

OPS102 – Week 3 – File Systems

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Activity 1: File Globing

When issuing Linux or Windows commands, it may be **more efficient** (less typing) to use **filename expansion symbols** also called **File Globing** to match files that share similar characteristics (e.g. same file extension) when issuing Linux commands.

Example: You can use a special character to indicate to the Bash shell to match all files that end with the extension ".txt" in your current working directory:

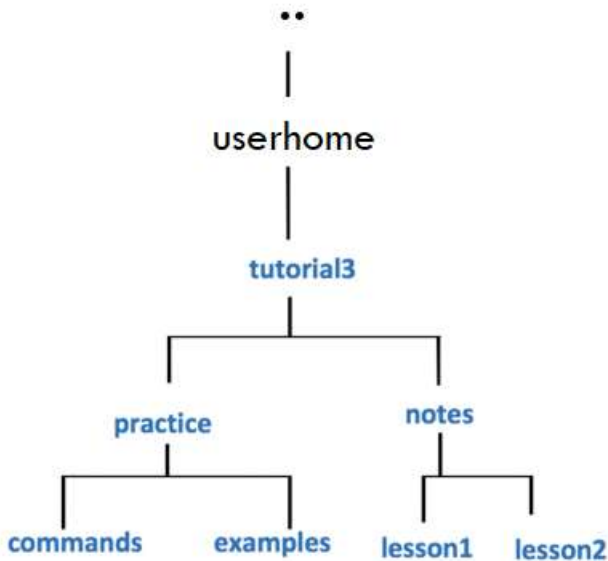
ls *.txt

a.txt b.txt c.txt 1.txt 2.txt 3.txt abc.txt work.txt

Below are the most common Filename Expansion symbols and how they are used for filename expansion:

Filename Expansion Symbol	Purpose
*	Asterisk (*) to represent 0 or more characters
?	Question mark (?) to represent exactly one character (any character)
[]	Square brackets ([]) to represent and match for the character enclosed within the square brackets . It represents ONLY ONE character - it's like a Question Mark (?) but with conditions or restrictions .
[!]	Square brackets containing an exclamation mark immediately after the open square bracket ([!]) to represent and match and OPPOSITE character for the character enclosed within the square brackets.

Consider following file hierarchy for the activities in this section. This applies to both of Linux and Windows.




You will now get practice issuing file management commands using **filename expansion symbols**. We will be using the directory structure given above.

A great way to practice filename expansion, use the **touch** command on Linux to create a lot of empty filenames (for windows use any preferred way to create such files.), write the **ls/dir** commands that use **filename expansion**, predict the filenames that will be display, and finally run the command to check your work.

Perform the following steps for Linux and repeat them for windows using equivalent commands learnt previously:

1. Issue a Linux command to move to the **examples** directory (i.e. under *practice* directory as shown in diagram to the right).

Ans: Linux: - mv examples examples1

 carora18@mtrx-node03pd:~/tutorial3/practice

```
[carora18@mtrx-node03pd practice]$ mv examples examples1
[carora18@mtrx-node03pd practice]$ ls
commands  examples1
[carora18@mtrx-node03pd practice]$
```

Windows: - xcopy /e /i examples examples1

```
Command Prompt
C:\tutorial3\practice>dir
Volume in drive C has no label.
Volume Serial Number is 8465-5951

Directory of C:\tutorial3\practice

01/28/2024  01:23 PM  <DIR>          .
01/28/2024  01:23 PM  <DIR>          ..
01/28/2024  01:21 PM  <DIR>          commands
01/28/2024  01:21 PM  <DIR>          examples
               0 File(s)              0 bytes
               4 Dir(s) 97,091,932,160 bytes free

C:\tutorial3\practice>move examples examples1
1 dir(s) moved.

C:\tutorial3\practice>dir
Volume in drive C has no label.
Volume Serial Number is 8465-5951

Directory of C:\tutorial3\practice

01/28/2024  01:23 PM  <DIR>          .
01/28/2024  01:23 PM  <DIR>          ..
01/28/2024  01:21 PM  <DIR>          commands
01/28/2024  01:21 PM  <DIR>          examples1
               0 File(s)              0 bytes
               4 Dir(s) 97,091,932,160 bytes free

C:\tutorial3\practice>
```

