

Lab Assignment No: 02

NAME: Vivek Vikram Pundkar

ROLLNO: 77

CLASS: C

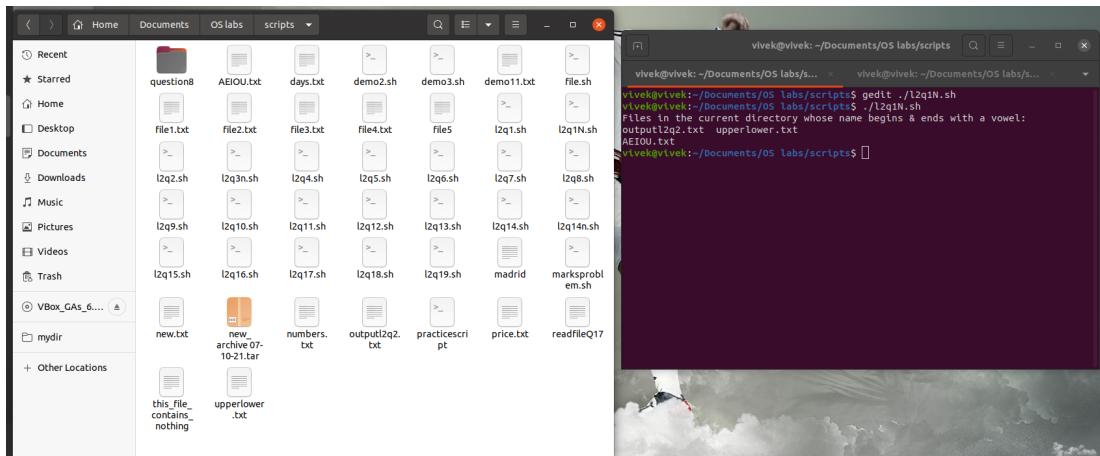
BRANCH: ENTC

BATCH: 3

DATE OF PERFORMANCE: 23-09-2021

1. Write a shell script to show all the files in the current directory whose name begins & ends with a vowel.

→



2. Write a shell script that takes the first 10 lines from one file & the last 10 lines from the second file & stores them in a third file. The file names will be sent as command line arguments.



```
vivek@vivek:~/Documents/OS labs/scripts$ ./l2q2.sh
Enter the file 1 name
file1.txt
a
b
c
d
e
f
g
h
i
j
k
l
m
n
o
Enter the file 2 name
file2.txt
aa
bb
cc
dd
ee
ff
gg
hh
ii
jj
kk
ll
mm
nn
oo
Enter the file name to copy contents
outputl2q2.txt
a
```

```
vivek@vivek:~/Documents/OS labs/scripts$ ./l2q2.sh
f
ff
g
gg
h
hh
i
ii
j
jj
k
kk
l
ll
m
mm
n
nn
o
oo
File copied contents are
a
b
c
d
e
f
g
h
i
j
ff
gg
hh
ii
jj
kk
ll
mm
nn
oo
vivek@vivek:~/Documents/OS labs/scripts$
```

3. Write a shell script to reverse the given number & find the sum of all the digits.



```
vivek@vivek:~/Documents/OS labs/scripts$ ./l2q3n.sh
Enter a number
654129
reversed number 921456
sum of digits 27
vivek@vivek:~/Documents/OS labs/scripts$
```

4. Write a shell script to enter a name & 3 subject marks of a student & calculate total & percentage & print First class, second class, pass class & fail.



```
vivek@vivek:~/Documents/OS labs/scripts$ ./l2q4.sh
Enter name of the student
Raoul
Enter the 3 subject marks outof 100
77 66 44
Sum of 3 subjects are: 187
Percentage: 62
Result of Raoul : Second Class
vivek@vivek:~/Documents/OS labs/scripts$
```

