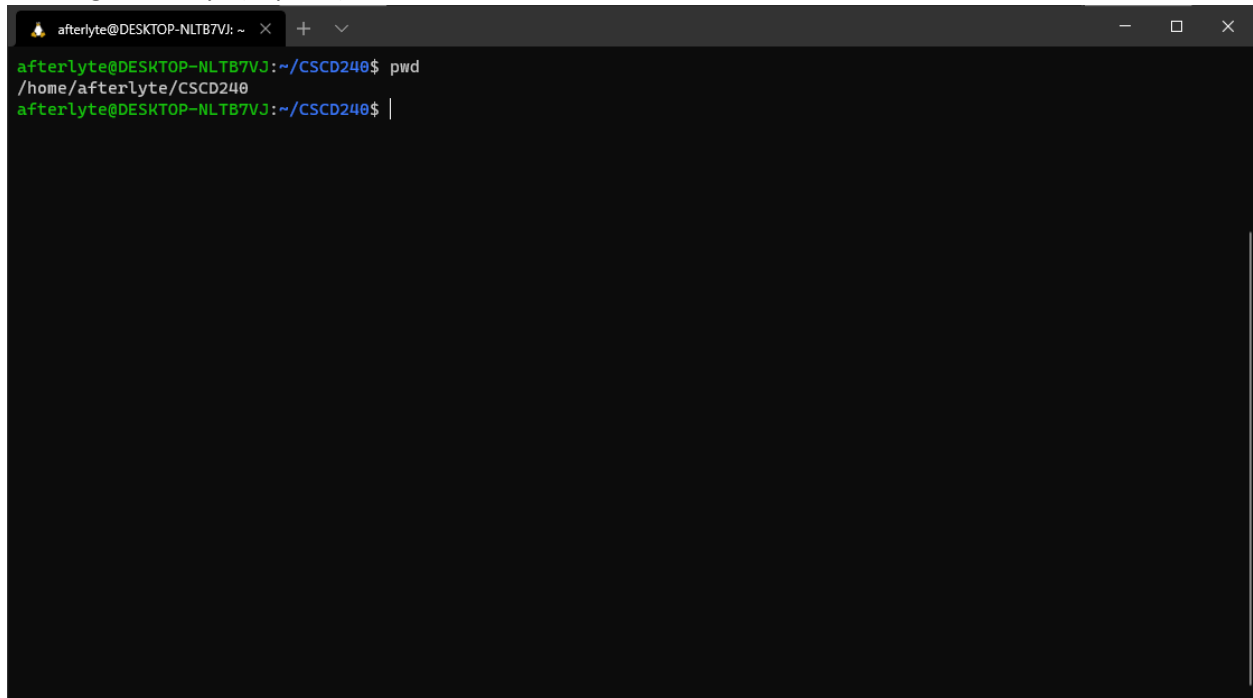
d) You want to access the directory named CSCD240 from your home directory. Write down both the absolute path and relative path for that. ( 2 points)

A terminal window with a dark background and light green text. The window title bar shows 'afterlyte@DESKTOP-NLTB7VJ: ~' and standard window controls. The terminal shows three commands being executed: 'cd CSCD240/', 'cd', and 'cd /home/afterlyte/CSCD240/'. Each command is followed by a new prompt line.

```
afterlyte@DESKTOP-NLTB7VJ: ~$ cd CSCD240/
afterlyte@DESKTOP-NLTB7VJ: ~/CSCD240$ cd
afterlyte@DESKTOP-NLTB7VJ: ~$ cd /home/afterlyte/CSCD240/
afterlyte@DESKTOP-NLTB7VJ: ~/CSCD240$ |
```

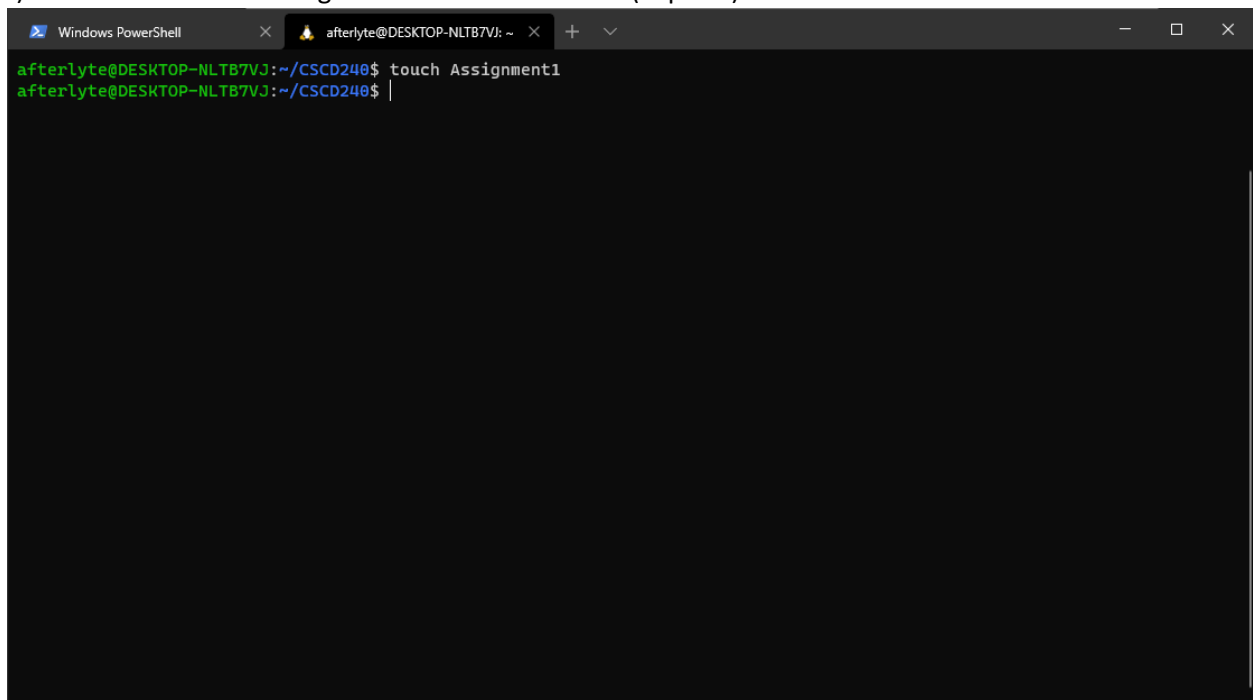
e) After running the command in d, what command will you use to figure out your current