2. Issue a Linux command to confirmed that you have moved to the **examples** directory.

Ans: Linux: - ls ~/tutorial3/practice

```
carora18@mtrx-node03pd:~
[carora18@mtrx-node03pd ~]$ ls ~/tutorial3/practice
commands  examples1
[carora18@mtrx-node03pd ~]$
```

Windows: - dir tutorial3\practice

```
Command Prompt
C:\tutorial3\practice>dir
Volume in drive C has no label.
Volume Serial Number is 8465-5951

Directory of C:\tutorial3\practice

01/28/2024  01:23 PM    <DIR>        .
01/28/2024  01:23 PM    <DIR>        ..
01/28/2024  01:21 PM    <DIR>        commands
01/28/2024  01:21 PM    <DIR>        examples
               0 File(s)                0 bytes
               4 Dir(s)  97,091,932,160 bytes free

C:\tutorial3\practice>move examples examples1
1 dir(s) moved.

C:\tutorial3\practice>dir
Volume in drive C has no label.
Volume Serial Number is 8465-5951

Directory of C:\tutorial3\practice

01/28/2024  01:23 PM    <DIR>        .
01/28/2024  01:23 PM    <DIR>        ..
01/28/2024  01:21 PM    <DIR>        commands
01/28/2024  01:21 PM    <DIR>        examples1
               0 File(s)                0 bytes
               4 Dir(s)  97,091,932,160 bytes free

C:\tutorial3\practice>
```

3. Issue the **touch** command to create the following empty text files in the *examples* directory:
(note *upper* and *lowercase* letters)

abc.txt
def.text
hij.Txt
1a4.txt
123.TXT
456.txt
6u9.txt
ab2.html
1234.txt
abcdef.txt
abcde.txt

Ans: Change Directory to examples: - cd ~/tutorial3/practice/examples

Use Touch command: - touch abc.txt def.text hij.Txt 1a4.txt 123.TXT 456.txt 6u9.txt
ab2.html 1234.txt abcdef.txt abcde.txt

```
carora18@mtrx-node03pd:~/tutorial3/practice/examples
[carora18@mtrx-node03pd examples]$ touch abc.txt def.text hij.Txt 1a4.txt 123.TXT 456.txt 6u9.txt ab2.html 1234.txt abcdef.txt abcde.txt
[carora18@mtrx-node03pd examples]$ ls
1234.txt  1a4.txt  6u9.txt  abcdef.txt  abc.txt  hij.Txt
123.TXT  456.txt  ab2.html  abcde.txt  def.text
[carora18@mtrx-node03pd examples]$
```

4. If you encounter errors, then make corrections (eg. **viewing directory contents, check for correct filename syntax, case sensitivity, missing files, files in the wrong location, etc.**)

Ans: ls -l command is used to view detailed directory

```
carora18@mtrx-node03pd:~/tutorial3/practice/examples
[carora18@mtrx-node03pd examples]$ ls -l
total 0
-rw-r--r-- 1 carora18 users 0 Jan 28 13:29 1234.txt
-rw-r--r-- 1 carora18 users 0 Jan 28 13:29 123.TXT
-rw-r--r-- 1 carora18 users 0 Jan 28 13:29 1a4.txt
-rw-r--r-- 1 carora18 users 0 Jan 28 13:29 456.txt
-rw-r--r-- 1 carora18 users 0 Jan 28 13:29 6u9.txt
-rw-r--r-- 1 carora18 users 0 Jan 28 13:29 ab2.html
-rw-r--r-- 1 carora18 users 0 Jan 28 13:29 abcdef.txt
-rw-r--r-- 1 carora18 users 0 Jan 28 13:29 abcde.txt
-rw-r--r-- 1 carora18 users 0 Jan 28 13:29 abc.txt
-rw-r--r-- 1 carora18 users 0 Jan 28 13:29 def.text
-rw-r--r-- 1 carora18 users 0 Jan 28 13:29 hij.Txt
[carora18@mtrx-node03pd examples]$
```

