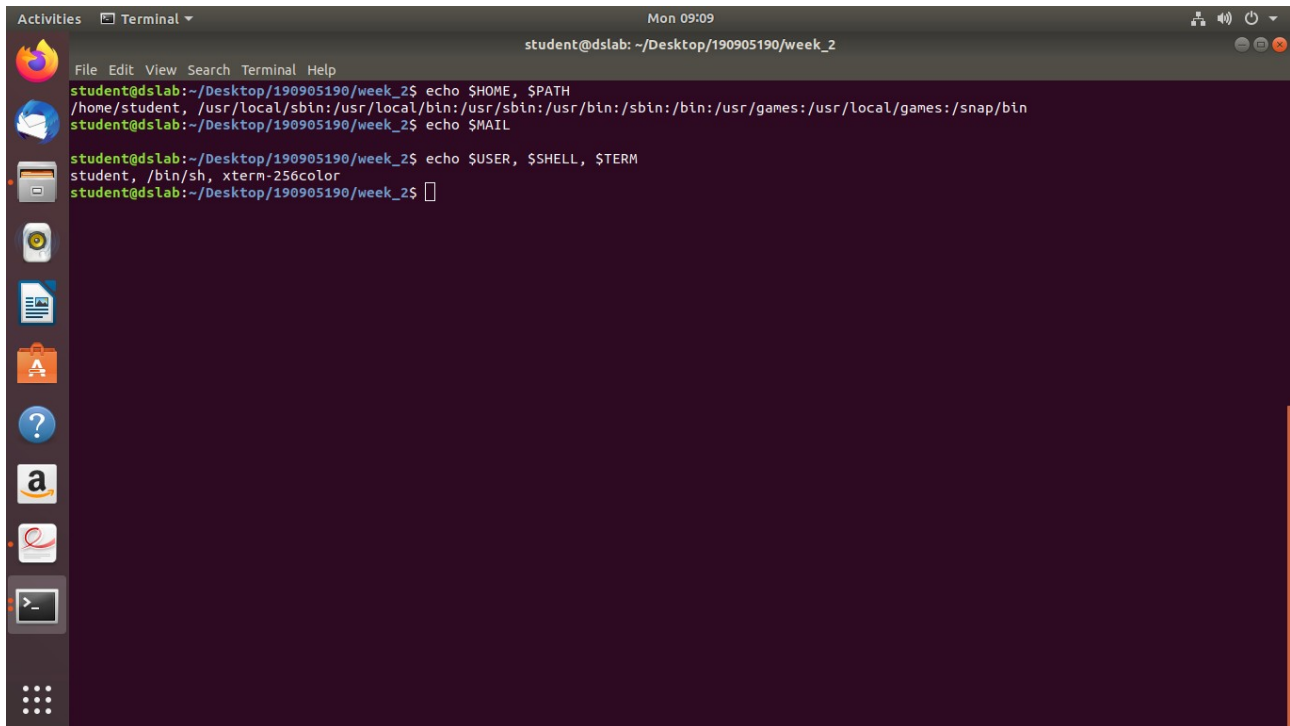


OST Lab

Week 2

Lab Exercise 1

1)