5. Shell Script to Scrape prices of Cryptocurrency coins in Linux.



```
vivek@vivek:~/Documents/OS labs/scripts$ gedit l2q5.sh
vivek@vivek:~/Documents/OS labs/scripts$ ./l2q5.sh
enter the coin code : bitcoin
./l2q5.sh: line 23: curl: command not found
The price of bitcoin is =
vivek@vivek:~/Documents/OS labs/scripts$ sudo apt install curl
[sudo] password for vivek:
Sorry, try again
[sudo] password for vivek:
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following packages were automatically installed and are no longer required:
  chromium-codecs-ffmpeg-extra gstreamer1.0-vaapi libgstreamer-plugins-bad1.0-0 libva-wayland2
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
  libcurl4
The following NEW packages will be installed:
  curl
The following packages will be upgraded:
  libcurl4
1 upgraded, 1 newly installed, 0 to remove and 65 not upgraded.
Need to get 161 kB/394 kB of archives.
After this operation, 11.0 MB of additional disk space will be used.
Do you want to continue? [Y/n]
Get:1 http://In.archive.ubuntu.com/ubuntu focal-updates/main amd64 curl amd64 7.68.0-1ubuntu2.7 [161 kB]
Fetched 161 kB in 1s (142 kB/s)
(Reading database ... 151565 files and directories currently installed.)
Preparing to unpack .../libcurl4_7.68.0-1ubuntu2.7_amd64.deb ...
Unpacking libcurl4:amd64 (7.68.0-1ubuntu2.7) over (7.68.0-1ubuntu2.6) ...
Setting up libcurl4:amd64 (7.68.0-1ubuntu2.7) ...
Preparing to unpack .../curl_7.68.0-1ubuntu2.7_amd64.deb ...
Unpacking curl (7.68.0-1ubuntu2.7) ...
Setting up libcurl4:amd64 (7.68.0-1ubuntu2.7) ...
Setting up curl (7.68.0-1ubuntu2.7) ...
Processing triggers for man-db (2.31-0ubuntu9.2) ...
vivek@vivek:~/Documents/OS labs/scripts$ ./l2q5.sh
enter the coin code : bitcoin
  % Total    % Received % Xferd  Average Speed   Time     Time      Current
                                 Dload Upload   Total Spent   Left  Speed
100  309k    0  309k    0     0  261k  0  0:00:01  --:--:-- 261k
The price of bitcoin is = $54,087
```

6. Shell Script to Display Time in Word



```
vivek@vivek: ~/Documents/OS labs/scripts
vivek@vivek:~/Documents/OS labs/scripts$ ./l2q6.sh
Current time is : 11:53:38 AM IST
Time in Word is : Eleven hour Fifty-Three minutes Thirty-Eight second AM
vivek@vivek:~/Documents/OS labs/scripts$
```

7. Shell Script to Enhance the Calendar to Accept MM, MMM, YYYY



```
vivek@vivek: ~/Documents/OS labs/scripts
vivek@vivek:~/Documents/OS labs/scripts$ ./l2q7.sh 2021
2021
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 5 6 7 8 9 10 11 12 13 1 2 3 4 5 6
3 4 5 6 7 8 9 10 11 12 13 7 8 9 10 11 12 13
10 11 12 13 14 15 16 14 15 16 17 18 19 20 14 15 16 17 18 19 20
17 18 19 20 21 22 23 21 22 23 24 25 26 27 21 22 23 24 25 26 27
24 25 26 27 28 29 30 28 29 30 31
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 5 6 7 8 9 10 11 12 13 1 2 3 4 5
4 5 6 7 8 9 10 2 3 4 5 6 7 8 6 7 8 9 10 11 12
11 12 13 14 15 16 17 9 10 11 12 13 14 15 13 14 15 16 17 18 19
18 19 20 21 22 23 24 16 17 18 19 20 21 22 20 21 22 23 24 25 26
25 26 27 28 29 30 31 23 24 25 26 27 28 29 27 28 29 30
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 5 6 7 8 9 10 11 12 13 1 2 3 4
4 5 6 7 8 9 10 1 2 3 4 5 6 7 5 6 7 8 9 10 11
11 12 13 14 15 16 17 15 16 17 18 19 20 21 12 13 14 15 16 17 18
18 19 20 21 22 23 24 22 23 24 25 26 27 28 19 20 21 22 23 24 25
25 26 27 28 29 30 31 29 30 31
26 27 28 29 30

October November December
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 5 6 7 8 9 10 11 12 13 1 2 3 4
3 4 5 6 7 8 9 7 8 9 10 11 12 13 5 6 7 8 9 10 11
10 11 12 13 14 15 16 14 15 16 17 18 19 20 12 13 14 15 16 17 18
17 18 19 20 21 22 23 21 22 23 24 25 26 27 19 20 21 22 23 24 25
24 25 26 27 28 29 30 28 29 30
26 27 28 29 30
31
vivek@vivek:~/Documents/OS labs/scripts$
```

```
vivek@vivek: ~/Documents/OS labs/scripts
vivek@vivek:~/Documents/OS labs/scripts$ ./l2q7.sh oct
./l2q7.sh: line 40: [: oct: integer expression expected
"Calander for oct Month : "
October 2021
Su Mo Tu We Th Fr Sa
1 2
3 4 5 6 7 8 9
10 11 12 13 14 15 16
17 18 19 20 21 22 23
24 25 26 27 28 29 30
31
vivek@vivek:~/Documents/OS labs/scripts$ ./l2q7.sh 10 2020
October 2020
Su 4 11 18 25
Mo 5 12 19 26
Tu 6 13 20 27
We 7 14 21 28
Th 1 8 15 22 29
Fr 2 9 16 23 30
Sa 3 10 17 24 31
vivek@vivek:~/Documents/OS labs/scripts$
```