5. Issue the ls command to get a listing of files in your *examples* directory.
The output should look identical to the diagram displayed below.
You can refer to this listing to see all files so you can then predict the output from Linux commands that use filename expansion symbols.

```
ls
123.TXT 1234.txt 1a4.txt 456.txt 6u9.txt ab2.html abc.txt abcde.txt abcdef.txt def.text hij.Txt
```

Ans:-

```
carora18@mtrx-node03pd:~/tutorial3/practice/examples
[carora18@mtrx-node03pd examples]$ ls
1234.txt 1a4.txt 6u9.txt abcdef.txt abc.txt hij.Txt
123.TXT 456.txt ab2.html abcde.txt def.text
[carora18@mtrx-node03pd examples]$ ls|sort -f
123.TXT
1234.txt
1a4.txt
456.txt
6u9.txt
ab2.html
abc.txt
abcde.txt
abcdef.txt
def.text
hij.Txt
[carora18@mtrx-node03pd examples]$
```

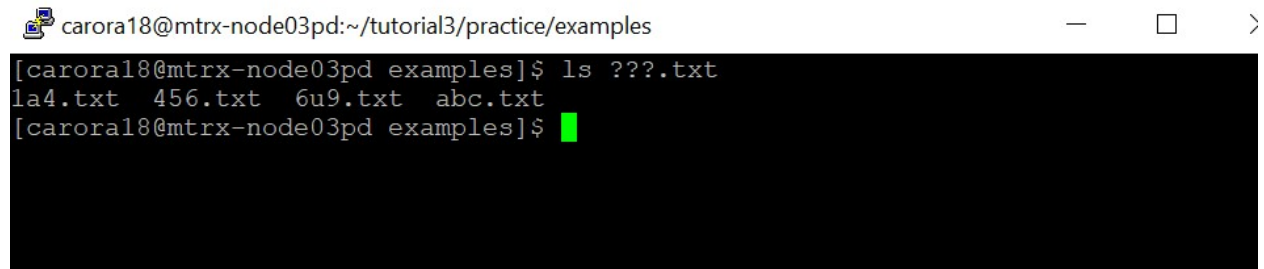
6. What do you think the output will be from the following Linux command?

ls ????.txt

Write down the expected output on paper, then **issue the command** to check your answer.

Ans:- ? symbol define as one character. So, ??? defines the three characters in file. ls command it used to see the list of files in directory. ls ????.txt the result of this command is it shows the text files in directory which have three characters followed by .txt in their name.

Expected output:- 1a4.txt 456.txt 6u9.txt abc.txt



```
carora18@mtrx-node03pd:~/tutorial3/practice/examples
[carora18@mtrx-node03pd examples]$ ls ????.txt
1a4.txt 456.txt 6u9.txt abc.txt
[carora18@mtrx-node03pd examples]$
```

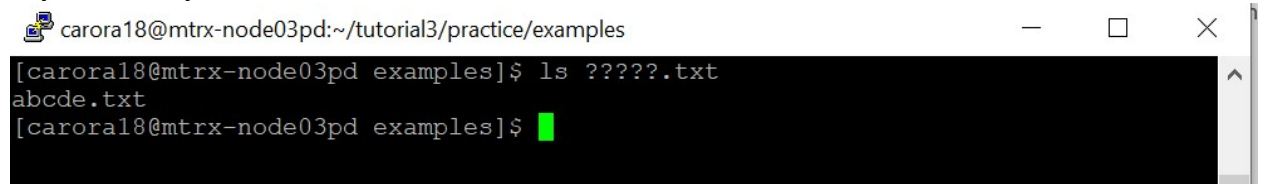
7. What do you think the output will be from the following Linux command?

ls ?????.txt

Write down the expected output on paper, then **issue the command** to check your answer.

Ans:- ? symbol define as one character. So, ????? defines the five characters in file. ls command it used to see the list of files in directory. ls ?????.txt the result of this command is it shows the text files in directory which have five characters followed by .txt in their name.