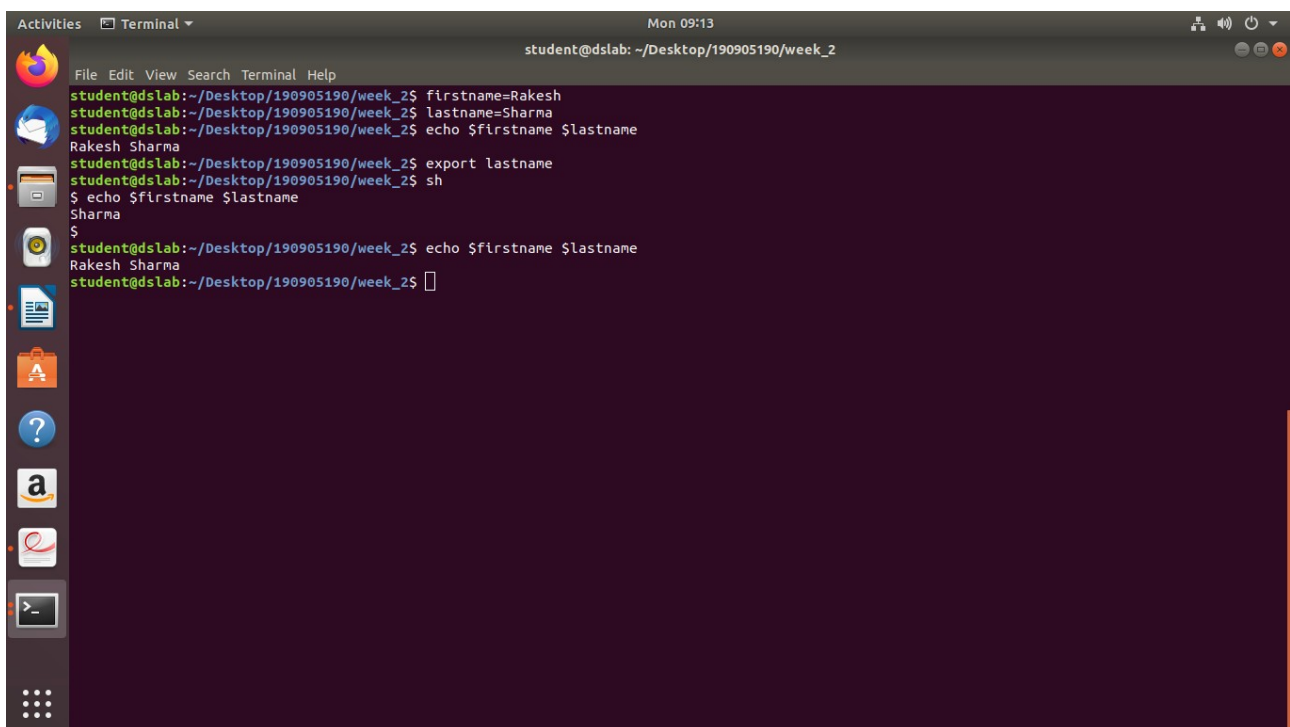


A terminal window titled 'Terminal' with a menu bar (File, Edit, View, Search, Terminal, Help) and a status bar (Mon 09:09, student@dslab: ~/Desktop/190905190/week_2). The terminal shows the following commands and output:

```
student@dslab:~/Desktop/190905190/week_2$ echo $HOME, $PATH
/home/student, /usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games:/snap/bin
student@dslab:~/Desktop/190905190/week_2$ echo $MAIL

student@dslab:~/Desktop/190905190/week_2$ echo $USER, $SHELL, $TERM
student, /bin/sh, xterm-256color
student@dslab:~/Desktop/190905190/week_2$
```

2)



A terminal window titled 'Terminal' with a menu bar (File, Edit, View, Search, Terminal, Help) and a status bar (Mon 09:13, student@dslab: ~/Desktop/190905190/week_2). The terminal shows the following commands and output:

```
student@dslab:~/Desktop/190905190/week_2$ firstname=Rakesh
student@dslab:~/Desktop/190905190/week_2$ lastname=Sharma
student@dslab:~/Desktop/190905190/week_2$ echo $firstname $lastname
Rakesh Sharma
student@dslab:~/Desktop/190905190/week_2$ export lastname
student@dslab:~/Desktop/190905190/week_2$ sh
$ echo $firstname $lastname
Sharma
$
student@dslab:~/Desktop/190905190/week_2$ echo $firstname $lastname
Rakesh Sharma
student@dslab:~/Desktop/190905190/week_2$
```