working directory? ( 1 point)

A terminal window with a dark background. The title bar shows 'afterlyte@DESKTOP-NLTB7VJ: ~'. The prompt is 'afterlyte@DESKTOP-NLTB7VJ:~/CSCD240\$'. The command 'pwd' has been entered, and the output is '/home/afterlyte/CSCD240'. The prompt is now 'afterlyte@DESKTOP-NLTB7VJ:~/CSCD240\$' with a cursor.

```
afterlyte@DESKTOP-NLTB7VJ:~/CSCD240$ pwd
/home/afterlyte/CSCD240
afterlyte@DESKTOP-NLTB7VJ:~/CSCD240$ |
```

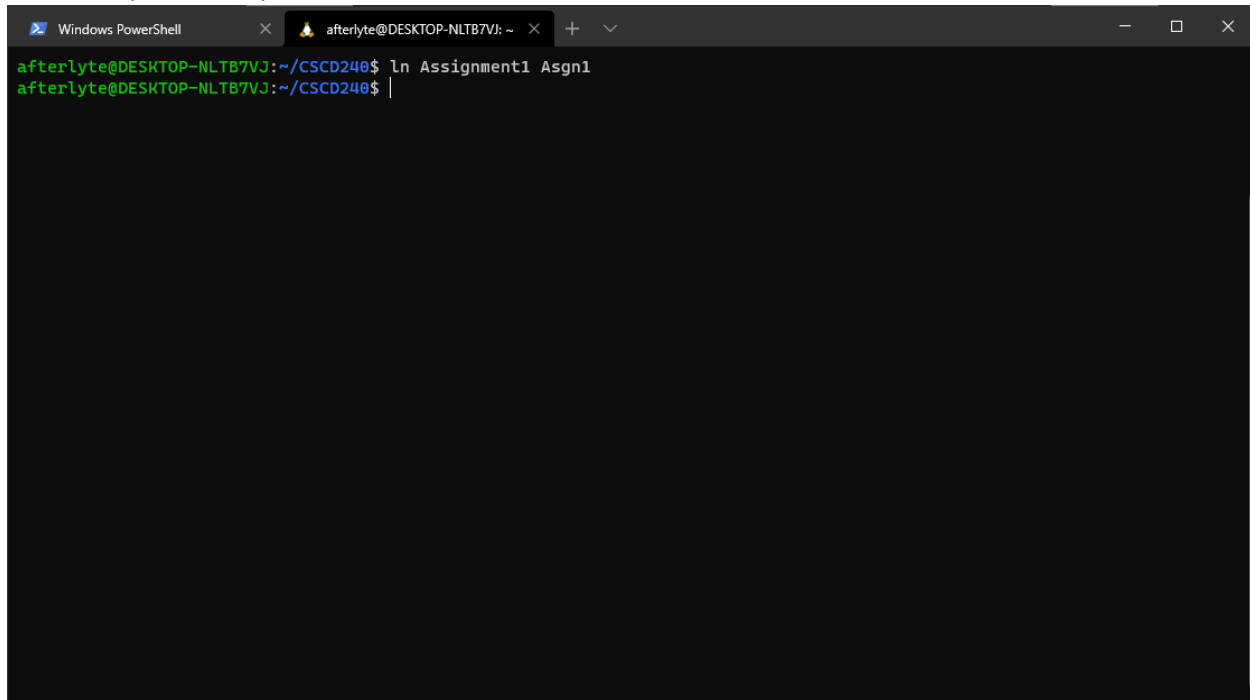
f) Create a file named Assignment1 under CSCD240. ( 1 point)

A terminal window with a dark background. The title bar shows 'Windows PowerShell' and 'afterlyte@DESKTOP-NLTB7VJ: ~'. The prompt is 'afterlyte@DESKTOP-NLTB7VJ:~/CSCD240\$'. The command 'touch Assignment1' has been entered. The prompt is now 'afterlyte@DESKTOP-NLTB7VJ:~/CSCD240\$' with a cursor.

```
afterlyte@DESKTOP-NLTB7VJ:~/CSCD240$ touch Assignment1
afterlyte@DESKTOP-NLTB7VJ:~/CSCD240$ |
```

g) Create a hard link for the file named Assignment1 in your current directory. You can