Expected output:- abcde.txt



```
carora18@mtrx-node03pd:~/tutorial3/practice/examples
[carora18@mtrx-node03pd examples]$ ls ?????.txt
abcde.txt
[carora18@mtrx-node03pd examples]$
```

8. What do you think the output will be from the following Linux command?

ls ??????.txt

Write down the expected output on paper, then **issue the command** to check your answer.

Ans:- ? symbol define as one character. So, ?????? defines the six characters in file. ls command it used to see the list of files in directory. ls ??????.txt the result of this command is it shows the text files in directory which have six characters followed by .txt in their name.

Expected output:- abcdef.txt

```
carora18@mtrx-node03pd:~/tutorial3/practice/examples
[carora18@mtrx-node03pd examples]$ ls ??????.txt
abcdef.txt
[carora18@mtrx-node03pd examples]$
```

9. What do you think the output will be from the following Linux command?

ls [0-9].txt

Write down the expected output on paper, then **issue the command** to check your answer.
Did the command work?

What does this teach you about the character class [] symbol?

Ans: - This command will list all the files in the current directory that have a single digit followed by .txt as their name.

Expected output:- ls: cannot access [0-9].txt: No such file or directory

```
carora18@mtrx-node03pd:~/tutorial3/practice/examples
[carora18@mtrx-node03pd examples]$ ls [0-9].txt
ls: cannot access [0-9].txt: No such file or directory
[carora18@mtrx-node03pd examples]$
```

This command did not work.

Square brackets ([]) to represent and match for the character enclosed within the square brackets. It represents ONLY ONE character - it's like a Question Mark (?) but with conditions or restrictions.

10. What do you think the output will be from the following Linux command?

ls [0-9][0-9][0-9].txt

Write down the expected output on paper, then **issue the command** to check your answer.

Ans: - This command will list all the files in the current directory that have a three digits followed by .txt as their name.

Expected output:- 456.txt

```
carora18@mtrx-node03pd:~/tutorial3/practice/examples
[carora18@mtrx-node03pd examples]$ ls [0-9][0-9][0-9].txt
456.txt
[carora18@mtrx-node03pd examples]$
```

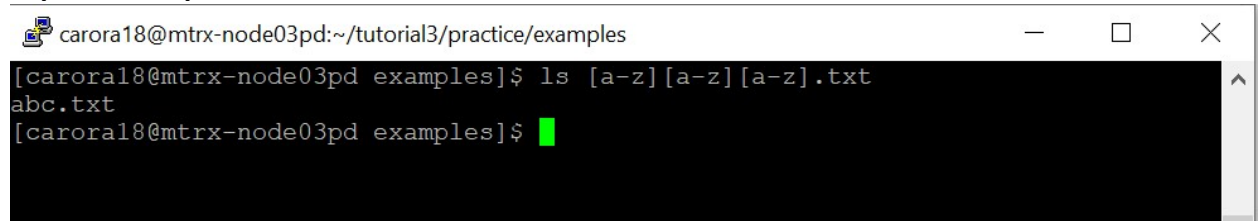
11. What do you think the output will be from the following Linux command?

ls [a-z][a-z][a-z].txt

Write down the expected output on paper, then **issue the command** to check your answer.

Ans: - This command will list all the files in the current directory that have a three characters (letters) in lower case from a to z followed by .txt as their name.

Expected output:- abc.txt



```
carora18@mtrx-node03pd:~/tutorial3/practice/examples
[carora18@mtrx-node03pd examples]$ ls [a-z][a-z][a-z].txt
abc.txt
[carora18@mtrx-node03pd examples]$
```

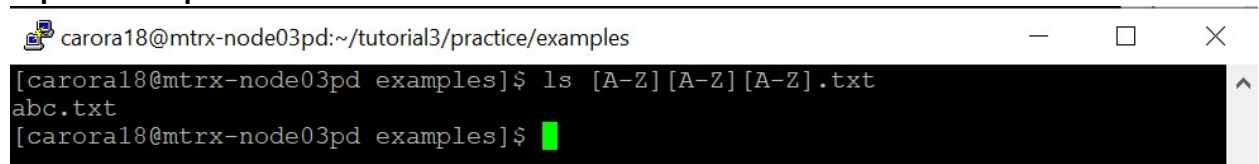
12. What do you think the output will be from the following Linux command (using character class with UPPERCASE letters)?:

ls [A-Z][A-Z][A-Z].txt

Write down the expected output on paper, then **issue the command** to check your answer.

