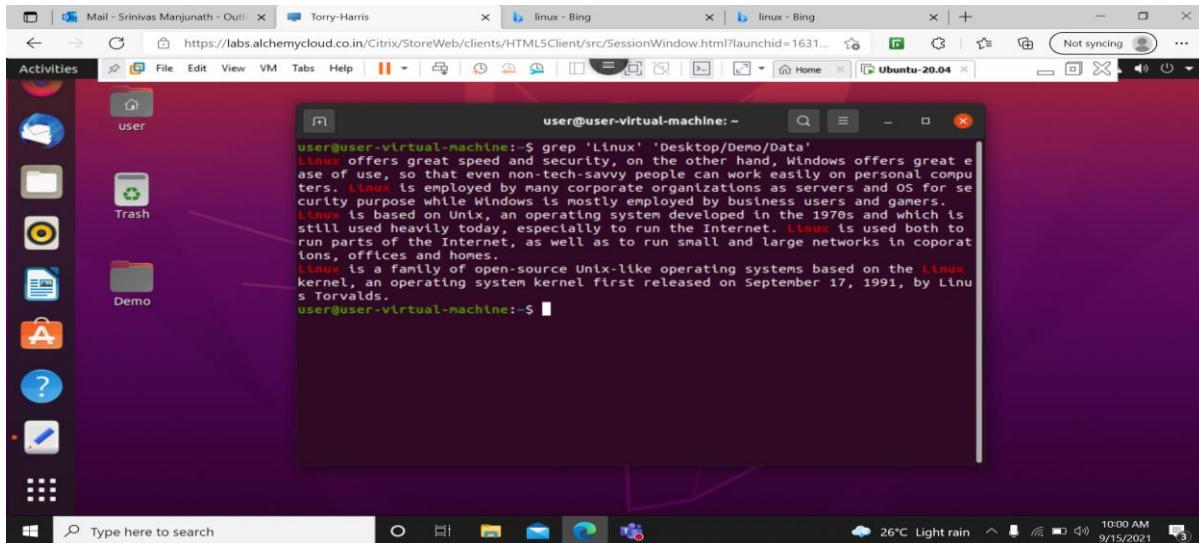


Day 3 – Assignment 3

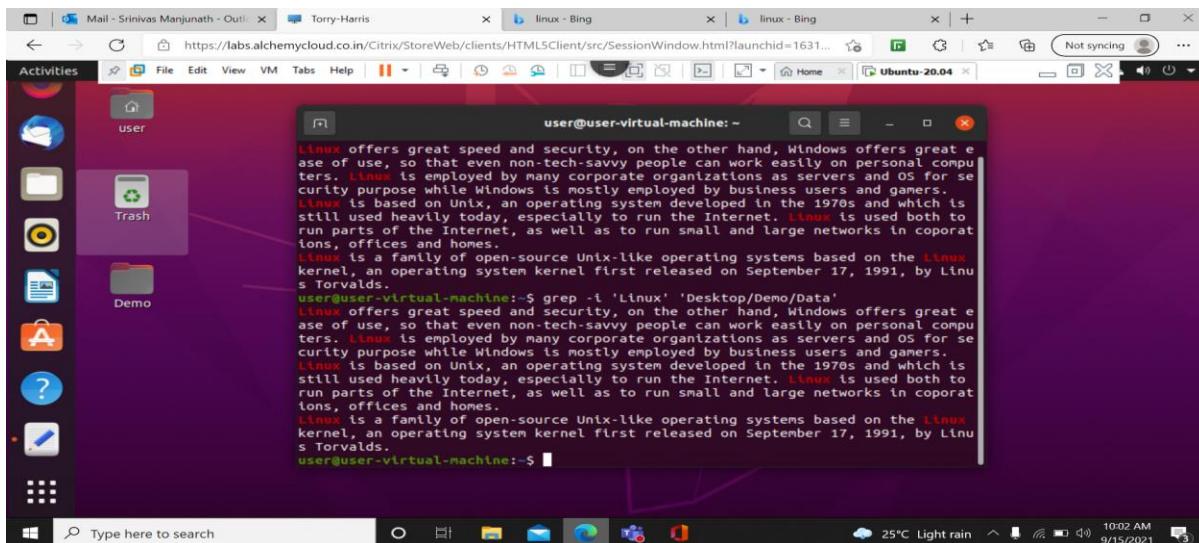
1> The 'grep' command stands for "global regular expression print". grep command filters the content of a file which makes our search easy.



A screenshot of a Linux desktop environment (Ubuntu 20.04) showing a terminal window titled "user@user-virtual-machine: ~". The terminal displays the following text:

```
user@user-virtual-machine:~$ grep 'Linux' 'Desktop/Demo/Data'
Linux offers great speed and security, on the other hand, Windows offers great e
ase of use, so that even non-tech-savvy people can work easily on personal compu
ters. Linux is employed by many corporate organizations as servers and OS for se
curity purpose while Windows is mostly employed by business users and gamers.
Linux is based on Unix, an operating system developed in the 1970s and which is
still used heavily today, especially to run the Internet. Linux is used both to
run parts of the Internet, as well as to run small and large networks in corporat
ions, offices and homes.
Linux is a family of open-source Unix-like operating systems based on the Linux
kernel, an operating system kernel first released on September 17, 1991, by Linu
s Torvalds.
user@user-virtual-machine:~$
```

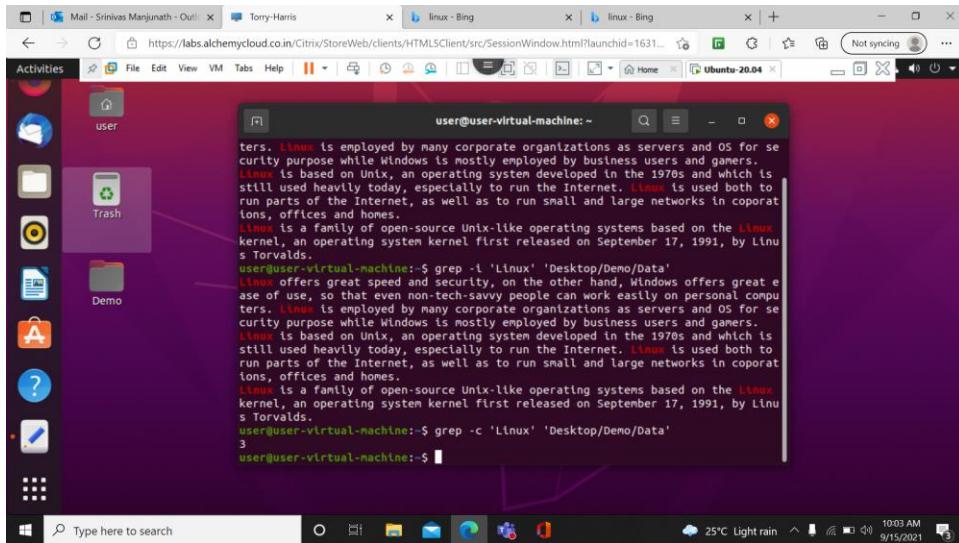
2> grep -i: The 'grep -i' command filters output in a case-insensitive way.



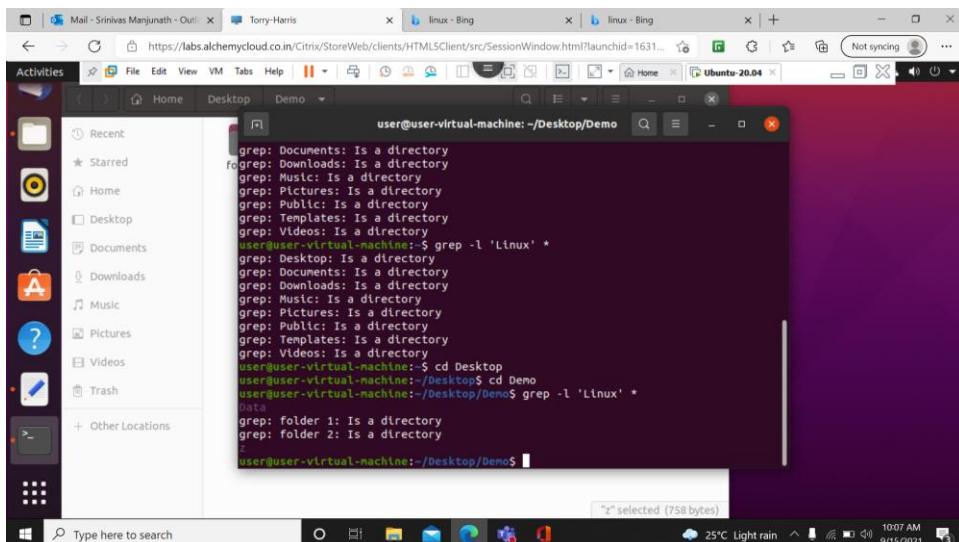
A screenshot of a Linux desktop environment (Ubuntu 20.04) showing a terminal window titled "user@user-virtual-machine: ~". The terminal displays the following text:

```
user@user-virtual-machine:~$ grep -i 'Linux' 'Desktop/Demo/Data'
Linux offers great speed and security, on the other hand, Windows offers great e
ase of use, so that even non-tech-savvy people can work easily on personal compu
ters. Linux is employed by many corporate organizations as servers and OS for se
curity purpose while Windows is mostly employed by business users and gamers.
Linux is based on Unix, an operating system developed in the 1970s and which is
still used heavily today, especially to run the Internet. Linux is used both to
run parts of the Internet, as well as to run small and large networks in corporat
ions, offices and homes.
Linux is a family of open-source Unix-like operating systems based on the Linux
kernel, an operating system kernel first released on September 17, 1991, by Linu
s Torvalds.
user@user-virtual-machine:~$
```

3> grep -c options alone will count the number of lines that contain the matching word instead of the number of total matches.



4> grep -l : Displays list of filenames only which contains the word.



