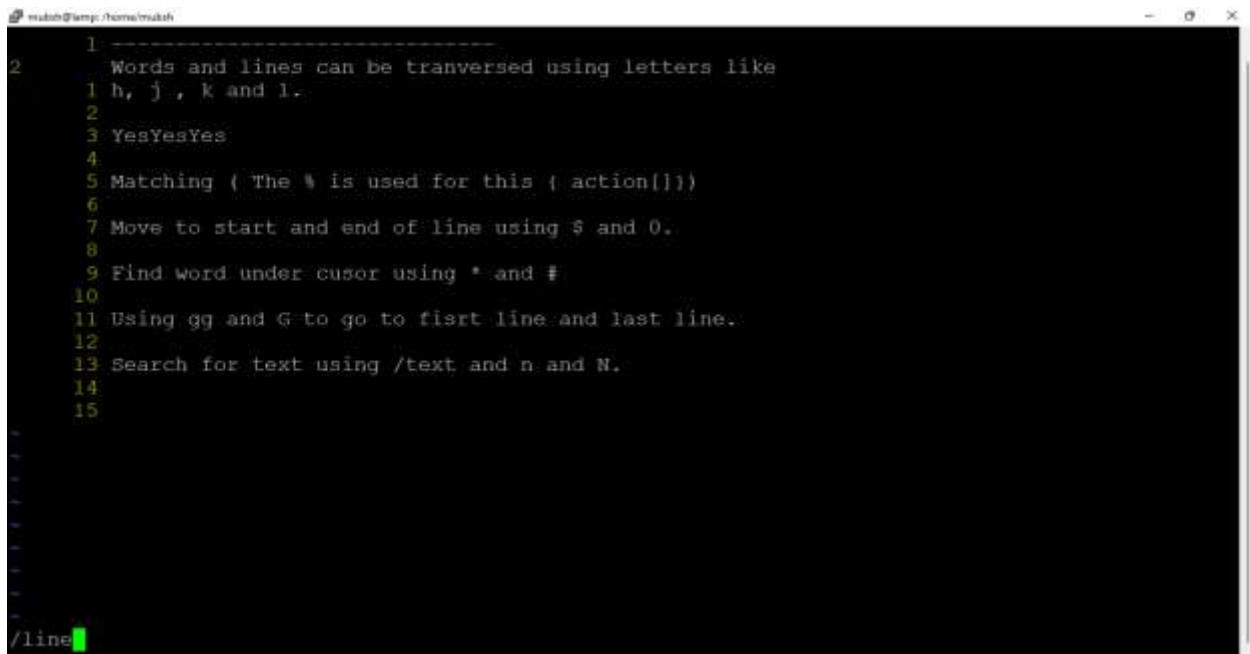


Part #1: Vim Tutorial.