Ans: - This command will list all the files in the current directory that have a three characters(letters) from A to Z followed by .txt as their name. there is no any difference to type upper or lower character in [] braces.

Expected output:- abc.txt



```
carora18@mtrx-node03pd:~/tutorial3/practice/examples
[carora18@mtrx-node03pd examples]$ ls [A-Z][A-Z][A-Z].txt
abc.txt
[carora18@mtrx-node03pd examples]$
```

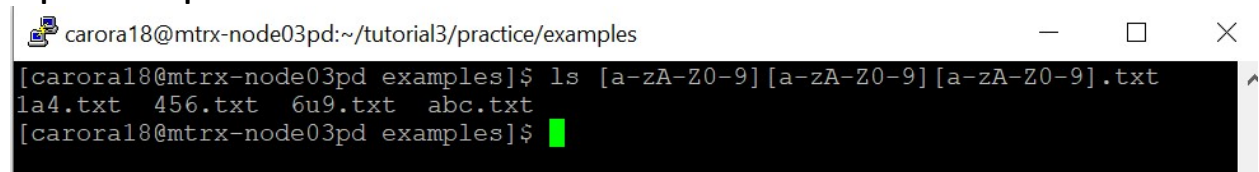
13. What do you think the output will be from the following Linux command (using character class using alpha-numeric characters)?

ls [a-zA-Z0-9][a-zA-Z0-9][a-zA-Z0-9].txt

Write down the expected output on paper, then **issue the command** to check your answer.

Ans: - This command will list all the files in the current directory that have a three-character name consisting of any combination of letters and digits, followed by .txt as their extension.

Expected output:- 1a4.txt 456.txt 6u9.txt abc.txt



```
carora18@mtrx-node03pd:~/tutorial3/practice/examples
[carora18@mtrx-node03pd examples]$ ls [a-zA-Z0-9][a-zA-Z0-9][a-zA-Z0-9].txt
1a4.txt 456.txt 6u9.txt abc.txt
[carora18@mtrx-node03pd examples]$
```

14. What do you think the output will be from the following Linux command?

ls *.txt

Write down the expected output on paper, then **issue the command** to check your answer. Did ALL text files get listed? Why not?

Ans: - This command will list all the files in the current directory that have .txt as their extension.

Expected output:- 1234.txt 1a4.txt 456.txt 6u9.txt abcdef.txt abcde.txt abc.txt


```
carora18@mtrx-node03pd:~/tutorial3/practice/examples
[carora18@mtrx-node03pd examples]$ ls *.txt
1234.txt 1a4.txt 456.txt 6u9.txt abcdef.txt abcde.txt abc.txt
[carora18@mtrx-node03pd examples]$
```

15. What do you think the output will be from the following Linux command?

ls *.*[tT][xX][tT]

Write down the expected output on paper, then **issue the command** to check your answer. Did ALL text files get listed this time? If so, why?

Ans: - This command will list all the files in the current directory that have .txt or .TXT as their extension, regardless of the case.

Expected output:- 1234.txt 1a4.txt 6u9.txt abcde.txt hij.Txt 123.TXT 456.txt abcdef.txt abc.txt

```
carora18@mtrx-node03pd:~/tutorial3/practice/examples
[carora18@mtrx-node03pd examples]$ ls *.*[tT][xX][tT]
1234.txt 1a4.txt 6u9.txt abcde.txt hij.Txt
123.TXT 456.txt abcdef.txt abc.txt
[carora18@mtrx-node03pd examples]$
```

Yes all the files listed this time.

16. **NOTE:** We have just been using filename expansion symbols just with the ls command. Filename expansion symbols can be used for ANY Linux file management command (e.g. **cat**, **more**, **less**, **cp**, **mv**, **rm**, **ls**, etc.).