5> grep -l used to find the matching word from different folders

A screenshot of a Linux desktop environment, likely Ubuntu, showing a terminal window. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo". The terminal content shows the following grep command execution:

```
grep: Public: Is a directory
grep: Templates: Is a directory
grep: Videos: Is a directory
user@user-virtual-machine:~$ grep -l 'Linux' *
grep: Desktop: Is a directory
grep: Documents: Is a directory
grep: Downloads: Is a directory
grep: Music: Is a directory
grep: Pictures: Is a directory
grep: Public: Is a directory
grep: Templates: Is a directory
grep: Videos: Is a directory
user@user-virtual-machine:~/Desktop$ cd Demo
user@user-virtual-machine:~/Desktop/Demo$ grep -l 'Linux' *
grep: folder 1: Is a directory
grep: folder 2: Is a directory
user@user-virtual-machine:~/Desktop/Demo$ grep -l 'Linux' Data z x
Data
z
x
user@user-virtual-machine:~/Desktop/Demo$
```

6> grep- c-i: for counting the words with ignore cases.

A screenshot of a Linux desktop environment, likely Ubuntu, showing a terminal window. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo". The terminal content shows the following grep command execution:

```
1 Linux offers great
that even non-tech
many corporate org
user@user-virtual-machine:~/Desktop/Demo$ grep -c -i 'linux' z
grep: c: No such file or directory
grep: linux: No such file or directory
2
3 Linux is based on
Linux offers great speed and security, on the other hand, Windows offers great
heavily today, esp
ease of use, so that even non tech savvy people can work easily on personal com
as well as to run
puters. Linux is employed by many corporate organizations as servers and OS for
security purpose while Windows is mostly employed by business users and gamers.
4
5 Linux is a family
Linux is a family of open source Unix like operating systems based on the Linu
operating system
x kernel, an operating system kernel first released on September 17, 1991, by Linu
6 welcome all
7 Hi! everyone
8 offers , today off
9 os is os
user@user-virtual-machine:~/Desktop/Demo$
```

7> grep-l 'Linux' *- it shows directories which contain the word Linux.

A screenshot of a Linux desktop environment (Ubuntu 20.04) showing a terminal window. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo". The command entered is "grep -l 'linux' *". The output shows several matches across multiple files, including "README", "index.html", and "script.sh". The desktop background is purple, and the Unity interface is visible at the bottom.

```
1Linux offers great speed and security, on the other hand, Windows offers great ease of use, so that even non-tech savvy people can work easily on personal computers. Linux is employed by many corporate organizations as servers and OS for security purpose while Windows is mostly employed by business users and gamers. Linux is a family of open source Unix-like operating systems based on the Linux kernel, an operating system kernel first released on September 17, 1991, by Linus Torvalds.
```

8> grep – w: Match whole word from the folder.

A screenshot of a Linux desktop environment (Ubuntu 20.04) showing a terminal window. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo". The command entered is "grep -w 'Linux' *". The output shows matches for the word "Linux" in various files, such as "README", "index.html", and "script.sh". The desktop background is purple, and the Unity interface is visible at the bottom.

```
user@user-virtual-machine:~/Desktop/Demo$ grep -w 'Linux' *
Linux offers great speed and security, on the other hand, Windows offers great ease of use, so that even non-tech savvy people can work easily on personal computers. Linux is employed by many corporate organizations as servers and OS for security purpose while Windows is mostly employed by business users and gamers. Linux is based on Unix, an operating system developed in the 1970s and which is still used heavily today, especially to run the Internet. Linux is used both to run parts of the Internet, as well as to run small and large networks in corporations, offices and homes.
```

9> grep –o: Print only the matched parts of a matching line, with each such part on a separate output line.

A screenshot of a Linux desktop environment, likely Ubuntu 20.04, showing a terminal window titled "user@user-virtual-machine: ~/Desktop/Demo". The terminal displays the following command and its output:

```
user@user-virtual-machine:~/Desktop/Demo$ grep -w 'Linux' z
for Linux offers great speed and security, on the other hand, Windows offers great ease of use, so that even non-tech-savvy people can work easily on personal computers. Linux is employed by many corporate organizations as servers and OS for security purpose while Windows is mostly employed by business users and gamers.
Linux is based on Unix, an operating system developed in the 1970s and which is still used heavily today, especially to run the Internet. Linux is used both to run parts of the Internet, as well as to run small and large networks in corporations, offices and homes.
Linux is a family of open-source Unix-like operating systems based on the Linux kernel, an operating system kernel first released on September 17, 1991, by Linus Torvalds.
user@user-virtual-machine:~/Desktop/Demo$ grep -o 'Linux' z
Linux
Linux
Linux
Linux
Linux
Linux
Linux
user@user-virtual-machine:~/Desktop/Demo$
```

The terminal window is part of a desktop environment with a dock at the bottom containing icons for various applications like Mail, Home, Desktop, Demo, etc.

10> grep –ow: Print only the matched parts of a matching line, with each such part on a separate output line with match whole word.

A screenshot of a Linux desktop environment, likely Ubuntu 20.04, showing a terminal window titled "user@user-virtual-machine: ~/Desktop/Demo". The terminal displays the following command and its output:

```
user@user-virtual-machine:~/Desktop/Demo$ grep -ow 'Linux' z
for Linux offers great speed and security, on the other hand, Windows offers great ease of use, so that even non-tech-savvy people can work easily on personal computers. Linux is employed by many corporate organizations as servers and OS for security purpose while Windows is mostly employed by business users and gamers.
Linux is based on Unix, an operating system developed in the 1970s and which is still used heavily today, especially to run the Internet. Linux is used both to run parts of the Internet, as well as to run small and large networks in corporations, offices and homes.
Linux is a family of open-source Unix-like operating systems based on the Linux kernel, an operating system kernel first released on September 17, 1991, by Linus Torvalds.
user@user-virtual-machine:~/Desktop/Demo$ grep -o 'Linux' z
Linux
Linux
Linux
Linux
Linux
Linux
Linux
Linux
user@user-virtual-machine:~/Desktop/Demo$
```

The terminal window is part of a desktop environment with a dock at the bottom containing icons for various applications like Mail, Home, Desktop, Demo, etc.

11> grep –owi: Print only the matched parts of a matching line, with each such part on a separate output line with match whole word and ignore cases

A screenshot of a Linux desktop environment, likely Ubuntu 20.04, showing a terminal window. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo". The terminal content shows the command "grep -owl 'Linux' x" being run, followed by the word "Linux". The desktop background is a purple gradient. On the left, there's a vertical dock with icons for Mail, Home, Desktop, Documents, Downloads, Music, Pictures, Videos, and Trash. A search bar at the bottom says "Type here to search".

```
user@user-virtual-machine:~/Desktop/Demo$ grep -owl 'Linux' x
Linux
user@user-virtual-machine:~/Desktop/Demo$
```

12> grep- o-l 'linux' z.

13>grep -n: Display the matched lines and their line numbers.

A screenshot of a Linux desktop environment, likely Ubuntu 20.04, showing a terminal window. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo". The terminal content shows the command "grep -nwl 'Linux' z" being run, followed by multiple lines of text about Linux. The desktop background is a purple gradient. On the left, there's a vertical dock with icons for Mail, Home, Desktop, Documents, Downloads, Music, Pictures, Videos, and Trash. A search bar at the bottom says "Type here to search".

```
user@user-virtual-machine:~/Desktop/Demo$ grep -nwl 'Linux' z
1:Linux offers great speed and security, on the other hand, Windows offers great
2:ease of use, so that even non-tech-savvy people can work easily on personal com-
3:puters. Linux is employed by many corporate organizations as servers and OS for
4:security purpose while Windows is mostly employed by business users and gamers.
5:Linux is based on Unix, an operating system developed in the 1970s and which i
6:s still used heavily today, especially to run the Internet. Linux is used both t
7:o run parts of the Internet, as well as to run small and large networks in corpor
8:ations, offices and homes.
9:Linux is a family of open-source Unix-like operating systems based on the Linu
10:x kernel, an operating system kernel first released on September 17, 1991, by Li
11:nus Torvalds.
user@user-virtual-machine:~/Desktop/Demo$
```

14>grep -ni: Display the matched lines and their line numbers and ignores the cases.

A screenshot of a Linux desktop environment, likely Ubuntu, showing a terminal window titled "user@user-virtual-machine: ~/Desktop/Demo". The terminal displays the following text:

```
1:Linux offers great speed and security, on the other hand, Windows offers great
for ease of use, so that even non-tech-savvy people can work easily on personal com
puters. Linux is employed by many corporate organizations as servers and OS for
security purpose while Windows is mostly employed by business users and gamers.
3:Linux is based on Unix, an operating system developed in the 1970s and which i
s still used heavily today, especially to run the Internet. Linux is used both t
o run parts of the Internet, as well as to run small and large networks in corpor
ations, offices and homes.
5:Linux is a family of open-source Unix-like operating systems based on the Linu
x kernel, an operating system kernel first released on September 17, 1991, by Li
nus Torvalds.
```

The terminal prompt shows the command: user@user-virtual-machine:~/Desktop/Demo\$

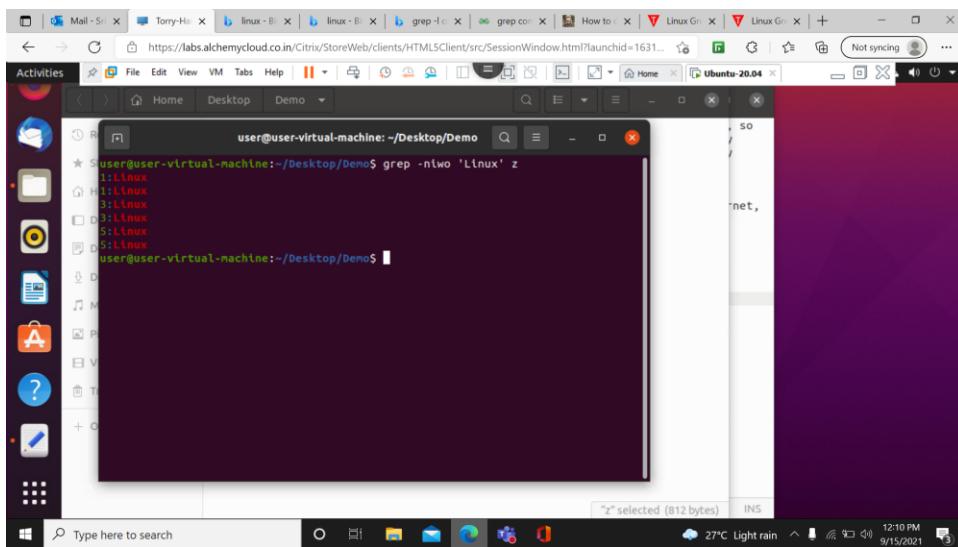
15> grep -niw: Display the matched lines and their line numbers and ignores the cases and match whole word.