A screenshot of the Vim editor interface. The window title is 'mubin@tmp: /home/mubin'. The editor contains a text file with 15 lines of text. Line 1 is a separator line with dashes. Line 2 is the first line of the document. The cursor is at the end of line 15, where the command '/line' has been entered. The search results are shown on the left margin, with line 15 highlighted in green.

```
mubin@tmp: /home/mubin
1 -----
2 Words and lines can be tranversed using letters like
3 1 h, j , k and l.
4 2
5 3 YesYesYes
6 4
7 5 Matching ( The % is used for this { action[]))
8 6
9 7 Move to start and end of line using $ and O.
10 8
11 9 Find word under cusor using * and #
12 10
13 11 Using gg and G to go to firsrt line and last line.
14 12
15 13 Search for text using /text and n and N.
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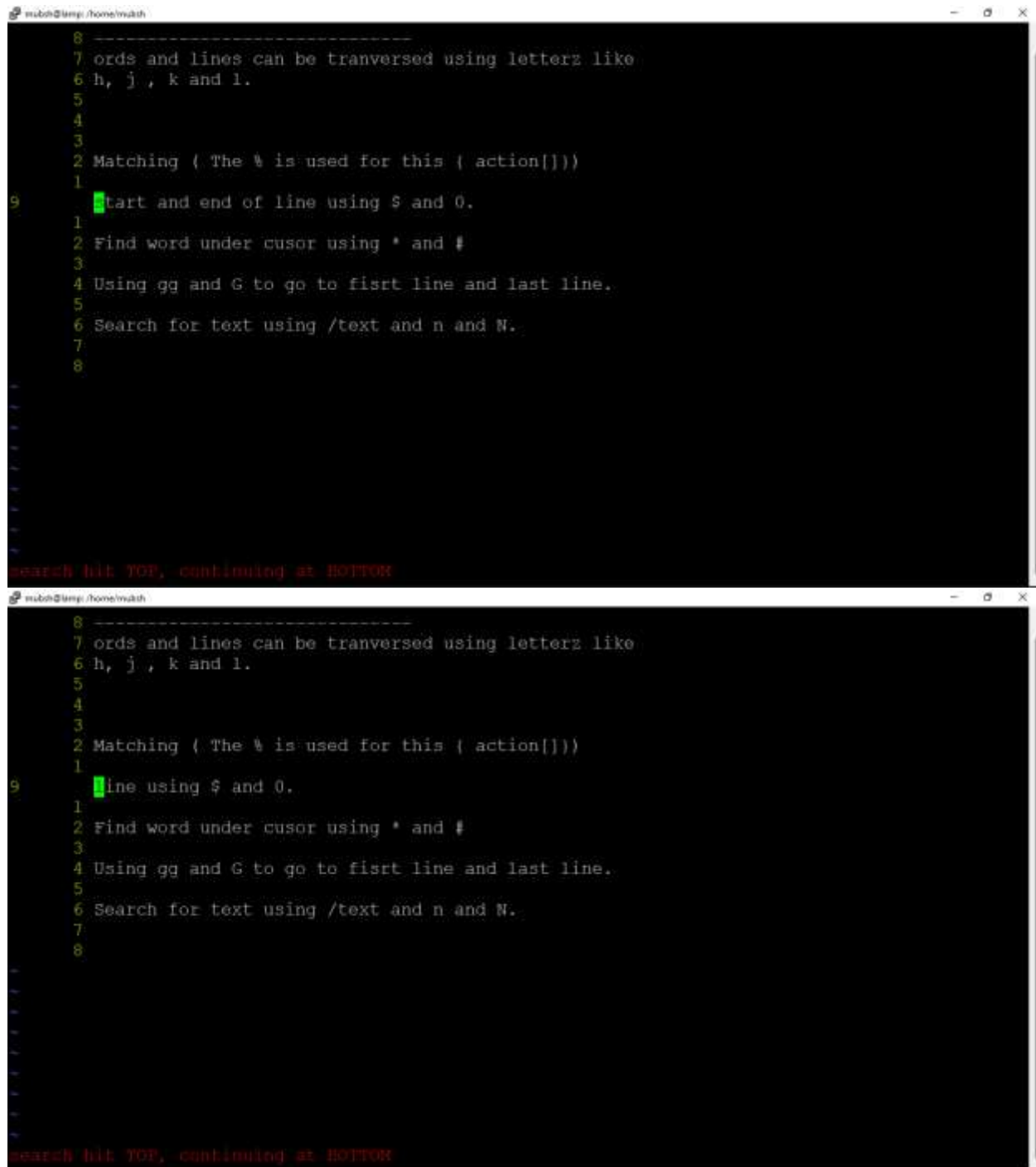
```
muhoh@lamp:/home/muhoh
1 -----
2   ords and lines can be tranversed using letter s like
3   h, j , k and l.
4   YesYesYes
5   Matching ( The % is used for this ( action[]))
6
7   Move to start and end of line using $ and 0.
8
9   Find word under cusor using * and #
10
11  Using gg and G to go to first line and last line.
12
13  Search for text using /text and n and N.
14
15
```

Figure 3: Using the r command to replace the letter under cursor from the normal mode here the letter s was replaced with the letter z.