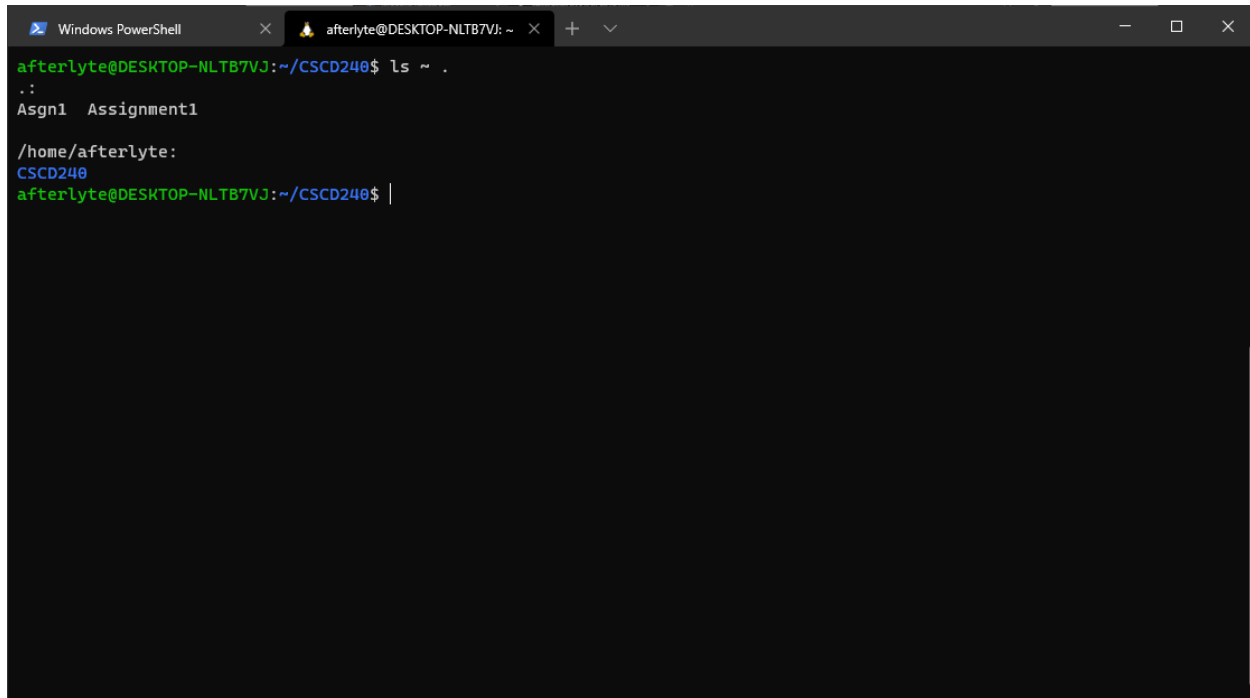
choose any name. (1 point)



```
Windows PowerShell
afterlyte@DESKTOP-NLTB7VJ: ~
afterlyte@DESKTOP-NLTB7VJ:~/CSCD240$ ln Assignment1 Asgn1
afterlyte@DESKTOP-NLTB7VJ:~/CSCD240$
```

h) Suppose you are now in CSCD240 directory. What output will be produced by the following command? Explain.

'ls ~ .' (1 point)



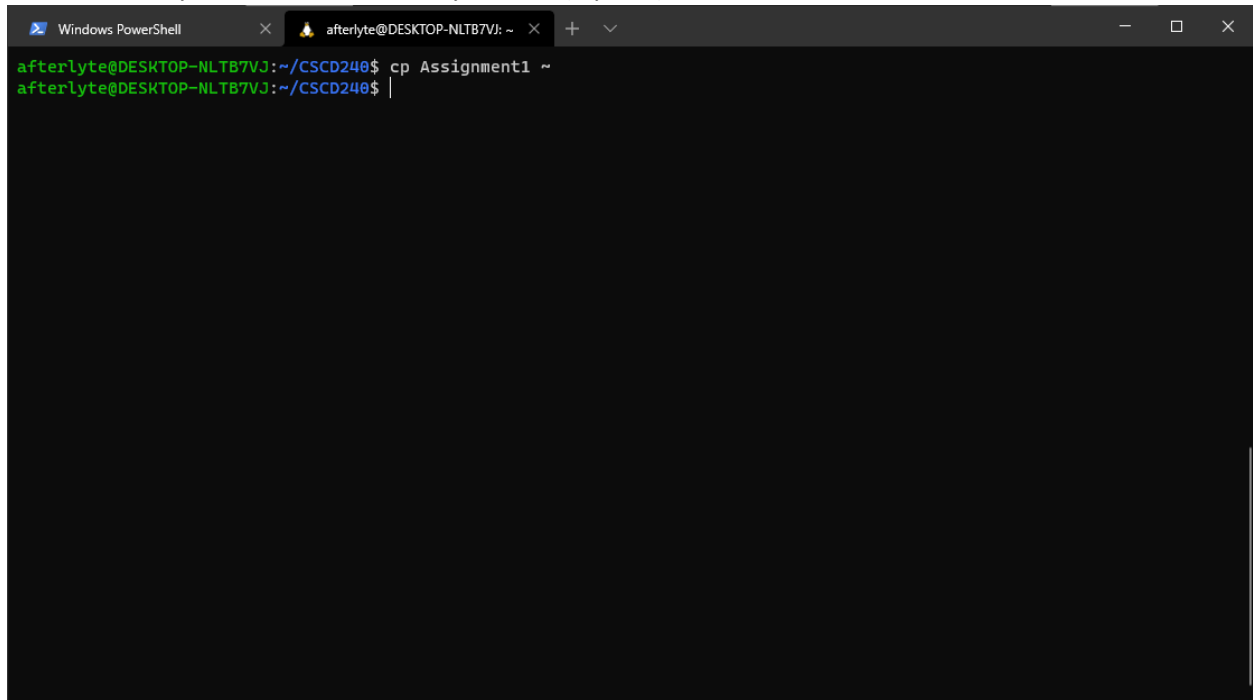
```
Windows PowerShell
afterlyte@DESKTOP-NLTB7VJ: ~
afterlyte@DESKTOP-NLTB7VJ:~/CSCD240$ ls ~ .
.:
Asgn1 Assignment1

/home/afterlyte:
CSCD240
afterlyte@DESKTOP-NLTB7VJ:~/CSCD240$
```