A screenshot of a Linux desktop environment, likely Ubuntu, showing a terminal window titled "user@user-virtual-machine: ~/Desktop/Demo". The terminal displays the same text as the previous screenshot, but the output is different due to the use of the -niw option:

```
1:Linux offers great speed and security, on the other hand, Windows offers great
for ease of use, so that even non-tech-savvy people can work easily on personal com
puters. Linux is employed by many corporate organizations as servers and OS for
security purpose while Windows is mostly employed by business users and gamers.
3:Linux is based on Unix, an operating system developed in the 1970s and which i
s still used heavily today, especially to run the Internet. Linux is used both t
o run parts of the Internet, as well as to run small and large networks in corpor
ations, offices and homes.
5:Linux is a family of open-source Unix-like operating systems based on the Linu
x kernel, an operating system kernel first released on September 17, 1991, by Li
nus Torvalds.
```

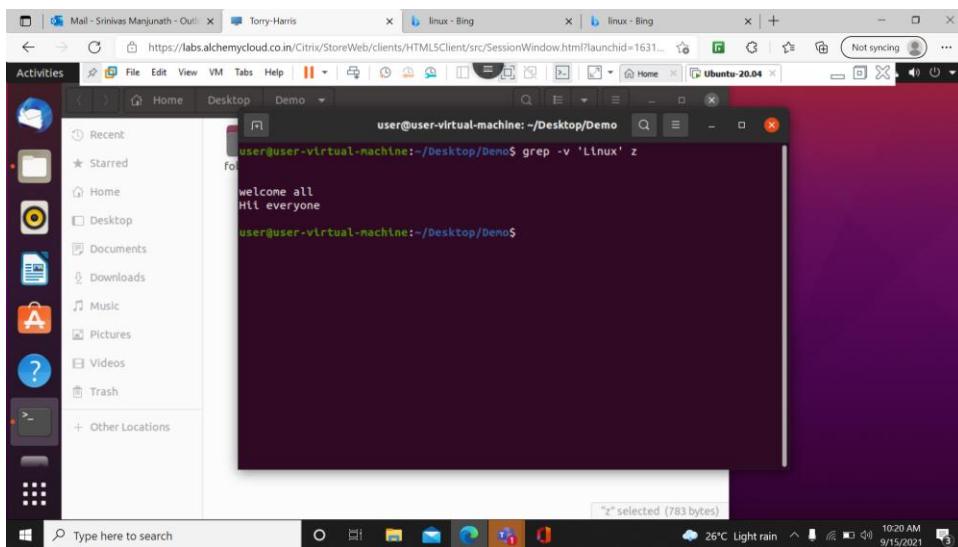
The terminal prompt shows the command: user@user-virtual-machine:~/Desktop/Demo\$

16> grep -niwo: Display the matched lines and their line numbers and ignores the cases and match whole word.



```
user@user-virtual-machine:~/Desktop/Demo$ grep -nlwo 'Linux' z
1:Linux
2:Linux
3:Linux
4:Linux
5:Linux
6:Linux
7:Linux
8:Linux
9:Linux
10:Linux
11:Linux
12:Linux
13:Linux
14:Linux
15:Linux
16:Linux
17:Linux
18:Linux
19:Linux
20:Linux
21:Linux
22:Linux
23:Linux
24:Linux
25:Linux
26:Linux
27:Linux
28:Linux
29:Linux
30:Linux
31:Linux
32:Linux
33:Linux
34:Linux
35:Linux
36:Linux
37:Linux
38:Linux
39:Linux
40:Linux
41:Linux
42:Linux
43:Linux
44:Linux
45:Linux
46:Linux
47:Linux
48:Linux
49:Linux
50:Linux
```

17> grep -v: This prints out all the lines that do not matches the pattern.



```
user@user-virtual-machine:~/Desktop/Demo$ grep -v 'Linux' z
for
welcome all
Hi everyone

user@user-virtual-machine:~/Desktop/Demo$
```

18>grep -vi: This prints out all the lines that do not matches the pattern. Ignore cases.

A screenshot of a Linux desktop environment, likely Ubuntu, showing a terminal window titled "user@user-virtual-machine: ~/Desktop/Demo". The terminal displays the following command and its output:

```
user@user-virtual-machine:~/Desktop/Demo$ grep -nlwo 'Linux' z
1:Linux
2:Linux
3:Linux
4:Linux
5:Linux
6:Linux
7:Linux
8:Linux
9:Linux
user@user-virtual-machine:~/Desktop/Demo$
```

The desktop interface includes a dock at the bottom with icons for various applications like Mail, Home, Desktop, Demo, and a search bar. The system tray shows the date (9/15/2021), time (12:13 PM), and weather (27°C Light rain).

19> grep - vin: This prints out all the lines that do not matches the pattern. Ignore cases and in with line number.

A screenshot of a Linux desktop environment, likely Ubuntu, showing a terminal window titled "user@user-virtual-machine: ~/Desktop/Demo". The terminal displays the following command and its output:

```
user@user-virtual-machine:~/Desktop/Demo$ grep -vin 'Linux' z
2:
3:
4:
5:
6:welcome all
7:Hi everyone
8:offers , today offers
9:os is os
user@user-virtual-machine:~/Desktop/Demo$
```

The desktop interface includes a dock at the bottom with icons for various applications like Mail, Home, Desktop, Demo, and a search bar. The system tray shows the date (9/15/2021), time (12:16 PM), and weather (27°C Light rain).

20> grep '^linux' z: shows the line which starts with linux.

A screenshot of a Linux desktop environment (Ubuntu 20.04) showing a terminal window. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo". The terminal content shows the output of several grep commands:

```
user@user-virtual-machine:~/Desktop/Demo$ grep -v 'Linux' z
2:
H4:
6:welcome all
7:Hi everyone
8:offers , today offers
9:os is os
user@user-virtual-machine:~/Desktop/Demo$ grep '^ Linux' z
user@user-virtual-machine:~/Desktop/Demo$ grep '^Linux' z
Linux offers great speed and security, on the other hand, Windows offers great ease of use, so that even non-tech-savvy people can work easily on personal computers. Linux is employed by many corporate organizations as servers and OS for security purpose while Windows is mostly employed by business users and gamers.
```

21> grep -l : Ignores, case for matching

22> grep-l 'off' z: shows the file starts with off

A screenshot of a Linux desktop environment (Ubuntu 20.04) showing a terminal window. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo". The terminal content shows the output of a grep command:

```
user@user-virtual-machine:~/Desktop/Demo$ grep -l 'off' z
Linux offers great speed and security, on the other hand, Windows offers great ease of use, so that even non-tech-savvy people can work easily on personal computers. Linux is employed by many corporate organizations as servers and OS for security purpose while Windows is mostly employed by business users and gamers.
```

23> grep 'os\$' z: shows the file ends with os.

A screenshot of a Linux desktop environment (Ubuntu 20.04) showing a terminal window. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo". The terminal content shows the following command and its output:

```
user@user-virtual-machine:~/Desktop/Demo$ grep 'os$' z
os ls os
User@user-virtual-machine:~/Desktop/Demo$
```

The status bar at the bottom of the terminal window indicates "z" selected (837 bytes).

24> grep -l 'os\$' z: shows the file ends with os without case.

A screenshot of a Linux desktop environment (Ubuntu 20.04) showing a terminal window. The terminal window title is "z" and the path is "-/Desktop/Demo". The terminal content shows the following command and its output:

```
user@user-virtual-machine:~/Desktop/Demo$ grep 'os$' z
os ls os
User@user-virtual-machine:~/Desktop/Demo$ grep -l 'os$' z
os ls os
User@user-virtual-machine:~/Desktop/Demo$
```

The status bar at the bottom of the terminal window indicates "Plain Text" and "Ln 11, Col 13".

25> grep -n 'off' : Display the matched lines and their line numbers and starting with 'off'.

A screenshot of a Linux desktop environment, likely Ubuntu, showing a terminal window. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo". The terminal content shows the output of a grep command:

```
user@user-virtual-machine:~/Desktop/Demo$ grep -n '^offer' z
for Linux offers great speed and security, on the other hand, Windows offers great
ease of use, so that even non-tech-savvy people can work easily on personal computers. Linux is employed by many corporate organizations as servers and OS for
security purpose while Windows is mostly employed by business users and gamers.
Linux is based on Unix, an operating system developed in the 1970s and which i
s still used heavily today, especially to run the Internet. Linux is used both t
o run parts of the Internet, as well as to run small and large networks in corpor
ations, offices and homes.
B:ht offers , today offers
user@user-virtual-machine:~/Desktop/Demo$
```

The terminal window has a status bar at the bottom indicating "z" selected (807 bytes).

26> grep -ni '^offers' : shows only statement starting with offer without case in word.

A screenshot of a Linux desktop environment, likely Ubuntu, showing a terminal window. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo". The terminal content shows the output of a grep command:

```
user@user-virtual-machine:~/Desktop/Demo$ grep -ni '^offers' z
for:offers , today offers
user@user-virtual-machine:~/Desktop/Demo$
```

The terminal window has a status bar at the bottom indicating "z" selected (803 bytes).

27> grep -n '^os' 'os\$' : Display the statement starts and ends with this words.

A screenshot of a Linux desktop environment (Ubuntu 20.04) showing a terminal window. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo". The terminal content shows the following command and its output:

```
user@user-virtual-machine:~/Desktop/Demo$ grep -n '^os.*os$' z
grep: os$: No such file or directory
z:9:os is os
user@user-virtual-machine:~/Desktop/Demo$
```

The terminal window has a dark background with light-colored text. The desktop interface includes a dock at the bottom with various icons and a system tray showing weather and date information.

28>grep “^os.*os\$”- start and end with os.

A screenshot of a Linux desktop environment (Ubuntu 20.04) showing a terminal window. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo". The terminal content shows the following command and its output:

```
user@user-virtual-machine:~/Desktop/Demo$ grep '^os.*os$' f2
os linux is an os
user@user-virtual-machine:~/Desktop/Demo$
```

The terminal window has a dark background with light-colored text. The desktop interface includes a dock at the bottom with various icons and a system tray showing weather and date information.

29> grep -n -l “^os.*os\$” : start and end with os without case.