3)

```
Mon 09:17
student@dslab: ~/Desktop/190905190/week_2

File Edit View Search Terminal Help

student@dslab:~/Desktop/190905190/week_2$ firstname=Rakesh
student@dslab:~/Desktop/190905190/week_2$ lastname=Sharma
student@dslab:~/Desktop/190905190/week_2$ echo $firstname $lastname
Rakesh Sharma
student@dslab:~/Desktop/190905190/week_2$ export lastname
student@dslab:~/Desktop/190905190/week_2$ sh
$ echo $firstname $lastname
Sharma
$
student@dslab:~/Desktop/190905190/week_2$ echo $firstname $lastname
Rakesh Sharma
student@dslab:~/Desktop/190905190/week_2$ cat > script.sh
echo the name of this script is $0
echo the first argument is $1
echo a list of all the arguments is $*
echo this script places the date into a temporary file
echo call $1.$$
date > $1.$$
ls $1.$$
rm $1.$$
student@dslab:~/Desktop/190905190/week_2$ chmod +x script.sh
student@dslab:~/Desktop/190905190/week_2$ ./script.sh Rahul Sachin Kumble
the name of this script is ./script.sh
the first argument is Rahul
a list of all the arguments is Rahul Sachin Kumble
this script places the date into a temporary file
call Rahul.4481
Rahul.4481
student@dslab:~/Desktop/190905190/week_2$
```

Lab Exercise 2

1)

```
Mon 09:21
student@dslab: ~/Desktop/190905190/week_2

File Edit View Search Terminal Help

student@dslab:~/Desktop/190905190/week_2$ (sleep 10; echo done) &
[1] 4532
student@dslab:~/Desktop/190905190/week_2$ ps
  PID TTY          TIME CMD
 3589 pts/1    00:00:00 sh
 3590 pts/1    00:00:00 bash
 4532 pts/1    00:00:00 bash
 4533 pts/1    00:00:00 sleep
 4534 pts/1    00:00:00 ps
student@dslab:~/Desktop/190905190/week_2$ done
[1]+  Done                  ( sleep 10; echo done )
student@dslab:~/Desktop/190905190/week_2$
```

2)

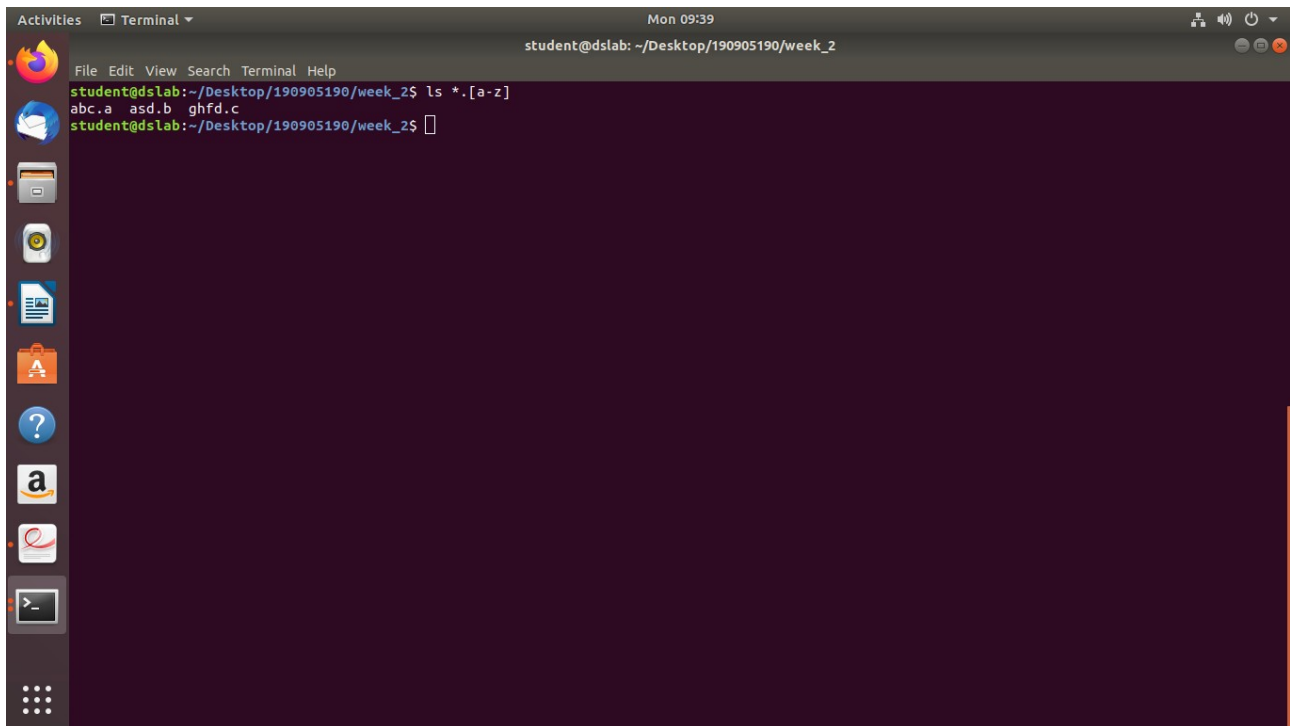
```
Activities Terminal Mon 09:22 student@dslab: ~/Desktop/190905190/week_2
File Edit View Search Terminal Help
student@dslab:~/Desktop/190905190/week_2$ (sleep 10; echo done) &
[1] 4561
student@dslab:~/Desktop/190905190/week_2$ ps
  PID TTY          TIME CMD
 3589 pts/1    00:00:00 sh
 3590 pts/1    00:00:00 bash
 4561 pts/1    00:00:00 bash
 4562 pts/1    00:00:00 sleep
 4563 pts/1    00:00:00 ps
student@dslab:~/Desktop/190905190/week_2$ kill 4561
student@dslab:~/Desktop/190905190/week_2$
[1]+  Terminated                  ( sleep 10; echo done )
student@dslab:~/Desktop/190905190/week_2$
```