Using multiple parameters in 'ls' executes 'ls' on multiple directories.

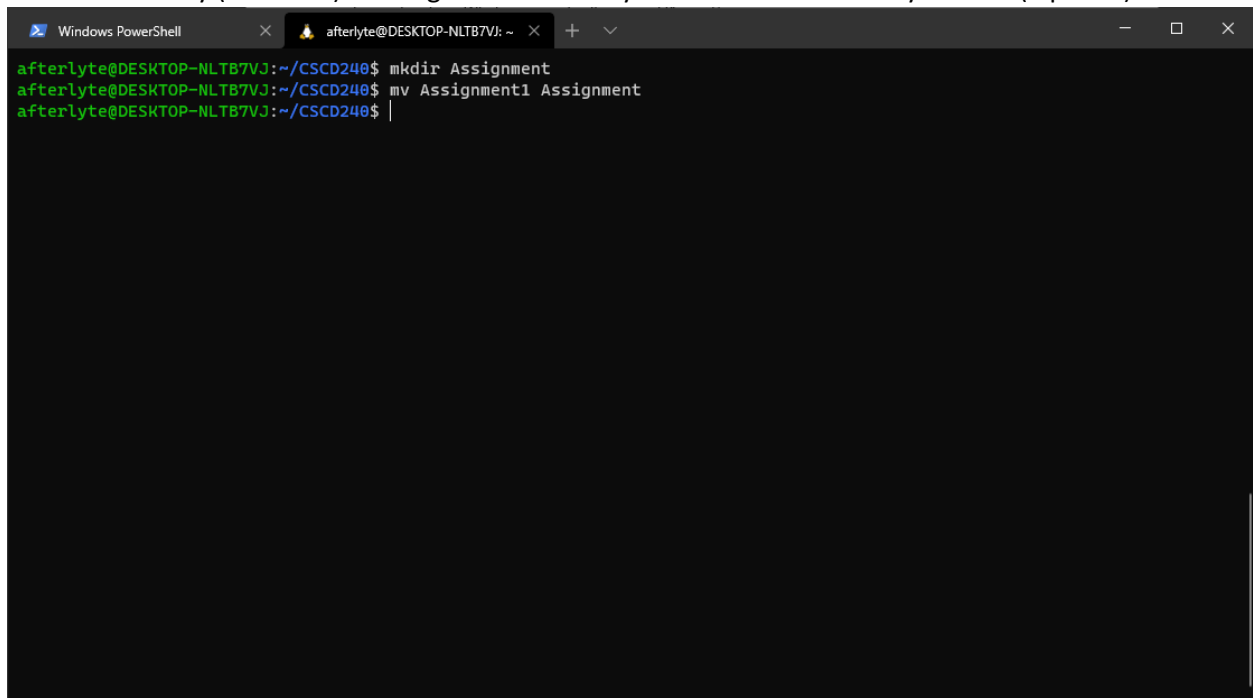
i) You need to copy Assignment1 file from your current directory (CSCD240) to your

home directory. What command will you use? (1 point)



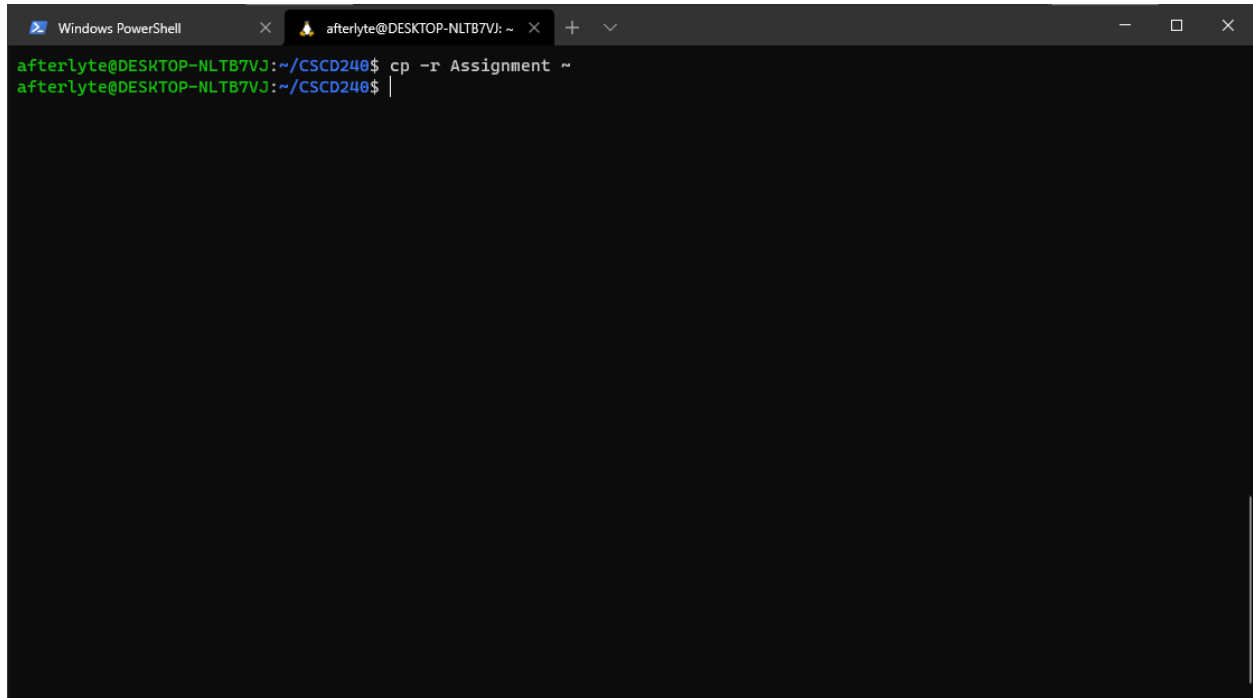
```
Windows PowerShell
afterlyte@DESKTOP-NLTB7VJ: ~
afterlyte@DESKTOP-NLTB7VJ:~/CSCD240$ cp Assignment1 ~
afterlyte@DESKTOP-NLTB7VJ:~/CSCD240$
```