A screenshot of a Linux desktop environment, likely Ubuntu, showing a terminal window titled "user@user-virtual-machine: ~/Desktop/Demo". The terminal displays the following command and its output:

```
user@user-virtual-machine:~/Desktop/Demo$ grep "^\w.*\w$" f2
user@user-virtual-machine:~/Desktop/Demo$ grep "^\w.*\w$" f2
Hos linux is an os
user@user-virtual-machine:~/Desktop/Demo$ grep -n -l "^\w.*\w$" f2
3:os linux is an os
12:05 linux OS
user@user-virtual-machine:~/Desktop/Demo$
```

The terminal window is part of a desktop interface with a dock at the bottom containing icons for various applications like Mail, Home, Desktop, Demo, etc.

30> grep -ni -E “^\w.*\w\$”: Treats pattern as an extended regular expression (ERE)

A screenshot of a Linux desktop environment, likely Ubuntu, showing a terminal window titled "user@user-virtual-machine: ~/Desktop/Demo". The terminal displays the following command and its output:

```
user@user-virtual-machine:~/Desktop/Demo$ grep "^\w.*\w$" f2
user@user-virtual-machine:~/Desktop/Demo$ grep "^\w.*\w$" f2
Hos linux is an os
user@user-virtual-machine:~/Desktop/Demo$ grep -n -l "^\w.*\w$" f2
3:os linux is an os
12:05 linux OS
user@user-virtual-machine:~/Desktop/Demo$ grep -ni -E "^\w.*\w$"
3:os linux is an os
12:05 linux OS
user@user-virtual-machine:~/Desktop/Demo$
```

The terminal window is part of a desktop interface with a dock at the bottom containing icons for various applications like Mail, Home, Desktop, Demo, etc.

31> grep -ni -E “^h.p\$” : gets the word with three letters with starts with h and ends with p.

A screenshot of a Linux desktop environment, likely Ubuntu, showing a terminal window titled "user@user-virtual-machine: ~/Desktop/Demo". The terminal displays the following grep command execution:

```
user@user-virtual-machine:~/Desktop/Demo$ grep '^os.*os$' f2
user@user-virtual-machine:~/Desktop/Demo$ grep '^os.*os$' f2
1:os linux is an os
user@user-virtual-machine:~/Desktop/Demo$ grep -n -l '^os.*os$' f2
12:05 Linux OS
3:os linux is an os
user@user-virtual-machine:~/Desktop/Demo$ grep -nl -E '^os.*os$' f2
3:os linux is an os
12:05 Linux OS
user@user-virtual-machine:~/Desktop/Demo$ grep -nl -E '^h.p$' f2
13:http
14:hop
user@user-virtual-machine:~/Desktop/Demo$
```

The status bar at the bottom shows "f2 selected (167 bytes)".

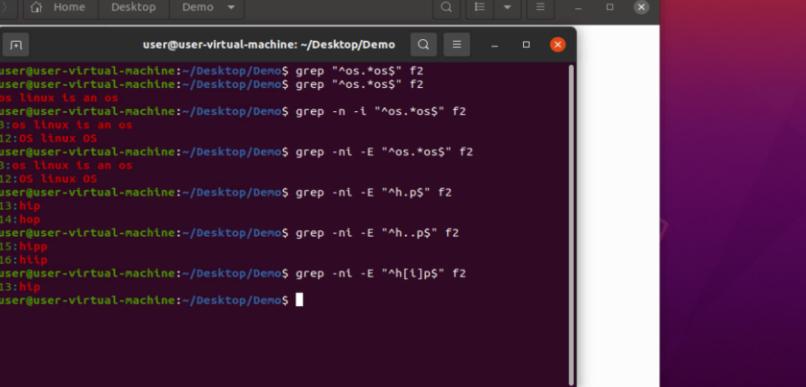
32> grep -ni -E “^h..p\$” : gets the word with four letters with starts with h and ends with p. “..” indicates any two letters between h and p.

A screenshot of a Linux desktop environment, likely Ubuntu, showing a terminal window titled "user@user-virtual-machine: ~/Desktop/Demo". The terminal displays the following grep command execution:

```
user@user-virtual-machine:~/Desktop/Demo$ grep '^os.*os$' f2
user@user-virtual-machine:~/Desktop/Demo$ grep '^os.*os$' f2
1:os linux is an os
user@user-virtual-machine:~/Desktop/Demo$ grep -n -l '^os.*os$' f2
12:05 Linux OS
3:os linux is an os
user@user-virtual-machine:~/Desktop/Demo$ grep -ni -E '^os.*os$' f2
3:os linux is an os
12:05 Linux OS
user@user-virtual-machine:~/Desktop/Demo$ grep -nl -E '^h.p$' f2
13:http
14:hop
user@user-virtual-machine:~/Desktop/Demo$ grep -nl -E '^h..p$' f2
15: http
16: http
user@user-virtual-machine:~/Desktop/Demo$
```

The status bar at the bottom shows "f2 selected (167 bytes)".

32> grep -ni -E “^h[i]p\$” : gets the word with three letters with starts with h and ends with p. “[i]” indicates i letter should be between h and p.



The screenshot shows a terminal window titled "user@user-virtual-machine: ~/Desktop/Demo\$". The user has run several grep commands to search for the string "os" across multiple files. The results are as follows:

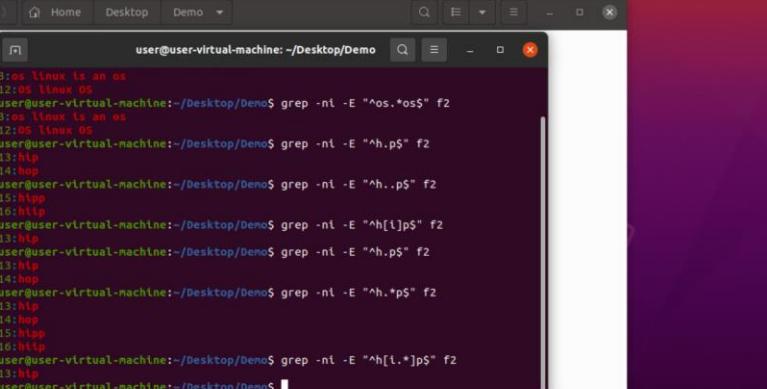
```
grep "os.*os$" f2
grep "os.*os$" f2
grep -n -l "os.*os$" f2
grep -n -l "os.*os$" f2
grep -nl -E "os.*os$" f2
grep -nl -E "os.*os$" f2
grep -nl -E "h.p$" f2
grep -nl -E "h..p$" f2
grep -nl -E "h[l]p$" f2
grep -nl -E "h[l]p$" f2
```

The terminal also displays a status message at the bottom right: "T2 selected (167 bytes)".

```
33> grep -ni E “^h.p$”
```

34> \$grep -ni -E “^h.*p\$”: here * indicates any number of letter between h and p.

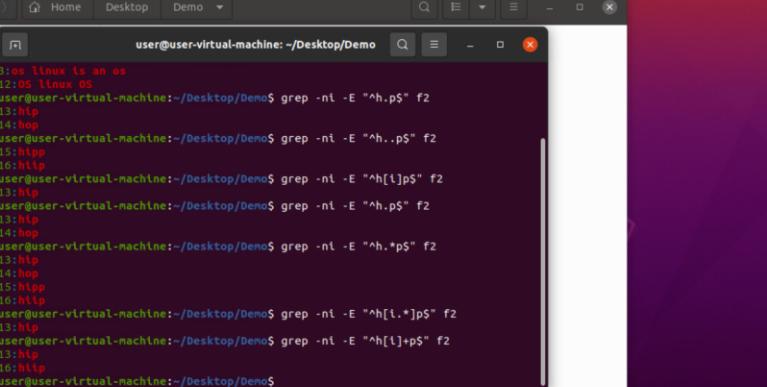
```
35> grep -ni E “^h[i.*}p$”
```



The screenshot shows a terminal window titled "user@user-virtual-machine: ~/Desktop/Demo\$". The terminal displays several examples of the grep command using regular expressions to search for specific patterns in files f1 through f5. The examples include searching for 'os' (case-insensitive), 'h.p' (case-insensitive), 'h.l.p' (case-insensitive), 'h.p\$' (case-insensitive), and 'h[.l]p\$' (case-insensitive). The terminal interface includes a navigation bar with tabs for various applications like Mail, Torry-HM, and browser windows, and a system tray at the bottom.

```
S:3:os linux is an os
12:05 linux 05
User@user-virtual-machine:~/Desktop/Demo$ grep -ni -E "^(os|.*os$)" f2
S:3:os linux is an os
12:05 linux 05
User@user-virtual-machine:~/Desktop/Demo$ grep -ni -E "h.p$" f2
13:1:p
14:1:op
User@user-virtual-machine:~/Desktop/Demo$ grep -ni -E "^(h|p)$" f2
15:h
16:hlp
User@user-virtual-machine:~/Desktop/Demo$ grep -ni -E "^(h|[l]p)$" f2
17:hlp
User@user-virtual-machine:~/Desktop/Demo$ grep -ni -E "^(h|p)$" f2
18:hlp
19:1:op
User@user-virtual-machine:~/Desktop/Demo$ grep -ni -E "^(h|.*p$)" f2
13:hlp
14:hop
User@user-virtual-machine:~/Desktop/Demo$ grep -ni -E "^(h|[l.*]p$)" f2
15:hlp
16:hlp
User@user-virtual-machine:~/Desktop/Demo$ grep -ni -E "^(h|[l.*]p$)" f2
17:hlp
User@user-virtual-machine:~/Desktop/Demo$
```

36> grep -ni E “^h[l]+p\$”



The screenshot shows a Linux desktop environment with a terminal window open. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo". The terminal content displays a series of grep commands and their results:

```
user@user-virtual-machine:~/Desktop/Demo$ grep -ni -E "^h.p$" f2
13:hp
14:hp
user@user-virtual-machine:~/Desktop/Demo$ grep -ni -E "^h..p$" f2
15:hpp
16:hlp
user@user-virtual-machine:~/Desktop/Demo$ grep -ni -E "^h[l]p$" f2
17:hp
user@user-virtual-machine:~/Desktop/Demo$ grep -ni -E "^h.ps" f2
13:hp
14:hp
user@user-virtual-machine:~/Desktop/Demo$ grep -ni -E "^h.*p$" f2
13:hp
14:hp
15:hpp
16:hlp
user@user-virtual-machine:~/Desktop/Demo$ grep -ni -E "^(l.*)p$" f2
13:hp
user@user-virtual-machine:~/Desktop/Demo$ grep -ni -E "^(h[l])p$" f2
13:hp
14:hp
user@user-virtual-machine:~/Desktop/Demo$
```

The terminal window has a dark background with light-colored text. The status bar at the bottom right shows "f2 selected (167 bytes)". The desktop background is a blurred image of a colorful abstract pattern.