```
muhoh@lamp:/home/muhoh
4 -----
3   ords and lines can be tranversed using letterz like
2   h, j , k and l.
1   [
5
1   [
2   Matching ( The % is used for this ( action[]))
3
4   Move to start and end of line using $ and 0.
5
6   Find word under cusor using * and #
7
8   Using gg and G to go to first line and last line.
9
10  Search for text using /text and n and N.
11
12
```

search hit TOP, continuing at BOTTOM

Figure 4: screenshot of many command here the command used are i) 30i-Esc to input 30 -, command o was used to input new line



The figure consists of two screenshots of a terminal window. The terminal window has a title bar that reads "muboh@lang: /home/muboh". The text in the terminal is as follows:

```
8 -----
7 ords and lines can be tranversed using letterz like
6 h, j , k and l.
5
4
3
2 Matching ( The % is used for this { action[]})
1
9 1 start and end of line using $ and 0.
  2 Find word under cusor using * and #
  3
  4 Using gg and G to go to fisrt line and last line.
  5
  6 Search for text using /text and n and N.
  7
  8
search hit TOP, continued at BOTTOM
```

The first screenshot shows the cursor on line 9, column 1. The second screenshot shows the cursor on line 9, column 1, after the command "9G" was used to jump to line 9. The text "line using \$ and 0." is now on line 9, and the text "Find word under cusor using * and #" is now on line 10.

Figure 5: screen shot of complex commands

In the figure above the command 9G was used to jump to line 9, then d2w was used to delete two words and the command "." was used to replicate the d2w which was the last command.

Part #2:

```
muhah@lamp:/home/muhah$ cat
cat
muhah@lamp:~$ touch list1
muhah@lamp:~$ cat > list1
peach
orange
muhah@lamp:~$ cat list1
peach
orange
muhah@lamp:~$ touch list2
muhah@lamp:~$ cat > list2
orange
plum
mango
grapefruit
muhah@lamp:~$ cat >> list1
pear
banana
apple
muhah@lamp:~$ cat list1
peach
orange
pear
banana
apple
muhah@lamp:~$ cat list2
orange
plum
mango
grapefruit
muhah@lamp:~$ cat list1 list2 > biglist
muhah@lamp:~$ cat biglist
peach
orange
pear
banana
apple
orange
plum
mango
grapefruit
muhah@lamp:~$

muhah@lamp:/home/muhah$
peach
orange
pear
banana
apple
orange
plum
mango
grapefruit
muhah@lamp:~$ sort
carrot
beetroot
artichoke
artichoke
beetroot
carrot
muhah@lamp:~$ sort < biglist
apple
banana
orange
grapefruit
mango
orange
orange
peach
pear
plum
muhah@lamp:~$ who
muhah pts/0 Jan 4 12:25 (192.168.56.1)
muhah@lamp:~$ who names.txt
muhah@lamp:~$ sort < names.txt
-bash: names.txt: No such file or directory
muhah@lamp:~$ who > names.txt
muhah@lamp:~$ sort names.txt
muhah pts/0 Jan 4 12:25 (192.168.56.1)
muhah@lamp:~$ who | sort
muhah pts/0 Jan 4 12:25 (192.168.56.1)
muhah@lamp:~$ who | wc -l
1
muhah@lamp:~$ cat list1 list2 | grep p | sort | nl
1
-bash: nlper: command not found
muhah@lamp:~$ usermod -s /bin/bash muhah
usermod: PERMISSION DENIED.
usermod: cannot lock /etc/passwd: try again later.
muhah@lamp:~$
```

Figure 6: Tutorial 3 using cat, sort and redirection.

```
mubsh@lamp: /home/mubsh
For more info see: https://www.turnkeylinux.org/docs/confconsole

Linux lamp 4.19.0-8-amd64 #1 SMP Debian 4.19.98-1+deb10u1 (2020-04-27) x86_64
Last login: Wed Jan  4 12:25:06 2023 from 192.168.56.1
mubsh@lamp ~$ ls list*
list1 list2
mubsh@lamp ~$ ls *list
biglist phonelist
mubsh@lamp ~$ ls ?list
ls: cannot access '?list': No such file or directory
mubsh@lamp ~$ man wc
WC(1)                                     User Commands                               WC(1)

NAME
    wc - print newline, word, and byte counts for each file

SYNOPSIS
    wc [OPTION]... [FILE]...
    wc [OPTION]... --files0-from=F

DESCRIPTION
    Print newline, word, and byte counts for each FILE, and a total line if
    more than one FILE is specified. A word is a non-zero-length sequence
    of characters delimited by white space.