j) Create one directory named Assignment under CSCD240. Move the file named Assignment1 from current directory (CSCD240) to Assignment directory. What commands will you use? (2 points)



```
Windows PowerShell
afterlyte@DESKTOP-NLTB7VJ: ~
afterlyte@DESKTOP-NLTB7VJ:~/CSCD240$ mkdir Assignment
afterlyte@DESKTOP-NLTB7VJ:~/CSCD240$ mv Assignment1 Assignment
afterlyte@DESKTOP-NLTB7VJ:~/CSCD240$
```

k) Copy the Assignment directory from the current directory (CSCD240) to your home directory. What command will you use? (1 point)

A screenshot of a Windows PowerShell terminal window. The window has a title bar with "Windows PowerShell" and a tab labeled "afterlyte@DESKTOP-NLTB7VJ: ~". The terminal shows a green prompt "afterlyte@DESKTOP-NLTB7VJ:~/CSCD240\$" followed by the command "cp -r Assignment ~". The command is partially executed, with a cursor at the end of the line.

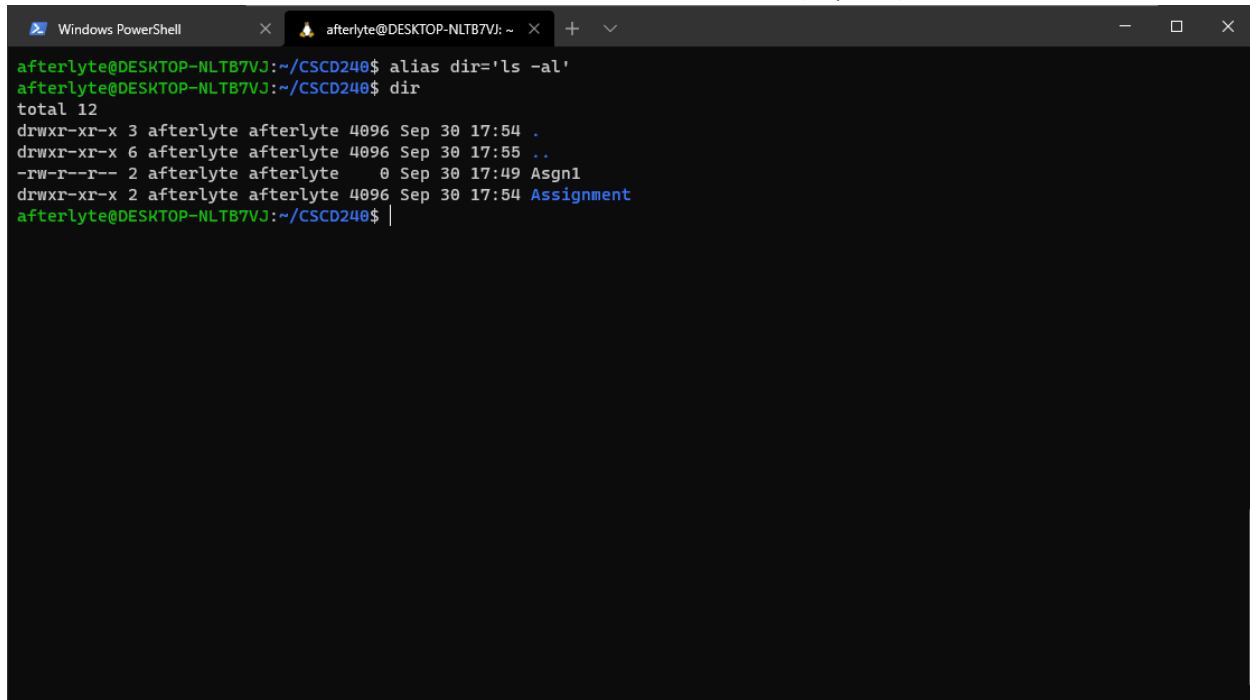
```
afterlyte@DESKTOP-NLTB7VJ:~/CSCD240$ cp -r Assignment ~
afterlyte@DESKTOP-NLTB7VJ:~/CSCD240$
```

l) What is the difference between 'ls -l' and 'ls -al' commands? (1 point)