37> \$ grep -E -l '^h.*o\$': show the elements starting with h and ending with o.

The screenshot shows a Linux desktop environment with a terminal window open. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo". The terminal content displays various examples of the grep command:

```
13:grep
user@user-virtual-machine:~/Desktop/Demo$ grep -nl -E "^h.p$" f2
13:grep
14:grep
14:grep
user@user-virtual-machine:~/Desktop/Demo$ grep -nl -E "^h.*p\$" f2
13:grep
14:grep
15:grep
16:grep
user@user-virtual-machine:~/Desktop/Demo$ grep -nl -E "^\h[.]*p\$" f2
13:grep
13:grep
user@user-virtual-machine:~/Desktop/Demo$ grep -nl -E "^\h[!]*p\$" f2
13:grep
16:grep
user@user-virtual-machine:~/Desktop/Demo$ grep -E-l '^h.*o\$' f2
grep: invalid option -- 'l'
Usage: grep [OPTION]... PATTERN [FILE]...
Try 'grep --help' for more information.
user@user-virtual-machine:~/Desktop/Demo$ grep -E -l '^h.*o\$' f2
hello
hillo
hylo
hrto
user@user-virtual-machine:~/Desktop/Demo$
```

[]: Matches any one of a set characters

[] with hyphen: Matches any one of a range characters

^: The pattern following it must occur at the beginning of each line

^ with []: The pattern must not contain any character in the set specified

§: The pattern preceding it must occur at the end of each line

. (dot): Matches any one character

\ (backslash): Ignores the special meaning of the character following it

*: zero or more occurrences of the previous character

(dot).*: Nothing or any numbers of characters.

38> **cut**: is a command for cutting out the sections from each line of files and writing the result to standard output. It can be used to cut parts of a line by byte position, character and field.

The screenshot shows a Linux desktop environment with a purple gradient background. On the left is a vertical dock containing icons for various applications like Mail, TH-BC, and a browser. The main window is a terminal titled "user@user-virtual-machine: ~/Desktop/Demo". It displays the following command and its error message:

```
user@user-virtual-machine:~/Desktop/Demo$ cut f2
cut: you must specify a list of bytes, characters, or fields
Try 'cut --help' for more information.
user@user-virtual-machine:~/Desktop/Demo$
```

A status bar at the bottom right indicates "f2 selected (191 bytes)". The bottom of the screen features a taskbar with icons for a search bar, file manager, terminal, and other system tools.

39> cut -c 1: This selects the characters given to the -c option. This can be a list of numbers separated comma or a range of numbers separated by hyphen (-). Tabs and backspaces are treated as a character.

The screenshot shows a Linux desktop environment with a dark purple background. On the left is a vertical dock containing icons for Mail, Home, Desktop, Demo, Recent, Starred, Home, Desktop, Documents, Downloads, Music, Pictures, Videos, Trash, and Other Locations. The main window is a terminal titled "user@user-virtual-machine: ~/Desktop/Demo". It displays the command "cut -c 1 f2" followed by a large block of lowercase 'h' characters. Below the terminal is a status bar with the message "f2 selected (191 bytes)". The top of the screen has a browser-like header with tabs for "Mail - Srinivas Manjunath - Outlook", "TH-BC-86: Session 2 – Alchemy", "Torry-Harris", and "Ubuntu-20.04". A system tray at the bottom shows icons for battery level (29%), temperature (23°C), signal strength, and date/time (9/15/2021, 2:30 PM). A notification bar at the top right says "Not syncing".

40> cut -c 1-4: It specifies the range of column should be selected.

A screenshot of a Linux desktop environment, likely Ubuntu 20.04, showing a terminal window titled "user@user-virtual-machine: ~/Desktop/Demo". The terminal displays the command "cut -c 1-4 f2" followed by its output, which consists of several lines of text starting with "Xl" and "Lu". The desktop background is a purple gradient. On the left, there's a docked application menu labeled "Activities" with various icons for apps like a browser, file manager, and system tools. The bottom of the screen shows the Unity interface with a search bar, a dock of icons, and a system tray with date and time information.

```
user@user-virtual-machine:~/Desktop/Demo$ cut -c 1-4 f2
Xl
Lu
ol
Hl
Hl
oh
Lu
cc
c
ca
cc
ol
h
h
hp
hp
hl
hl
ho
user@user-virtual-machine:~/Desktop/Demo$
```

41> cut –c 1,4: Another way of specifying range.

A screenshot of a Linux desktop environment, likely Ubuntu 20.04, showing a terminal window titled "user@user-virtual-machine: ~/Desktop/Demo". The terminal displays the command "cut -c 1,4 f2" followed by its output, which consists of several lines of text starting with "Xn" and "Lu". The desktop background is a purple gradient. On the left, there's a docked application menu labeled "Activities" with various icons for apps like a browser, file manager, and system tools. The bottom of the screen shows the Unity interface with a search bar, a dock of icons, and a system tray with date and time information.

```
user@user-virtual-machine:~/Desktop/Demo$ cut -c 1,4 f2
Xn
Lu
ol
Hl
Hl
oh
Lu
cc
c
ca
cc
ol
h
h
hp
hp
hl
hl
ho
user@user-virtual-machine:~/Desktop/Demo$
```

42> cut –c 1-: from starting column to end.

A screenshot of a Linux desktop environment, likely Ubuntu 20.04, showing a terminal window. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo". The command entered is "user@user-virtual-machine:~/Desktop/Demo\$ cut -c 1- f2". The output of the command is displayed in the terminal window, showing the first character of each line from the file "f2". The desktop background is a purple gradient. On the left, there is a vertical docked application menu titled "Activities" with various icons for different applications like a browser, file manager, and system tools. The bottom of the screen shows the standard Unity desktop interface with a search bar, a dock of icons, and a system tray.

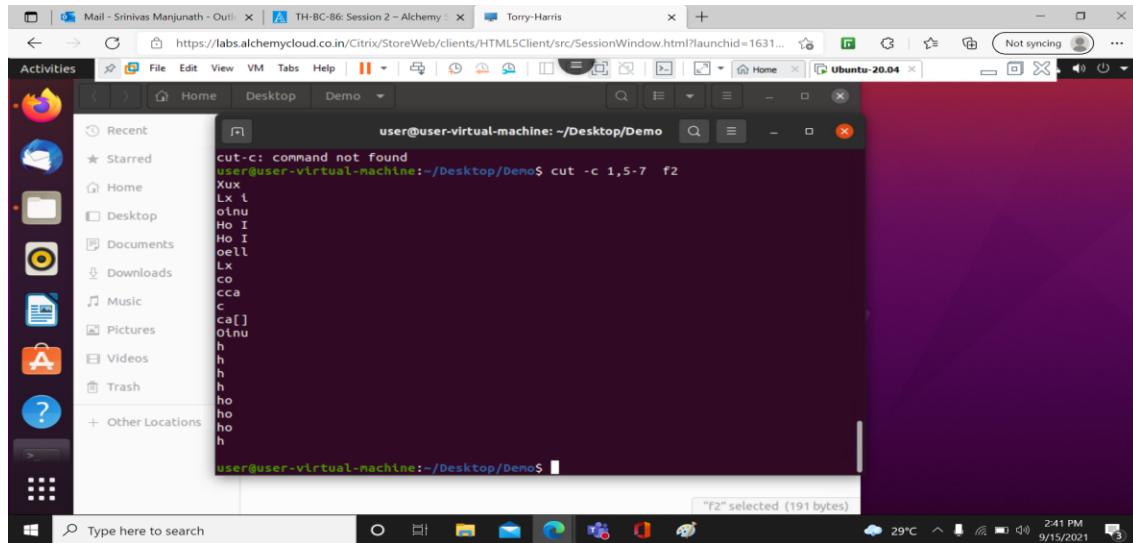
```
user@user-virtual-machine:~/Desktop/Demo$ cut -c 1- f2
XLinux ls an OS
Linux is an os
os linux is an os
Hello I am linux OS as an OS
Hello I am an OS
os hello
Linux
co co
coo ca
caca
coca[]
os linux OS
hip
hop
hipp
hipp
hello
hillo
hyllo
hytto
```

43> cut -c -5: from starting column till 5th column.

A screenshot of a Linux desktop environment, likely Ubuntu 20.04, showing a terminal window. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo". The command entered is "user@user-virtual-machine:~/Desktop/Demo\$ cut -c -5 f2". The output of the command is displayed in the terminal window, showing the first five characters of each line from the file "f2". The desktop background is a purple gradient. On the left, there is a vertical docked application menu titled "Activities" with various icons for different applications like a browser, file manager, and system tools. The bottom of the screen shows the standard Unity desktop interface with a search bar, a dock of icons, and a system tray.

```
user@user-virtual-machine:~/Desktop/Demo$ cut -c -5 f2
XLinu
Linux
os li
Hello
Hello
os he
Linux
co co
coo c
caca
coca
os ll
hip
hop
hipp
hipp
hello
hillo
hyllo
hytto
```

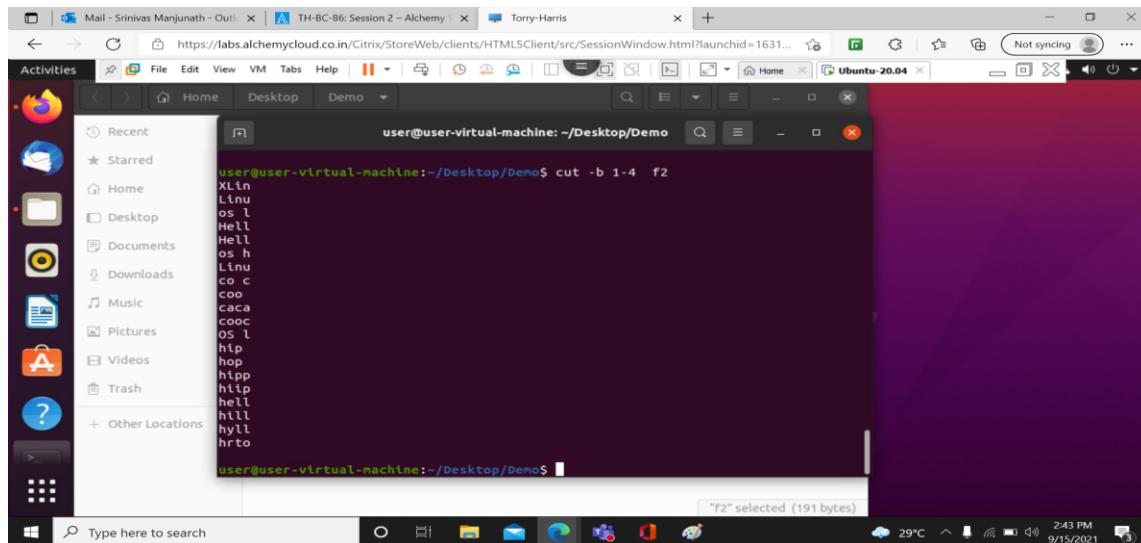
44> cut -c 1,5-7: first column and from 5th column till 7th column.