8. Shell Script to create a compressed archive of the specified directory



```
vivek@vivek: ~/Documents/OS labs/scripts
vivek@vivek:~/Documents/OS labs/scripts$ ./l2q8.sh question8
ated.
os labs/scripts$ ls
file4.txt l2q11.sh l2q14.sh l2q18.sh l2q2.sh l2q6.sh madrid numbers.txt question8
file5 l2q12.sh l2q15.sh l2q19.sh l2q3n.sh l2q7.sh marksproblem.sh outputl2q2.txt readfile017
file.sh l2q13.sh l2q16.sh l2q1N.sh l2q4.sh l2q8.sh 'new_archive_07-10-21.tar' practicescript this_file_contains_nothing
l2q10.sh l2q14n.sh l2q17.sh l2q1.sh l2q5.sh l2q9.sh new.txt price.txt upperlower.txt
os labs/scripts$
```

9. Shell Script to Check Hard Disk Revolutions Per Minute (RPM) Speed



```
vivek@vivek: ~/Documents/OS labs/scripts
vivek@vivek:~/Documents/OS labs/scripts$ ./l2q9.sh
[sudo] password for vivek:
Sorry, try again.
[sudo] password for vivek:
The RPM speed of the Hard disk is: rpm
vivek@vivek:~/Documents/OS labs/scripts$
```

10. Shell Script to Check if Every Passed Argument is a File or Directory

→

```
vivek@vivek:~/Documents/OS labs/scripts$ ls
days.txt  file4.txt  l2q14n.sh  l2q2.sh  l2q9.sh      price.txt
demo11.txt  file5    l2q14.sh   l2q3n.sh  madrid     readfile017
demo2.sh   file.sh   l2q15.sh   l2q4.sh   marksproblem.sh  this_file_contains_nothing
demo3.sh   l2q10.sh  l2q16.sh  l2q5.sh   new.txt    upperlower.txt
file1.txt  l2q11.sh  l2q17.sh  l2q6.sh   numbers.txt
file2.txt  l2q12.sh  l2q18.sh  l2q7.sh   outputl2q2.txt
file3.txt  l2q13.sh  l2q19.sh  l2q8.sh   practicescript
vivek@vivek:~/Documents/OS labs/scripts$ ./l2q10.sh
The provided argument is the directory,
vivek@vivek:~/Documents/OS labs/scripts$ ./l2q10.sh madrid
The provided argument is the file.
vivek@vivek:~/Documents/OS labs/scripts$ ./l2q10.sh file4.txt
The provided argument is the file.
vivek@vivek:~/Documents/OS labs/scripts$ ./l2q10.sh mumbai
The given argument does not exist on the file system.
vivek@vivek:~/Documents/OS labs/scripts$
```