'ls -l' gives the details view of all files/directories in the current directory. 'ls -al' does the same but also includes the directory itself, its parent, and hidden files.

m) Make a new command dir that is equivalent to Unix command ls -al. Capture the

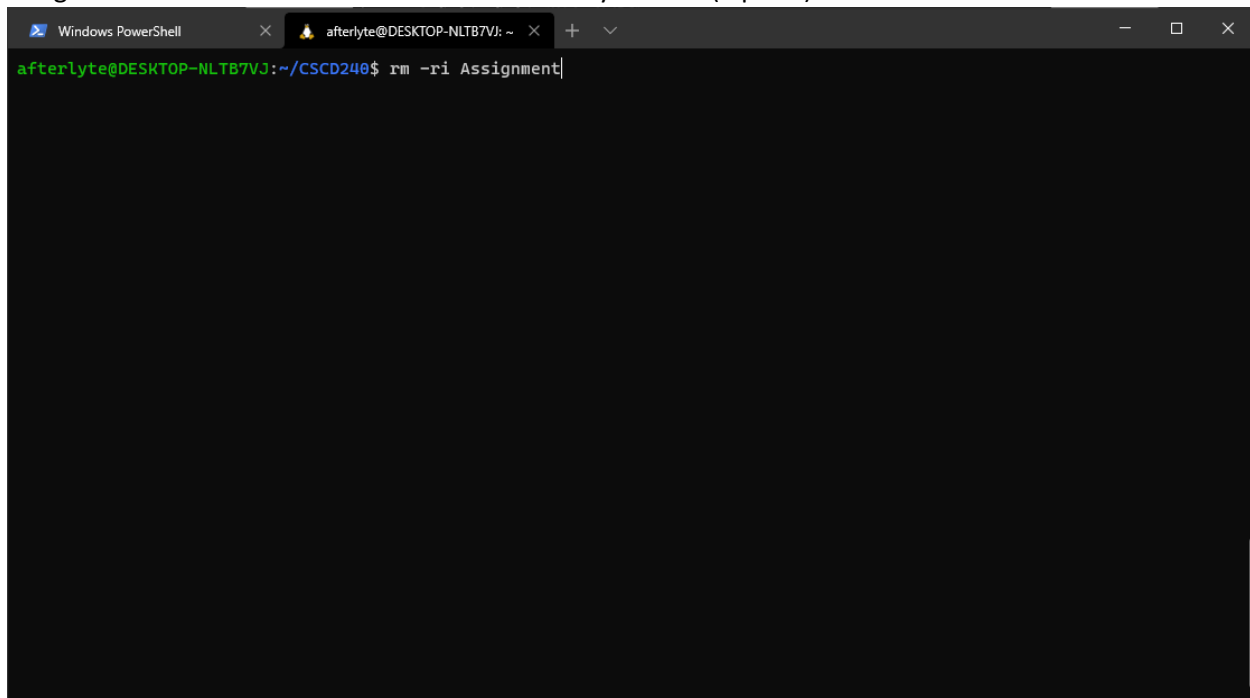
screenshot of the command that can achieve that and the results. ( 1 point)



```
Windows PowerShell
afterlyte@DESKTOP-NLTB7VJ: ~
afterlyte@DESKTOP-NLTB7VJ:~/CSCD240$ alias dir='ls -al'
afterlyte@DESKTOP-NLTB7VJ:~/CSCD240$ dir
total 12
drwxr-xr-x 3 afterlyte afterlyte 4096 Sep 30 17:54 .
drwxr-xr-x 6 afterlyte afterlyte 4096 Sep 30 17:55 ..
-rw-r--r-- 2 afterlyte afterlyte    0 Sep 30 17:49 Asgn1
drwxr-xr-x 2 afterlyte afterlyte 4096 Sep 30 17:54 Assignment
afterlyte@DESKTOP-NLTB7VJ:~/CSCD240$ |
```

n) We'd like to get a warning or prompt information before we delete the subdirectory