A screenshot of a Linux desktop environment, likely Ubuntu 20.04, showing a terminal window. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo". The terminal content shows the command "cut -c" followed by a list of characters from the file "f2". The output includes "Xux", "Lx t", "oInu", "Ho I", "Ho I", "oell", "Lx", "co", "cca", "ca[]", "OInu", "h", "h", "h", "ho", "ho", "h". A tooltip at the bottom right of the terminal window says "'f2' selected (191 bytes)". The desktop background is a purple gradient. On the left, there's a dock with icons for various applications like a browser, file manager, and system tools. The bottom of the screen has a taskbar with icons for file, folder, mail, and other desktop functions.

```
user@user-virtual-machine:~/Desktop/Demo$ cut -c 1,5-7 f2
Xux
Lx t
oInu
Ho I
Ho I
oell
Lx
co
cca
ca[]
OInu
h
h
h
ho
ho
h
```

45> **cut -b 1-4:** To extract the specific bytes, you need to follow -b option with the list of byte numbers separated by comma. Range of bytes can also be specified using the hyphen (Same as C - column).



A screenshot of a Linux desktop environment, likely Ubuntu 20.04, showing a terminal window. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo". The terminal content shows the command "cut -b 1-4" followed by the file "f2". The output includes "XLin", "Linu", "os l", "Hell", "Hell", "os h", "Linu", "co c", "coo", "caca", "cooc", "OS l", "hip", "hop", "hipp", "hilp", "hell", "hill", "hyll", "hrto". A tooltip at the bottom right of the terminal window says "'f2' selected (191 bytes)". The desktop background is a purple gradient. On the left, there's a dock with icons for various applications like a browser, file manager, and system tools. The bottom of the screen has a taskbar with icons for file, folder, mail, and other desktop functions.

```
user@user-virtual-machine:~/Desktop/Demo$ cut -b 1-4 f2
XLin
Linu
os l
Hell
Hell
os h
Linu
co c
coo
caca
cooc
OS l
hip
hop
hipp
hilp
hell
hill
hyll
hrto
```

45> **cut -f1:** only f cannot be used, we should use d(delimiter along with f every time). Otherwise, it will not do anything.

A screenshot of a Linux desktop environment, likely Ubuntu 20.04, showing a terminal window. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo\$". The terminal content shows the output of the command "cut -f1 f2", which prints the first field of each line from the file "f2". The file "f2" contains the following text:
XLinux is an OS
Llinux is an os
os linux ls an os
Hello I am linux OS as an OS
Hello I am an OS
os hello
Linux
co co
caca
coca[]
OS linux OS
hip
hop
hipp
htip
hello
hillo
hyllo
hrto

45> cut -d '' -f1: field delimiter but can also work with other delimiter by using -d option and used then it considered space as a field separator or delimiter.

A screenshot of a Linux desktop environment, likely Ubuntu 20.04, showing a terminal window. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo\$". The terminal content shows the output of the command "cut -d ' ' -f1 f2", which prints the first field of each line from the file "f2" using a space as the field separator. The file "f2" contains the same text as the previous screenshot, resulting in the same output.

46>cut-d' '-f1-3: range specification.

A screenshot of a Linux desktop environment, likely Ubuntu 20.04, showing a terminal window. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo". The terminal content shows the output of the command "cut -d '' -f1-3 f2". The output is:
XLinux is an
Linux is an
os linux ls
Hello I am
Hello I am
os hello
Linux
co co
coo ca
caca
cooca[]
OS linux OS
hip
hop
hipp
hip
hello
hillo
hyllo
hrto

47>cut-d 's' -f1: in delimiter we can specify the letter also.

A screenshot of a Linux desktop environment, likely Ubuntu 20.04, showing a terminal window. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo". The terminal content shows the output of the command "cut -d 's' -f1-1 f2". The output is:
XLinux i
Linux i
o
Hello I am linux OS a
Hello I am an OS
o
Linux
co co
coo ca
caca
cooca[]
OS linux OS
hip
hop
hipp
hip
hello
hillo
hyllo
hrto

48> cut – complement –c: As the name suggests it complement the output. This option can be used in the combination with other options either with -f or with -c.

A screenshot of a Linux desktop environment, likely Ubuntu, showing a terminal window. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo". The command entered is "cut --complement -c 1,5 f2". The output of the command is:

```
user@user-virtual-machine:~/Desktop/Demo$ cut --complement -c 1,5 f2
Lnx is an OS
linu is an os
s linux is an OS
ell I am linux OS as an OS
ell I am an OS
s hlo
lhu
o c
oo a
aca
ooc[]
s linux OS
ip
op
ipp
tip
ell
ill
yll
rto
```

The terminal window has a status bar at the bottom indicating "'f2' selected (191 bytes)". The desktop background is a purple gradient. A dock at the bottom contains icons for various applications like Mail, Home, Desktop, Demo, etc.

49> cut—complement –c 5:- with ranges.

A screenshot of a Linux desktop environment, likely Ubuntu, showing a terminal window. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo". The command entered is "cut --complement -c 5- f2". The output of the command is:

```
user@user-virtual-machine:~/Desktop/Demo$ cut --complement -c 5- f2
XLn
Linu
os l
Hell
Hell
os h
Linu
co c
coo
caca
cooc
OS l
hip
hop
hipp
hilp
hell
hill
hyll
hrto
```

The terminal window has a status bar at the bottom indicating "'f2' selected (191 bytes)". The desktop background is a purple gradient. A dock at the bottom contains icons for various applications like Mail, Home, Desktop, Demo, etc.

50> cut – complement –d ' ' -f1:

A screenshot of a Linux desktop environment, specifically Ubuntu 20.04, showing a terminal window. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo". The command entered is "cut --complement -d' ' -f2 f2". The output shows various words and punctuation marks from a file named "f2". The desktop background is a purple gradient. On the left, there's a dock with icons for a browser, file manager, terminal, and others. The system tray at the bottom right shows the date and time as 3:18 PM on 9/15/2021.

```
Try 'cut --help' for more information.  
user@user-virtual-machine:~/Desktop/Demo$ cut --complement -d' ' -f2 f2  
XLinux an OS  
Llinux an os  
os is an os  
Hello am linux OS as an OS  
Hello am an OS  
os  
Linux  
co  
coo  
coca[]  
OS OS  
hip  
hop  
hipp  
htip  
hello  
hillo  
hyllo  
hrto
```

51> cut – complement –b 1-5 : complement with bytes in range.

A screenshot of a Linux desktop environment, specifically Ubuntu 20.04, showing a terminal window. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo". The command entered is "cut --complement -b 1-5 f2". The output shows specific bytes from the file "f2". The desktop background is a purple gradient. On the left, there's a dock with icons for a browser, file manager, terminal, and others. The system tray at the bottom right shows the date and time as 3:20 PM on 9/15/2021.

```
user@user-virtual-machine:~/Desktop/Demo$ cut --complement -b 1-5 f2  
x is an OS  
is an os  
nux is an os  
I am linux OS as an OS  
I am an OS  
llo  
  
a  
[]  
nux OS
```

52> cut –d ' ' -f1- f2 –f2 –output –delimiter='*': replaces space with “*”.

A screenshot of a Linux desktop environment (Ubuntu 20.04) showing a terminal window. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo". The command entered is "cut -d '' -f1-2 f2 --output-delimiter='*'". The output shows the contents of file f2, which contains the words "Linux", "caca", and "cooca". The terminal window has a dark background with light-colored text. The desktop background is a purple gradient. A sidebar on the left lists recent files like "Home", "Desktop", and "Documents". A taskbar at the bottom includes icons for various applications like a browser, file manager, and system monitor.

```
user@user-virtual-machine:~/Desktop/Demo$ cut -d '' -f1-2 f2 --output-delimiter='*' 
Linux
caca
cooca
```

53> cut -complement-d '' -f 1-2 f2--output-delimiter='*'

A screenshot of a Linux desktop environment (Ubuntu 20.04) showing a terminal window. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo". The command entered is "cut --complement -d '' -f 1-2 f2 --output-delimiter='*'". The output shows the complement of the set of words in file f2, resulting in the words "an", "os", "am", "Linux", "OS", "as", and "an". The terminal window has a dark background with light-colored text. The desktop background is a purple gradient. A sidebar on the left lists recent files like "Home", "Desktop", and "Documents". A taskbar at the bottom includes icons for various applications like a browser, file manager, and system monitor.

```
user@user-virtual-machine:~/Desktop/Demo$ cut --complement -d '' -f 1-2 f2 --output-delimiter='*' 
an
os
am
Linux
OS
as
an
```

54> cut-d '' -f1-2 f2 – output-delimeter='+' >d2: it create a new files and store the data there.

A screenshot of a Linux desktop environment, likely Ubuntu 20.04, showing a terminal window. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo". The command entered is:

```
user@user-virtual-machine:~/Desktop/Demo$ cut -d ' ' -f1 f2 --output-delimiter='+' >d2
```

The terminal shows the output of the command:

```
an*OS  
an*os  
ts'an*os  
am'linux*OS*as*an*OS  
am'an*OS  
  
Linux  
  
caca  
cooca[]  
OS  
hip  
hop  
hipp  
hip  
hello  
hillo  
hylo  
hrto
```

The status bar at the bottom of the terminal window indicates: "f2 selected (191 bytes)".