11. Menu Driven Shell Script to Check Memory and Disk Usages

→

```
vivek@vivek:~/Documents/OS labs/scripts
+++++ MENU ++++++
1. Show Memory Usage.
2. Show Disk Usage.
3. Exit
+++++ Select the option from above menu: 1
Memory Usage:
total        used         free        shared       buff/cache   available
Mem:      5126396   1970324   1657928      91696   1498144   2818340
Swap:    2097148      0      2097148
Press any key to Continue...[ ]
```



```
vivek@vivek:~/Documents/OS labs/scripts
+++++ MENU ++++++
1. Show Memory Usage.
2. Show Disk Usage.
3. Exit
+++++ Select the option from above menu: 2
Disk Usage:
Filesystem  1K-blocks  Used Available Use% Mounted on
udev          2533580      0   2533580  0% /dev
tmpfs         512640   1408   511232  1% /run
/dev/sda5  102919080 9080972  88567068 10% /
tmpfs         2563196      0   2563196  0% /dev/shm
tmpfs          5120       4    5116  1% /run/lock
tmpfs         2563196      0   2563196  0% /sys/fs/cgroup
/dev/loop0      128      128      0  100% /snap/bare/5
/dev/loop1      56832  56832      0  100% /snap/core18/2128
/dev/loop3      66816  66816      0  100% /snap/gtk-common-themes/1519
/dev/loop2      66688  66688      0  100% /snap/gtk-common-themes/1515
/dev/loop4     224256  224256      0  100% /snap/gnome-3-34-1804/72
/dev/loop5      52224  52224      0  100% /snap/snap-store/547
/dev/loop6      33152  33152      0  100% /snap/snapd/13170
/dev/loop7      33152  33152      0  100% /snap/snapd/12883
/dev/sda1     523248      4  523244  1% /boot/efi
tmpfs         512636      12   512624  1% /run/user/125
tmpfs         512636      60   512576  1% /run/user/1000
Press any key to Continue...[ ]
```

12. Shell Script to Count Lines and Words in a file

→

```
vivek@vivek:~/Documents/OS labs/scripts$ gedit l2q12.sh
vivek@vivek:~/Documents/OS labs/scripts$ ./l2q12.sh
Number of lines: 4
Number of words: 15
```

13. Shell Script to Remove Temporary Files

→

```
vivek@vivek:~/Documents/OS labs/scripts$ ./l2q12.sh
./l2q12.sh: line 7: home/vivek/Documents/demo11.txt: No such file or directory
./l2q12.sh: line 9: home/vivek/Documents/demo11.txt: No such file or directory
Number of lines:
Number of words:
vivek@vivek:~/Documents/OS labs/scripts$ ./l2q13.sh
Removing all temporary files from /tmp
There are total 14 temporary files/directory in /tmp
rm: cannot remove '/tmp/systemd-private-af25e211a49647f4b421faf3ee7c47f-colord.service-rd1Z6e': Operation not permitted
rm: cannot remove '/tmp/systemd-private-af25e211a49647f4b421faf3ee7c47f-fwupd.service-sdp0ke': Operation not permitted
rm: cannot remove '/tmp/systemd-private-af25e211a49647f4b421faf3ee7c47f-ModemManager.service-oJkDdf': Operation not permitted
rm: cannot remove '/tmp/systemd-private-af25e211a49647f4b421faf3ee7c47f-switcheroo-control.service-zWxPf': Operation not permitted
rm: cannot remove '/tmp/systemd-private-af25e211a49647f4b421faf3ee7c47f-systemd-logind.service-DrSSol': Operation not permitted
rm: cannot remove '/tmp/systemd-private-af25e211a49647f4b421faf3ee7c47f-systemd-resolved.service-45wv1l': Operation not permitted
rm: cannot remove '/tmp/systemd-private-af25e211a49647f4b421faf3ee7c47f-timesyncd.service-e9ZPkf': Operation not permitted
rm: cannot remove '/tmp/systemd-private-af25e211a49647f4b421faf3ee7c47f-upower.service-iHctll': Operation not permitted
rm: cannot remove '/tmp/tracker-extract-files.125': Operation not permitted
Failed to delete temporary files
There are total 10 temporary files/directory in /tmp directory
vivek@vivek:~/Documents/OS labs/scripts$
```

14. Shell Script to Delete Zero Sized Files From a Directory

→

```
vivek@vivek:~/Documents/OS labs/scripts$ ./l2q14.sh
Enter name of the directory : /home/vivek/Documents
Directory exist
rm: cannot remove '/home/vivek/Documents/OS': No such file or directory
Zero-sized files are Successfully deleted
rm: cannot remove '/home/vivek/Documents/labs/scripts/file.txt': No such file or directory
Zero-sized files are Successfully deleted
rm: cannot remove '/home/vivek/Documents/OS': No such file or directory
Zero-sized files are Successfully deleted
rm: cannot remove '/home/vivek/Documents/labs/scripts/this_file_contains_nothing': No such file or directory
Zero-sized files are Successfully deleted
rm: cannot remove '/home/vivek/Documents/labs/demo': No such file or directory
Zero-sized files are Successfully deleted
rm: cannot remove '/home/vivek/Documents/labs/demo.txt': No such file or directory
Zero-sized files are Successfully deleted
rm: cannot remove '/home/vivek/Documents/OS': No such file or directory
Zero-sized files are Successfully deleted
rm: cannot remove '/home/vivek/Documents/labs/demo.txt': No such file or directory
Zero-sized files are Successfully deleted
vivek@vivek:~/Documents/OS labs/scripts$
```