3)

```
Activities Terminal Mon 09:24 student@dslab: ~/Desktop/190905190/week_2
File Edit View Search Terminal Help
student@dslab:~/Desktop/190905190/week_2$ (sleep 10; echo done 1) &
[1] 4615
student@dslab:~/Desktop/190905190/week_2$ (sleep 10; echo done 2) &
[2] 4617
student@dslab:~/Desktop/190905190/week_2$ echo done 3; wait; echo done 4
done 3
done 1
[1]- Done                        ( sleep 10; echo done 1 )
done 2
[2]+ Done                        ( sleep 10; echo done 2 )
done 4
student@dslab:~/Desktop/190905190/week_2$
student@dslab:~/Desktop/190905190/week_2$
```

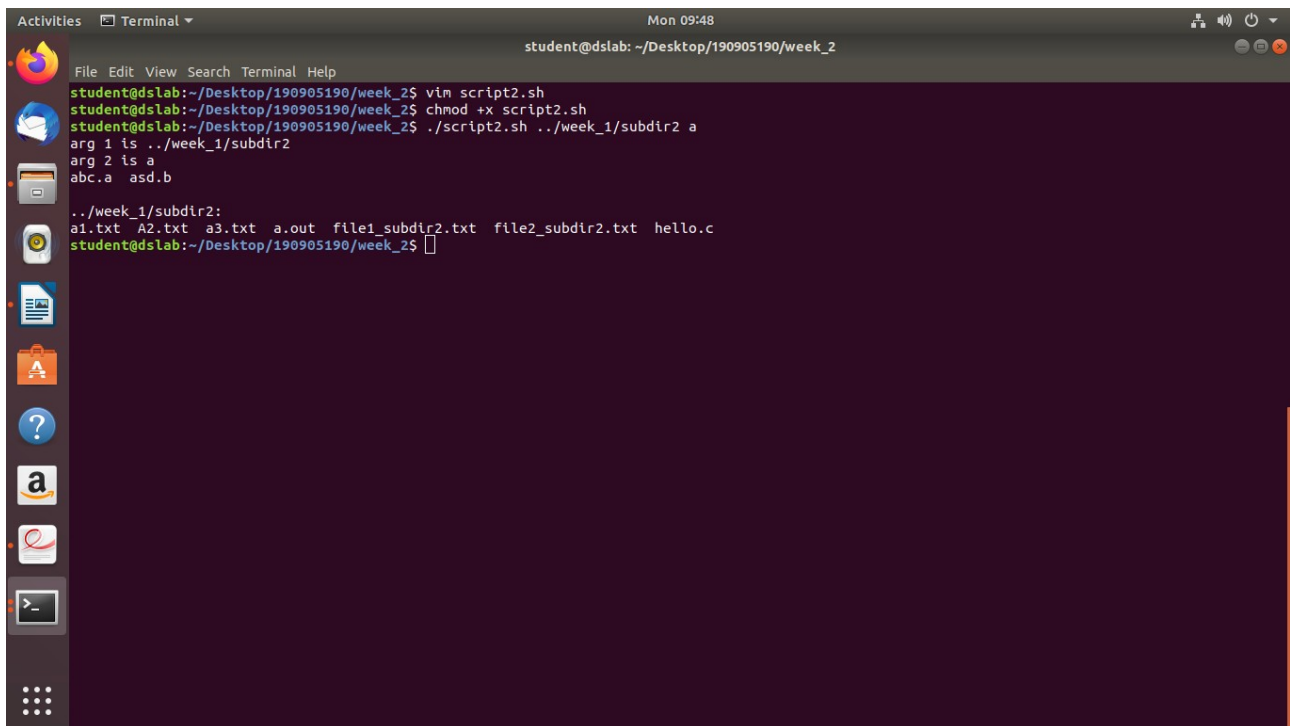
Lab Exercise 3

1)

A terminal window titled 'Terminal' with a menu bar (File, Edit, View, Search, Terminal, Help) and a status bar (Mon 09:39, student@dslab: ~/Desktop/190905190/week_2). The terminal shows the user running the command 'ls *. [a-z]' in the directory ~/Desktop/190905190/week_2, which outputs 'abc.a asd.b ghfd.c'.

```
student@dslab:~/Desktop/190905190/week_2$ ls *. [a-z]
abc.a  asd.b  ghfd.c
student@dslab:~/Desktop/190905190/week_2$
```

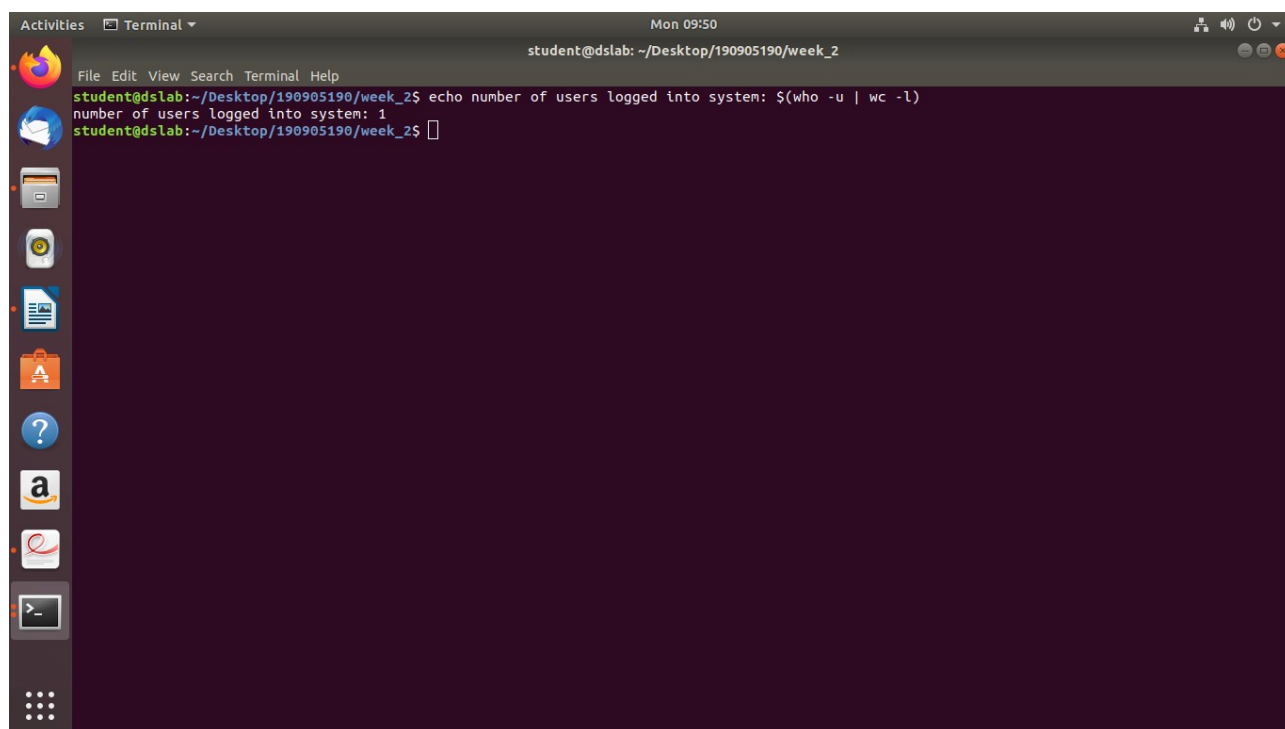
2)