55> cut-d ' ' -f1 f4| sort-r: we sort the elements.

A screenshot of a Linux desktop environment, likely Ubuntu 20.04, showing a terminal window. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo". The command entered is:

```
user@user-virtual-machine:~/Desktop/Demo$ cut -d ' ' -f1 f2 | sort -r
```

The terminal shows the output of the command:

```
XLinux  
OS  
os  
os  
Linux  
Linux  
hylo  
hrto  
hop  
hipp  
hip  
hillo  
hip  
Hello  
Hello  
Hello  
cooca[]  
coo  
co  
caca
```

The status bar at the bottom of the terminal window indicates: "f2 selected (191 bytes)".

56> cat f2| cut-d' '-f1-3|sort> newdata: create a new file and stores the data.

A screenshot of a Linux desktop environment, likely Ubuntu 20.04, showing a terminal window. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo". The terminal displays the following command and its output:

```
user@user-virtual-machine:~/Desktop/Demo$ cat f2| cut-d ' ' -f1-3 | sort > new d
ata
sort: cannot read: data: No such file or directory
cut-d: command not found
user@user-virtual-machine:~/Desktop/Demo$ cat f2| cut-d ' ' -f1-3 | sort > newda
t
```

57> cat f2| cut-d ' ' -f1-3|sort-r: sort with ranges.

A screenshot of a Linux desktop environment, likely Ubuntu 20.04, showing a terminal window. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo". The terminal displays the following command and its output:

```
user@user-virtual-machine:~/Desktop/Demo$ cat f2 | cut -d ' ' -f 1-3 | sort -r
Linux is an
Linux OS
Linux is
os hello
Linux is an
Linux
hylla
hrto
hop
hipp
hip
hillp
hip
Hello I am
Hello I am
hello
cooca[]
coo ca
co co
caca
```

58> The tr command in UNIX is a command line utility for translating or deleting characters. It supports a range of transformations including uppercase to lowercase, squeezing repeating characters, deleting specific characters and basic find and replace.

A screenshot of a Linux desktop environment, likely Ubuntu 20.04, showing a terminal window. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo". The terminal content shows the following command and its output:

```
user@user-virtual-machine:~/Desktop/Demo$ cat new | tr '[a-z]' '[A-Z]'  
HELLO, I AM LINUX, UBUNTU IS MY NAME  
HI I AM SRINIVAS  
I LOVE CODING  
USN 123  
user@user-virtual-machine:~/Desktop/Demo$
```

59> Conversion of lower case to upper case and other methods in conversions.

A screenshot of a Linux desktop environment, likely Ubuntu 20.04, showing a terminal window. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo". The terminal content shows the following command and its output:

```
user@user-virtual-machine:~/Desktop/Demo$ cat new | tr '[a-z]' '[A-Z]'  
HELLO, I AM LINUX, UBUNTU IS MY NAME  
HI I AM SRINIVAS  
I LOVE CODING  
USN 123  
user@user-virtual-machine:~/Desktop/Demo$ cat new | tr '[:lower:]' '[:upper:]'  
HELLO, I AM LINUX, UBUNTU IS MY NAME  
HI I AM SRINIVAS  
I LOVE CODING  
USN 123  
user@user-virtual-machine:~/Desktop/Demo$
```

60> Echo command used with tr.

The screenshot shows a Linux desktop environment with a terminal window open. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo". The terminal content displays several examples of using the tr command:

```
user@user-virtual-machine:~/Desktop/Demo$ echo " Hello World | tr '[[:lower:]]' '[[:upper:]]'
Hello World | tr '[[:lower:]]' '[[:upper:]]'
user@user-virtual-machine:~/Desktop/Demo$ echo " Hello World" | tr '[[:lower:]]' '[[:upper:]]'
" HELLO WORLD
> k"
k: command not found
user@user-virtual-machine:~/Desktop/Demo$ echo " Hello World" | tr '[[:lower:]]' '[[:upper:]]'
HELLO WORLD
user@user-virtual-machine:~/Desktop/Demo$ echo " Hello World" | tr '[[:space:]]'\t
> '
Hello
World
user@user-virtual-machine:~/Desktop/Demo$ echo " Hello World" | tr '[[:space:]]'\t
Hello   World user@user-virtual-machine:~/Desktop/Demo$
```

61> Cat used with tr in single letter replacement.

The screenshot shows a Linux desktop environment with a terminal window open. The terminal window title is "user@user-virtual-machine: ~/Desktop/Demo". The terminal content displays examples of using the tr command with the output of the cat command:

```
> '
Hello
World
user@user-virtual-machine:~/Desktop/Demo$ echo " Hello World" | tr '[[:space:]]' '\t'
Hello   World user@user-virtual-machine:~/Desktop/Demo$ echo " Hello W
orld" | tr '[[:space:]]' '\n'
Hello
World
user@user-virtual-machine:~/Desktop/Demo$ cat new | tr '[lL]' '[kK]'
hello, K am lknux, Ubuntu ks my name
Hk k am srknvas
k love codng
usn 123
user@user-virtual-machine:~/Desktop/Demo$ cat new | tr '{}' '()'
hello, I am linux, Ubuntu is my name
Hi t am srintvas
i love coding
usn (123)
user@user-virtual-machine:~/Desktop/Demo$
```

62> Removing spacings

A screenshot of a Linux desktop environment, likely Ubuntu, showing a terminal window titled "user@user-virtual-machine: ~/Desktop/Demo". The terminal displays several examples of the tr command:

```
Hello  
World  
user@user-virtual-machine:~/Desktop/Demo$ cat new | tr '[iI]' '[kK]'  
hello, K am lknux, Ubuntu ks my name  
Hk k am srknkas  
k love codkng  
usn 123  
  
user@user-virtual-machine:~/Desktop/Demo$ cat new | tr '()' ''  
hello, I am llnux, Ubuntu is my name  
Hi i am sriñivas  
i love coding  
usn (123)  
  
user@user-virtual-machine:~/Desktop/Demo$ cat new | tr -s [:space:] ''  
hello, I am linux, Ubuntu is my name Hl i am sriñivas i love coding usn {123} us  
er@user-virtual-machine:~/Desktop/Demo$ cat new | tr -d 'I'  
Hello,anlinux,Ubuntuismyname  
Hiamsriñivas  
ilovecoding  
usn{123}  
  
user@user-virtual-machine:~/Desktop/Demo$
```

63> Removing the elements.

A screenshot of a Linux desktop environment, likely Ubuntu, showing a terminal window titled "user@user-virtual-machine: ~/Desktop/Demo". The terminal displays several examples of the tr command, specifically focusing on removing characters:

```
t love coding  
usn (123)  
  
user@user-virtual-machine:~/Desktop/Demo$ cat new | tr -s [:space:] ''  
hello, I am llnux, Ubuntu is my name Hl i am sriñivas i love coding usn {123} us  
er@user-virtual-machine:~/Desktop/Demo$ cat new | tr -d 'I'  
Hello, am linux, Ubuntu is my name  
Hi i am sriñivas  
i love coding  
usn {123}  
  
user@user-virtual-machine:~/Desktop/Demo$ cat new | tr -d 'hel'  
o, I am inux, Ubuntu is my nam  
Hi i am sriñivas  
i ov coding  
usn {123}  
  
user@user-virtual-machine:~/Desktop/Demo$
```

64> Different methods used with tr.

A screenshot of a Linux desktop environment, likely Ubuntu, showing a terminal window titled "Activities". The terminal window displays several examples of the `tr` command being used to transform text. The examples show how `tr` can be used to convert lowercase letters to uppercase, remove digits, or replace specific characters.

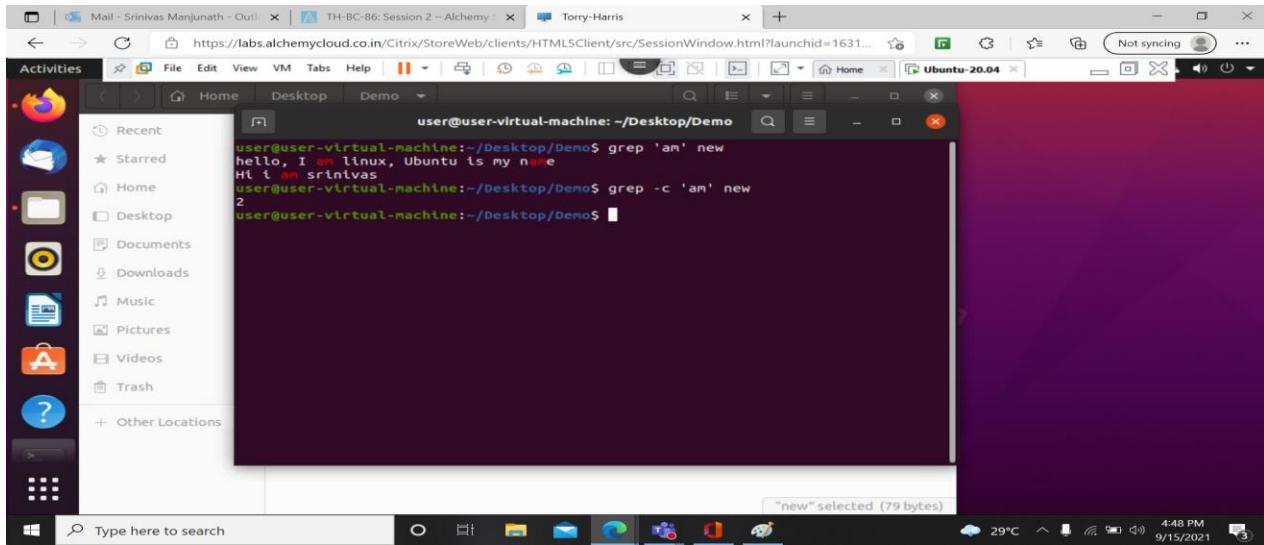
```
user@user-virtual-machine:~/Desktop/Demo$ cat new | tr -d '[hel]'  
I am linux, Ubuntu is my name  
Hl i am srinivas  
l ov coding  
usn {123}  
  
user@user-virtual-machine:~/Desktop/Demo$ cat new | tr -d '[:upper:]'  
hello, am linux, buntu is my name  
t i am srinivas  
t love coding  
usn {123}  
  
user@user-virtual-machine:~/Desktop/Demo$ cat new | tr -d '[:digit:]'  
hello, am lnx, bnu s my name  
am sruvas  
love con  
usn {123}  
  
user@user-virtual-machine:~/Desktop/Demo$ cat new | tr -d '[:upper:][:digit:]'  
hello, am lnx, bnu s my name  
am sruvas  
love con  
usn {123}
```

65> grep: The grep filter searches a file for a particular pattern of characters, and displays all lines that contain that pattern.