15. Shell Script to Convert a File Content to Lower Case or Upper Case

→

```
vivek@vivek:~/Documents/OS labs/scripts$ ./l2q15.sh
1. Uppercase to Lowercase
2. Lowercase to Uppercase
3. Exit
Enter your Choice(1-3):
Enter File Name:upperlower.txt
Converting Upper-case to Lower-Case
hello this is vivek
from akola city,
this is uppercase sentence
this is lowercase sentence
vivek@vivek:~/Documents/OS labs/scripts$
```

16. Shell Script to List Files that have Read, Write and Execute Permissions



```
vivek@vivek:~/Documents/OS labs/scripts$ ./l2q16.sh
The name of all files having all permissions :
-rwxr--r-- 1 vivek vivek 86 Sep 28 11:06 demo2.sh
-rwxr--r-- 1 vivek vivek 52 Sep 28 11:46 demo3.sh
-rwxr--r-- 1 vivek vivek 253 Sep 28 12:29 file.sh
-rwxr--r-- 1 vivek vivek 517 Sep 25 11:40 l2q10.sh
-rwxr--r-- 1 vivek vivek 1141 Sep 25 11:47 l2q11.sh
-rwxr--r-- 1 vivek vivek 170 Oct 1 13:31 l2q12.sh
-rwxr--r--X 1 vivek vivek 610 Sep 25 11:53 l2q13.sh
-rwxr--r-- 1 vivek vivek 569 Oct 6 10:26 l2q14.sh
-rwxr--r-- 1 vivek vivek 552 Oct 6 10:29 l2q14.sh
-rwxr--r-- 1 vivek vivek 1007 Oct 6 10:34 l2q15.sh
-rwxr--r-- 1 vivek vivek 479 Oct 6 10:42 l2q16.sh
-rwxr--r-- 1 vivek vivek 98 Oct 6 10:51 l2q17.sh
-rwxr--r-- 1 vivek vivek 240 Oct 6 10:54 l2q18.sh
-rwxr--r-- 1 vivek vivek 580 Oct 6 10:59 l2q19.sh
-rwxr--r-- 1 vivek vivek 267 Sep 23 09:27 l2q2.sh
-rwxr--r-- 1 vivek vivek 307 Oct 6 11:46 l2q3n.sh
-rwxr--r-- 1 vivek vivek 422 Sep 23 10:19 l2q4.sh
-rwxr--r-- 1 vivek vivek 547 Sep 23 10:40 l2q5.sh
-rwxr--r-- 1 vivek vivek 1241 Sep 23 17:25 l2q6.sh
-rwxr--r-- 1 vivek vivek 1432 Sep 23 14:09 l2q7.sh
-rwxr--r-- 1 vivek vivek 1217 Sep 25 11:21 l2q8.sh
-rwxr--r-- 1 vivek vivek 472 Sep 25 11:35 l2q9.sh
-rwxr--r-- 1 vivek vivek 439 Sep 28 14:00 marksproblem.sh
-rwxr--r-- 1 vivek vivek 56 Sep 20 10:52 practicescript
vivek@vivek:~/Documents/OS labs/scripts$
```

17. Shell Script to Read Data From a File



```
vivek@vivek:~/Documents/OS labs/scripts$ ./l2q17.sh
Enter file name : readfile017
Node.js is an open-source, cross-platform, back-end JavaScript runtime environment that runs on the V8 engine and executes JavaScript code outside a web browser. Wikipedia
Developer(s): OpenJS Foundation
Written in: C, C++, JavaScript
License: MIT License
Initial release: May 27, 2009; 12 years ago
Stable release: 16.7.0 / August 17, 2021; 44 days ago
Original author(s): Ryan Dahl
Operating system: z/OS, Linux, macOS, Microsoft Windows, SmartOS, FreeBSD, OpenBSD, IBM AIX
vivek@vivek:~/Documents/OS labs/scripts$
```