    With no FILE, or when FILE is -, read standard input.

DESCRIPTION
    Print newline, word, and byte counts for each FILE, and a total line if
    more than one FILE is specified. A word is a non-zero-length sequence
    of characters delimited by white space.

    With no FILE, or when FILE is -, read standard input.

    The options below may be used to select which counts are printed, al-
    ways in the following order: newline, word, character, byte, maximum
    line length.

    -c, --bytes
        print the byte counts

mubsh@lamp ~$ whatis wc
wc (1) - print newline, word, and byte counts for each file
wc (lpotix) - word, line, and byte or character count
mubsh@lamp ~$ apropos copy
bcopy (3) - copy byte sequence
copy_file_range (2) - Copy a range of data from one file to another
copysign (3) - copy sign of a number
copysign (3posix) - number manipulation function
copysignf (3) - copy sign of a number
copysignl (3) - copy sign of a number
cp (1) - copy files and directories
cp (lpotix) - copy files
cpgr (8) - copy with locking the given file to the password or gr...
```

Figure 7: Tutorial 4 using wildcard, man, whatis and apropos.

```
mubsh@lamp: /home/mubsh
[1]+ sleep 100 &
mubsh@lamp ~$ fg %1
sleep 100
mubsh@lamp ~$ ps
  PID TTY          TIME CMD
 1060 pts/0        00:00:00 bash
 1224 pts/0        00:00:00 ps
mubsh@lamp ~$ jobs
mubsh@lamp ~$ sleep 100
^C
mubsh@lamp ~$ ps
  PID TTY          TIME CMD
 1060 pts/0        00:00:00 bash
 1226 pts/0        00:00:00 ps
mubsh@lamp ~$ sleep 100 &
[1] 1227
mubsh@lamp ~$ job
-bash: job: command not found
mubsh@lamp ~$ jobs
[1]+  Running                  sleep 100 &
mubsh@lamp ~$ kill %1
mubsh@lamp ~$ ps
  PID TTY          TIME CMD
 1060 pts/0        00:00:00 bash
 1229 pts/0        00:00:00 ps
[1]+  Terminated              sleep 100
mubsh@lamp ~$
```