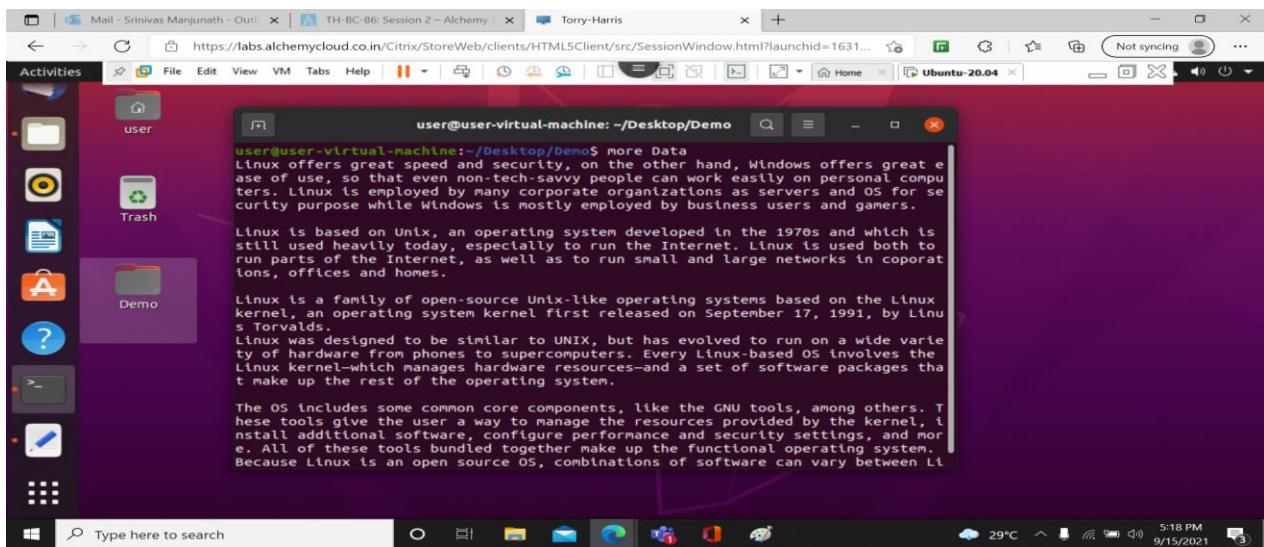
A screenshot of a Linux desktop environment, likely Ubuntu, showing a terminal window titled "Activities". The terminal window displays an example of the `grep` command being used to search for the word "am" in a file named "new". The output shows the line containing "am" highlighted in red.

```
user@user-virtual-machine:~/Desktop/Demo$ grep 'am' new  
hello, I am linux, Ubuntu is my name  
Hl am sruivas  
user@user-virtual-machine:~/Desktop/Demo$
```

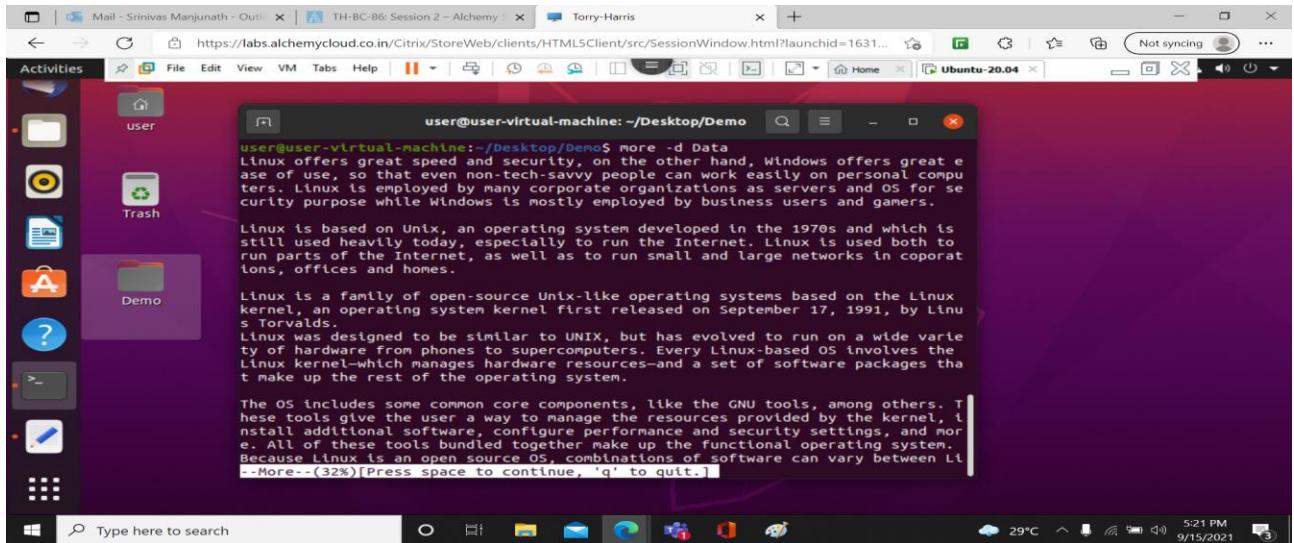
66> grep -c: count the number of word which is given.



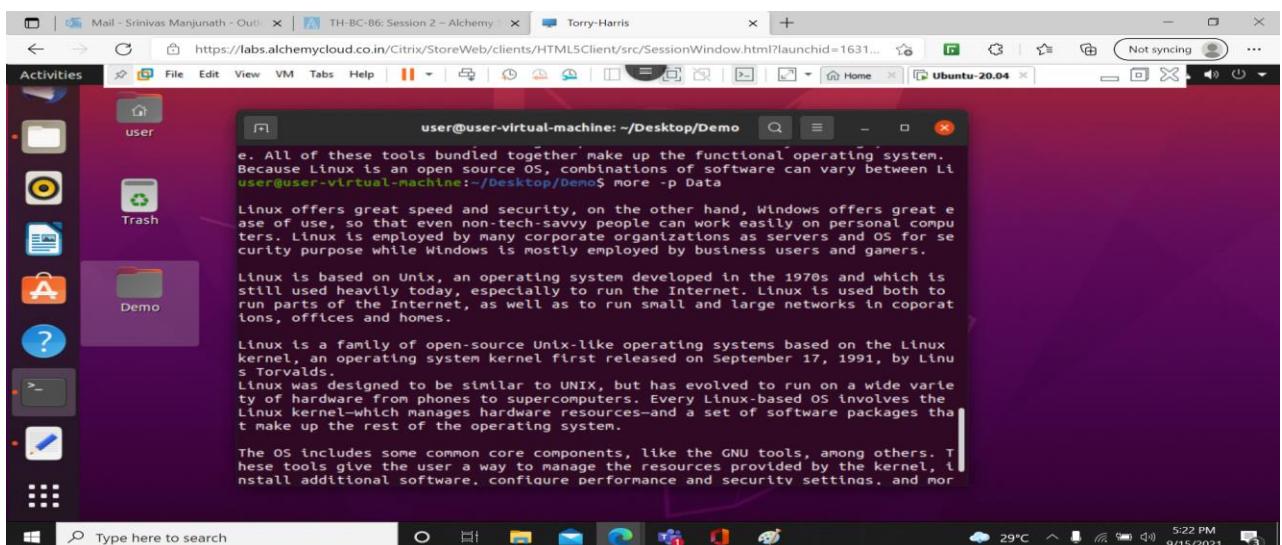
67> More- more command is used to view the text files in the command prompt, displaying one screen at a time in case the file is large (For example log files). The more command also allows the user do scroll up and down through the page.



68> more -d : Use this command in order to help the user to navigate. It displays “[Press space to continue, ‘q’ to quit.]” and displays “[Press ‘h’ for instructions.]” when wrong key is pressed.



69> more -p: This option clears the screen and then displays the text.



70> more -c : This command is used to display the pages on the same area by overlapping the previously displayed text.

A screenshot of a Linux desktop environment, likely Ubuntu, showing a terminal window titled "user@user-virtual-machine: ~/Desktop/Demo". The terminal displays the following text:

```
on personal computers. Linux is employed by many corporate organizations as servers and OS for security purpose while Windows is mostly employed by business users and gamers.

Linux is based on Unix, an operating system developed in the 1970s and which is still used heavily today, especially to run the Internet. Linux is used both to run parts of the Internet, as well as to run small and large networks in corporations, offices and homes.

Linux is a family of open-source Unix-like operating systems based on the Linux kernel, an operating system kernel first released on September 17, 1991, by Linus Torvalds.

Linux was designed to be similar to UNIX, but has evolved to run on a wide variety of hardware from phones to supercomputers. Every Linux-based OS involves the Linux kernel—which manages hardware resources—and a set of software packages that make up the rest of the operating system.

The OS includes some common core components, like the GNU tools, among others. These tools give the user a way to manage the resources provided by the kernel; i install additional software, configure performance and security settings, and more. All of these tools bundled together make up the functional operating system. Because Linux is an open source OS, combinations of software can vary between Linux distributions.

user@user-virtual-machine:~/Desktop/Demo$ user@user-virtual-machine:~/Desktop/Demo$ more -c Data
```

71> more -s: This option squeezes multiple blank lines into one single blank line

A screenshot of a Linux desktop environment, likely Ubuntu, showing a terminal window titled "user@user-virtual-machine: ~/Desktop/Demo". The terminal displays the following text:

```
user@user-virtual-machine:~/Desktop/Demo$ user@user-virtual-machine:~/Desktop/Demo$ more -s Data
Linux offers great speed and security, on the other hand, Windows offers great ease of use so that even non-tech-savvy people can work easily on personal computers. Linux is employed by many corporate organizations as servers and OS for security purpose while Windows is mostly employed by business users and gamers.

Linux is based on Unix, an operating system developed in the 1970s and which is still used heavily today, especially to run the Internet. Linux is used both to run parts of the Internet, as well as to run small and large networks in corporations, offices and homes.

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```