A terminal window titled 'Terminal' with a menu bar (File, Edit, View, Search, Terminal, Help) and a status bar (Mon 09:48, student@dslab: ~/Desktop/190905190/week_2). The terminal shows the user running a series of commands: 'vim script2.sh', 'chmod +x script2.sh', and './script2.sh ../week_1/subdir2 a'. The script outputs 'arg 1 is ../week_1/subdir2', 'arg 2 is a', and 'abc.a asd.b'. The user then runs 'ls' in the directory ../week_1/subdir2, which outputs a list of files including a1.txt, A2.txt, a3.txt, a.out, file1_subdir2.txt, file2_subdir2.txt, and hello.c.

```
student@dslab:~/Desktop/190905190/week_2$ vim script2.sh
student@dslab:~/Desktop/190905190/week_2$ chmod +x script2.sh
student@dslab:~/Desktop/190905190/week_2$ ./script2.sh ../week_1/subdir2 a
arg 1 is ../week_1/subdir2
arg 2 is a
abc.a  asd.b

../week_1/subdir2:
a1.txt  A2.txt  a3.txt  a.out  file1_subdir2.txt  file2_subdir2.txt  hello.c
student@dslab:~/Desktop/190905190/week_2$
```

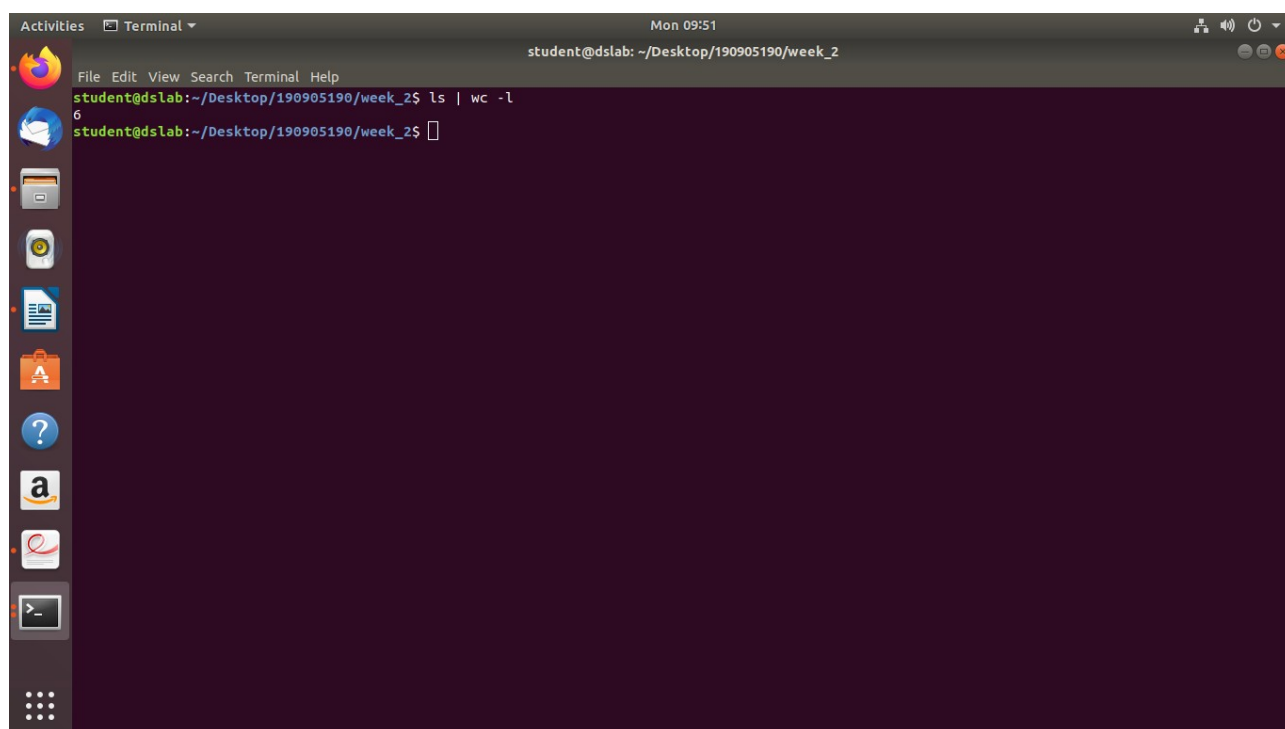
3)



A terminal window titled "Terminal" with a menu bar (File, Edit, View, Search, Terminal, Help) and a status bar (Mon 09:50, student@dslab: ~/Desktop/190905190/week_2). The terminal shows the following commands and output:

```
student@dslab:~/Desktop/190905190/week_2$ echo number of users logged into system: $(who -u | wc -l)
number of users logged into system: 1
student@dslab:~/Desktop/190905190/week_2$
```

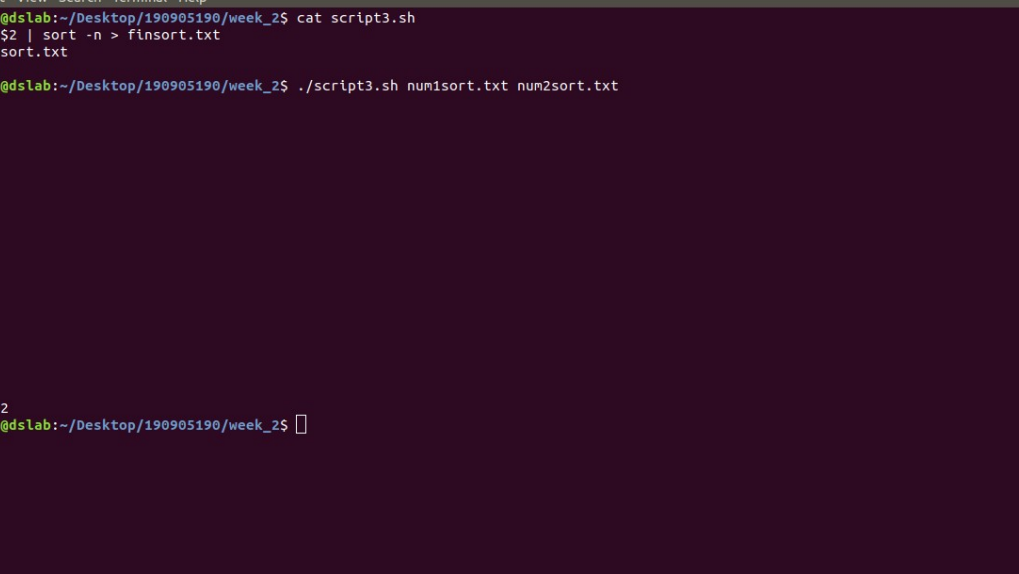
4)