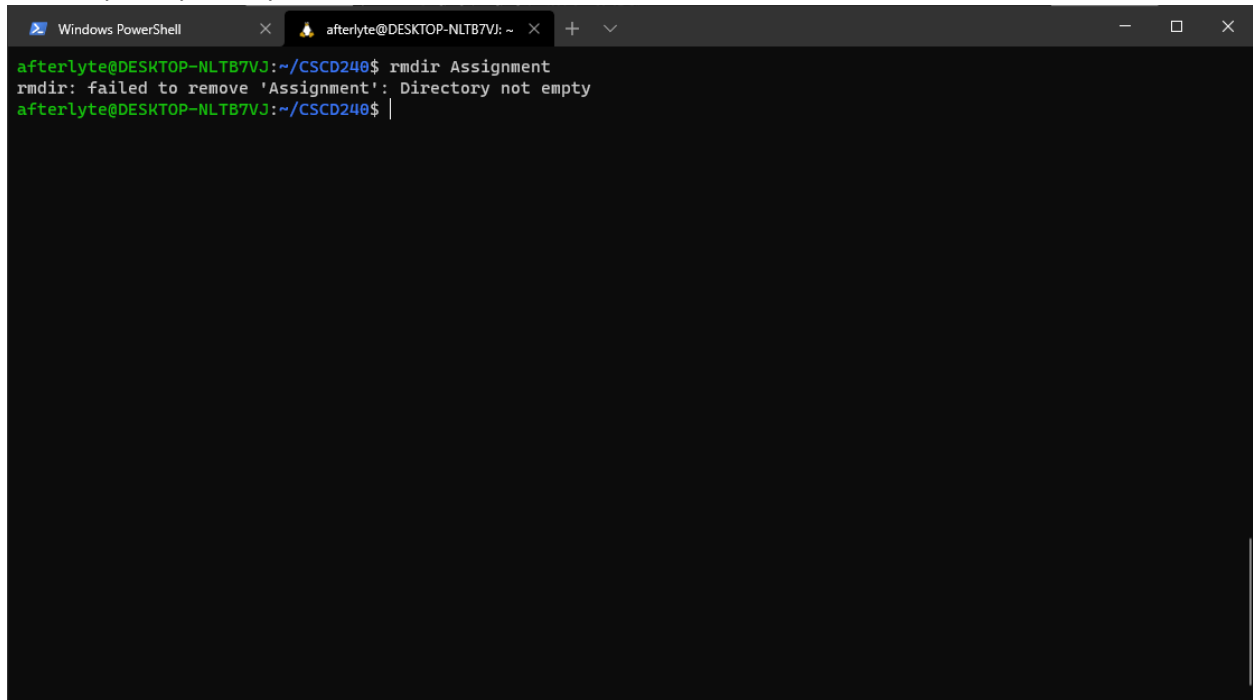
Assignment under CSCD240. What command will you use? (1 point)



```
Windows PowerShell
afterlyte@DESKTOP-NLTB7VJ: ~
afterlyte@DESKTOP-NLTB7VJ:~/CSCD240$ rm -ri Assignment|
```

o) Use rmdir to delete subdirectory Assignment under CSCD240. Does it delete the

directory? Why or why not?

A screenshot of a Windows PowerShell terminal window. The window has a dark background and a title bar with the text "Windows PowerShell". The terminal shows the following text: 

```
afterlyte@DESKTOP-NLTB7VJ: ~/CSCD240$ rmdir Assignment  
rmdir: failed to remove 'Assignment': Directory not empty  
afterlyte@DESKTOP-NLTB7VJ: ~/CSCD240$
```

No, because rmdir only works on empty directories. Assignment contains the file Assignment1

## Question 2

a) Create a text file named calendar2020.txt using command `cal 2020 > calendar2020.txt`. Issue the more command or the less command on calendar2020.txt and capture the screenshot of the output. How to move to the beginning of calendar2020.txt in less? How to move to the end of calendar2020.txt in less? How to scroll down or up?( 5 points, one for each question)



```
Windows PowerShell
afterlyte@DESKTOP-NLTB7VJ: ~
afterlyte@DESKTOP-NLTB7VJ:~$ cal 2020 > calendar2020.txt
afterlyte@DESKTOP-NLTB7VJ:~$ less calendar2020.txt
afterlyte@DESKTOP-NLTB7VJ:~$ |
```

```
Windows PowerShell
afterlyte@DESKTOP-NLTB7VJ: ~
2020
January February March
Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa
  1  2  3  4          1  1  2  3  4  5  6  7
  5  6  7  8  9 10 11    2  3  4  5  6  7  8    8  9 10 11 12 13 14
 12 13 14 15 16 17 18    9 10 11 12 13 14 15   15 16 17 18 19 20 21
 19 20 21 22 23 24 25   16 17 18 19 20 21 22   22 23 24 25 26 27 28
 26 27 28 29 30 31     23 24 25 26 27 28 29   29 30 31

April May June
Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa
  1  2  3  4          1  2    1  2  3  4  5  6
  5  6  7  8  9 10 11    3  4  5  6  7  8  9    7  8  9 10 11 12 13
 12 13 14 15 16 17 18   10 11 12 13 14 15 16   14 15 16 17 18 19 20
 19 20 21 22 23 24 25   17 18 19 20 21 22 23   21 22 23 24 25 26 27
 26 27 28 29 30       24 25 26 27 28 29 30   28 29 30
                   31

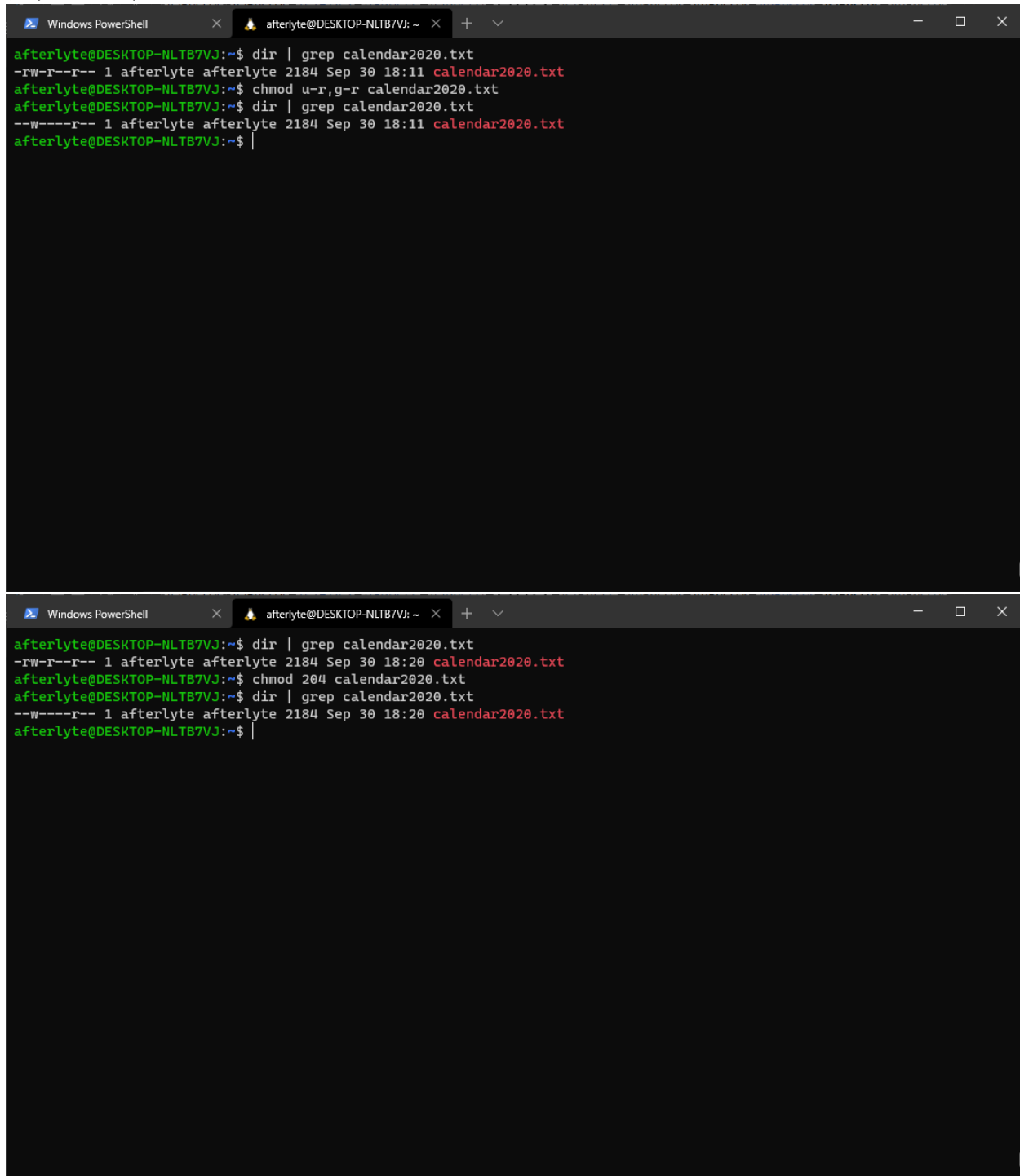
July August September
Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa
  1  2  3  4          1    1  2  3  4  5
  5  6  7  8  9 10 11    2  3  4  5  6  7  8    6  7  8  9 10 11 12
 12 13 14 15 16 17 18    9 10 11 12 13 14 15   13 14 15 16 17 18 19
 19 20 21 22 23 24 25   16 17 18 19 20 21 22   20 21 22 23 24 25 26
 26 27 28 29 30 31     23 24 25 26 27 28 29   27 28 29 30
                   30 31

October November December
calendar2020.txt
```