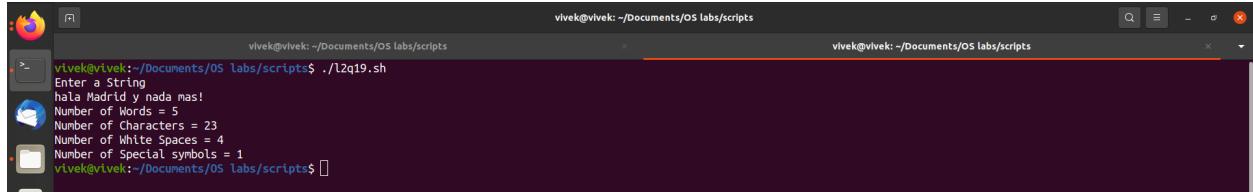
18. Shell Script to Display Name & Size of a File Whose Size is Greater than 100 Bytes



```
vivek@vivek:~/Documents/OS labs/scripts$ ./l2q18.sh
Enter path : /home/vivek/Documents
file path - size
/home/vivek/Documents/outputfun - 17144
/home/vivek/Documents/outfile - 7448
/home/vivek/Documents/fun - 1593
/home/vivek/Documents/header_writer.c - 1525
stat: cannot stat '/home/vivek/Documents/05': No such file or directory
./l2q18.sh: line 7: [: gt: unary operator expected
stat: cannot stat 'labs/scripts/numbers.txt': No such file or directory
./l2q18.sh: line 7: [: gt: unary operator expected
stat: cannot stat '/home/vivek/Documents/05': No such file or directory
./l2q18.sh: line 7: [: gt: unary operator expected
stat: cannot stat 'labs/scripts/l2q2.sh': No such file or directory
./l2q18.sh: line 7: [: gt: unary operator expected
stat: cannot stat '/home/vivek/Documents/05': No such file or directory
./l2q18.sh: line 7: [: gt: unary operator expected
stat: cannot stat '/home/vivek/Documents/05': No such file or directory
./l2q18.sh: line 7: [: gt: unary operator expected
stat: cannot stat 'labs/scripts/l2q3.sh': No such file or directory
./l2q18.sh: line 7: [: gt: unary operator expected
stat: cannot stat '/home/vivek/Documents/05': No such file or directory
./l2q18.sh: line 7: [: gt: unary operator expected
stat: cannot stat 'labs/scripts/l2q4.sh': No such file or directory
./l2q18.sh: line 7: [: gt: unary operator expected
stat: cannot stat '/home/vivek/Documents/05': No such file or directory
./l2q18.sh: line 7: [: gt: unary operator expected
stat: cannot stat 'labs/scripts/l2q5.sh': No such file or directory
./l2q18.sh: line 7: [: gt: unary operator expected
stat: cannot stat '/home/vivek/Documents/05': No such file or directory
./l2q18.sh: line 7: [: gt: unary operator expected
stat: cannot stat 'labs/scripts/l2q6.sh': No such file or directory
./l2q18.sh: line 7: [: gt: unary operator expected
stat: cannot stat '/home/vivek/Documents/05': No such file or directory
./l2q18.sh: line 7: [: gt: unary operator expected
stat: cannot stat 'labs/scripts/l2q7.sh': No such file or directory
./l2q18.sh: line 7: [: gt: unary operator expected
stat: cannot stat '/home/vivek/Documents/05': No such file or directory
./l2q18.sh: line 7: [: gt: unary operator expected
stat: cannot stat 'labs/scripts/l2q8.sh': No such file or directory
./l2q18.sh: line 7: [: gt: unary operator expected
stat: cannot stat '/home/vivek/Documents/05': No such file or directory
./l2q18.sh: line 7: [: gt: unary operator expected
stat: cannot stat 'labs/scripts/l2q9.sh': No such file or directory
./l2q18.sh: line 7: [: gt: unary operator expected
stat: cannot stat '/home/vivek/Documents/05': No such file or directory
vivek@vivek:~/Documents/OS labs/scripts$
```

19. Shell Script To Count Number of Words, Characters, White Spaces, and Special Symbols

→



The screenshot shows a terminal window with two tabs. Both tabs are titled "vivek@vivek: ~/Documents/OS labs/scripts". The left tab contains the command "vivek@vivek:~/Documents/OS labs/scripts\$./l2q19.sh" followed by the output: "Enter a String", "hala Madrid y nada mas!", "Number of Words = 5", "Number of Characters = 23", "Number of White Spaces = 4", and "Number of Special symbols = 1". The right tab is empty.

```
vivek@vivek:~/Documents/OS labs/scripts$ ./l2q19.sh
Enter a String
hala Madrid y nada mas!
Number of Words = 5
Number of Characters = 23
Number of White Spaces = 4
Number of Special symbols = 1
vivek@vivek:~/Documents/OS labs/scripts$
```