A terminal window titled "Terminal" with a menu bar (File, Edit, View, Search, Terminal, Help) and a status bar (Mon 09:51, student@dslab: ~/Desktop/190905190/week_2). The terminal shows the following commands and output:

```
student@dslab:~/Desktop/190905190/week_2$ ls | wc -l
6
student@dslab:~/Desktop/190905190/week_2$
```

5)



The screenshot shows a terminal window with the following content:

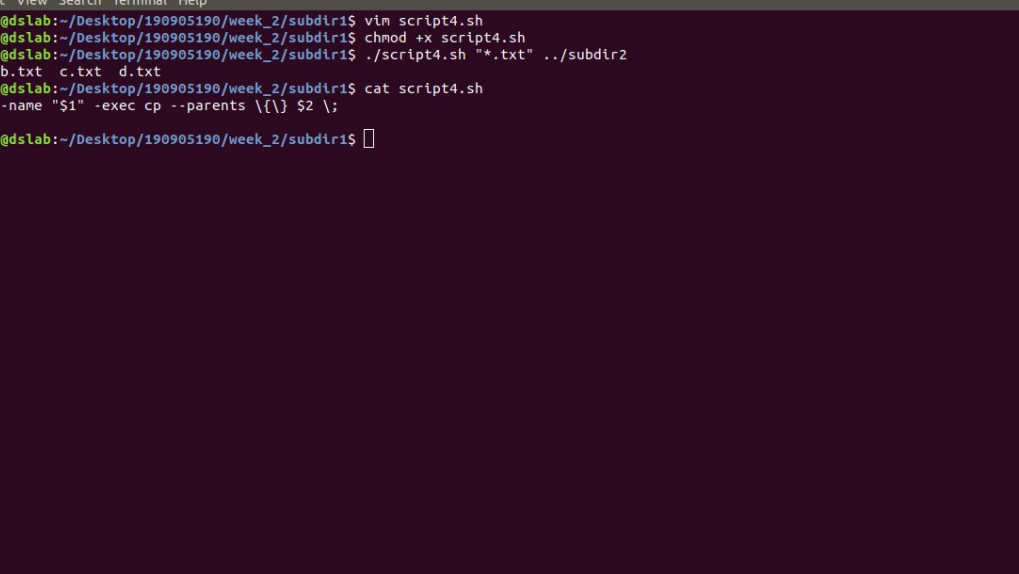
```
student@dslab: ~/Desktop/190905190/week_2
student@dslab:~/Desktop/190905190/week_2$ cat script3.sh
cat $1 $2 | sort -n > finsort.txt
cat finsort.txt

student@dslab:~/Desktop/190905190/week_2$ ./script3.sh num1sort.txt num2sort.txt

4
5
23
34
42
56
78
94
131
182
356
1035
7392
34816
48163
71845
284398
12947302
student@dslab:~/Desktop/190905190/week_2$
```

The terminal window has a title bar with "Activities", "Terminal", and "Mon 10:06". The left sidebar contains icons for various applications, including Firefox, a mail client, a file manager, and a terminal. The terminal output shows the execution of a script that sorts two input files and concatenates the results.

6)



```
student@slab: ~/Desktop/190905190/week_2/subdir1
student@slab:~/Desktop/190905190/week_2/subdir1$ vim script4.sh
student@slab:~/Desktop/190905190/week_2/subdir1$ chmod +x script4.sh
student@slab:~/Desktop/190905190/week_2/subdir1$ ./script4.sh "*.txt" ../subdir2
a.txt b.txt c.txt d.txt
student@slab:~/Desktop/190905190/week_2/subdir1$ cat script4.sh
find . -name "$1" -exec cp --parents {\{\} $2 \;
ls $2
student@slab:~/Desktop/190905190/week_2/subdir1$
```