Beginning: g, End: G, scroll up/down: up arrow/down arrow

- b) Remove read permission from calendar2020.txt for the owner and all permissions for the group. Write down the commands using both symbolic and numeric (octal) values. Capture the screenshot for the commands and prove that the permission was changed.

( 4 points ; 2 points for each command)



The image shows two screenshots of a Windows PowerShell terminal window. The window title is 'Windows PowerShell' and the user is 'afterlyte@DESKTOP-NLTB7VJ: ~'. The terminal shows the following commands and outputs:

```
afterlyte@DESKTOP-NLTB7VJ:~$ dir | grep calendar2020.txt
-rw-r--r-- 1 afterlyte afterlyte 2184 Sep 30 18:11 calendar2020.txt
afterlyte@DESKTOP-NLTB7VJ:~$ chmod u-r,g-r calendar2020.txt
afterlyte@DESKTOP-NLTB7VJ:~$ dir | grep calendar2020.txt
--w----r-- 1 afterlyte afterlyte 2184 Sep 30 18:11 calendar2020.txt
afterlyte@DESKTOP-NLTB7VJ:~$ |
```

The second screenshot shows the same terminal window with the following commands and outputs:

```
afterlyte@DESKTOP-NLTB7VJ:~$ dir | grep calendar2020.txt
-rw-r--r-- 1 afterlyte afterlyte 2184 Sep 30 18:20 calendar2020.txt
afterlyte@DESKTOP-NLTB7VJ:~$ chmod 204 calendar2020.txt
afterlyte@DESKTOP-NLTB7VJ:~$ dir | grep calendar2020.txt
--w----r-- 1 afterlyte afterlyte 2184 Sep 30 18:20 calendar2020.txt
afterlyte@DESKTOP-NLTB7VJ:~$ |
```

### Question 3

Explain the following outputs from a unix command:

-rw-r--r-- 1 syasmin IT-GenericLinuxGroup 3637 Sep 21 2015 file.txt

This is a text file with standard permissions

drwx----- 16 syasmin IT-GenericLinuxGroup 4096 Mar 29 2016 CSCD240

This is a directory that syasmin as full and exclusive permissions over

lrwxrwxrwx 1 syasmin IT-GenericLinuxGroup 15 Nov 21 2015 netstorage -> /mnt/ns-syasmin

This is a soft link to a mounted storage that all users have read/write/execute permissions over

-rw-r--r-- 2 syasmin IT-GenericLinuxGroup 80 Jan 24 2017 hello.c

This is a C file that likely is a link to another file, given that it has 2 FS links on it