```
mubsh@lamp: /home/mubsh
1213 pts/0        00:00:00 sleep
1214 pts/0        00:00:00 ps
mubsh@lamp ~$ ps
  PID TTY          TIME CMD
 1060 pts/0        00:00:00 bash
 1215 pts/0        00:00:00 ps
[1]+  Done                  sleep 10
mubsh@lamp ~$ sleep 100
^2
[1]+  Stopped                  sleep 100
mubsh@lamp ~$ jobs
[1]+  Stopped                  sleep 100
mubsh@lamp ~$ bg
[1]+ sleep 100 &
mubsh@lamp ~$ fg %1
sleep 100
mubsh@lamp ~$ ps
  PID TTY          TIME CMD
 1060 pts/0        00:00:00 bash
 1224 pts/0        00:00:00 ps
mubsh@lamp ~$ jobs
mubsh@lamp ~$ sleep 100
^C
mubsh@lamp ~$ ps
  PID TTY          TIME CMD
 1060 pts/0        00:00:00 bash
 1226 pts/0        00:00:00 ps
```

Figure 8: Tutorial 5 using the ps, bg, jobs, and commands related to creating and terminating jobs in linux.

Part #3: writing script that checks for the symbol “*”

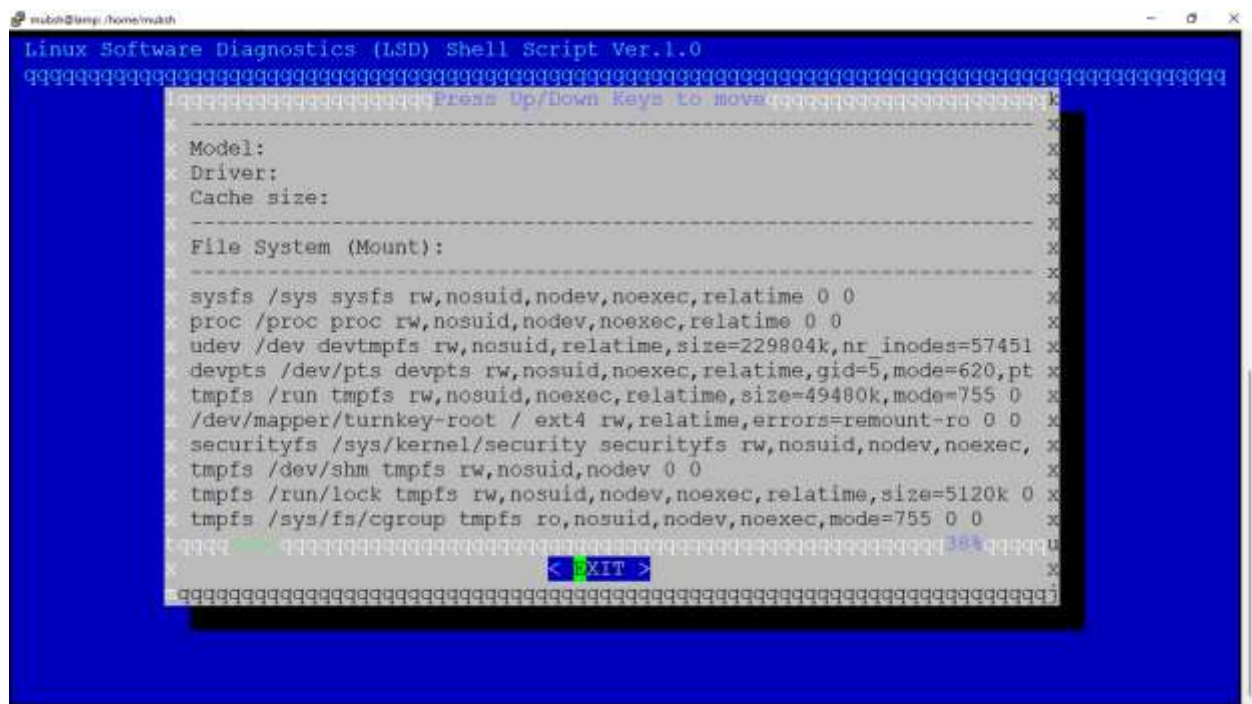


```
mubsh@lamp ~$ vim symbol.sh
mubsh@lamp ~$ bash symbol.sh /g*
Symbol is not required
mubsh@lamp ~$ bash symbol.sh /g
* is required
mubsh@lamp ~$ bash symbol.sh /g/*
mubsh@lamp ~$
```

Figure 9: test result of script.

Part #4;

The screen shot after running the script provided in the lab worksheet.



```
Linux Software Diagnostics (LSD) Shell Script Ver.1.0
Press Up/Down Keys to move

Model:
Driver:
Cache size:

File System (Mount):

sysfs /sys sysfs rw,nosuid,nodev,noexec,relatime 0 0
proc /proc proc rw,nosuid,nodev,noexec,relatime 0 0
udev /dev devtmpfs rw,nosuid,relatime,size=229804k,nr_inodes=57451
devpts /dev/pts devpts rw,nosuid,noexec,relatime,gid=5,mode=620,pt
tmpfs /run tmpfs rw,nosuid,noexec,relatime,size=49480k,mode=755 0
/dev/mapper/turnkey-root / ext4 rw,relatime,errors=remount-ro 0 0
securityfs /sys/kernel/security securityfs rw,nosuid,nodev,noexec,
tmpfs /dev/shm tmpfs rw,nosuid,nodev 0 0
tmpfs /run/lock tmpfs rw,nosuid,nodev,noexec,relatime,size=5120k 0
tmpfs /sys/fs/cgroup tmpfs ro,nosuid,nodev,noexec,mode=755 0 0
< EXIT >
```

Figure : The result from script in the lab worksheet.