Let's get some practice issuing these other Linux file management commands.

Ans: - Filename expansion symbols are useful for performing operations on multiple files that match a certain pattern. Some are below:-

cat: - cat command is used to view the content of the file.

more: - more command is used to display in forward page by page.

less: - less command is used to display in backward page by page.

cp: - cp command is used to copy the file as well as directory.

mv: - mv command is used to move the file as well as directory.

rm: - rm command is used to remove/delete the file as well as directory.

ls: - ls command is used to view the content in the file.

```
carora18@mtrx-node03pd:~/tutorial3/practice/examples
[carora18@mtrx-node03pd examples]$ ls
1234.txt 1a4.txt 6u9.txt abcdef.txt abc.txt hij.Txt
123.TXT 456.txt ab2.html abcde.txt def.text
[carora18@mtrx-node03pd examples]$ cat 1234.txt
[carora18@mtrx-node03pd examples]$ cls
[carora18@mtrx-node03pd examples]$ ls
1234.txt 1a4.txt 6u9.txt abcdef.txt abc.txt hij.Txt
123.TXT 456.txt ab2.html abcde.txt def.text
```

carora18@mtrx-node03pd:~/tutorial3/practice/examples

```
hello
hello
hello
hello
hello
hello
hello
hello
hello
hello
hello
hello
Class
Class
Class
Class
Class
Class
Class
Class
Class
Class
Directory
Directory
Directory
```

--More-- (62%)

carora18@mtrx-node06pd:~/tutorial3/practice/examples

```
[carora18@mtrx-node06pd examples]$ less 1234.txt
Class
Class
Class
Class
Class
Class
Class
Class
Directory
Directory
Directory
Directory
Directory
Directory
Linux
Linux
Linux
Linux
Linux
Linux
Linux
Linux
Linux
Linux
Linux
```

carora18@mtrx-node06pd:~/tutorial3/practice/examples

```
Class
Class
Class
Class
Class
Class
Class
Directory
Directory
Directory
Directory
Directory
Directory
Linux
Linux
Linux
Linux
Linux
Linux
Linux
Linux
Linux
Linux
Linux
(END)
```

carora18@mtrx-node01pd:~/tutorial3/practice/examples

```
[carora18@mtrx-node01pd examples]$ ls
1234.txt 1a4.txt 6u9.txt abcdef.txt abc.txt hij.Txt
123.TXT 456.txt ab2.html abcde.txt def.text
[carora18@mtrx-node01pd examples]$ cp 1234.txt linux.txt
[carora18@mtrx-node01pd examples]$ ls
1234.txt 1a4.txt 6u9.txt abcdef.txt abc.txt hij.Txt
123.TXT 456.txt ab2.html abcde.txt def.text linux.txt
[carora18@mtrx-node01pd examples]$
```

carora18@mtrx-node01pd:~/tutorial3/practice/examples

```
[carora18@mtrx-node01pd examples]$ ls
1234.txt 1a4.txt 6u9.txt abcdef.txt abc.txt hij.Txt
123.TXT 456.txt ab2.html abcde.txt def.text
[carora18@mtrx-node01pd examples]$ cp 1234.txt linux.txt
[carora18@mtrx-node01pd examples]$ ls
1234.txt 1a4.txt 6u9.txt abcdef.txt abc.txt hij.Txt
123.TXT 456.txt ab2.html abcde.txt def.text linux.txt
[carora18@mtrx-node01pd examples]$ mv 1234.txt linux1.txt
[carora18@mtrx-node01pd examples]$ ls
123.TXT 456.txt ab2.html abcde.txt def.text linux1.txt
1a4.txt 6u9.txt abcdef.txt abc.txt hij.Txt linux.txt
[carora18@mtrx-node01pd examples]$
```

```
carora18@mtrx-node01pd:~/tutorial3/practice/examples
[carora18@mtrx-node01pd examples]$ ls
1234.txt 1a4.txt 6u9.txt abcdef.txt abc.txt hij.Txt
123.TXT 456.txt ab2.html abcde.txt def.text
[carora18@mtrx-node01pd examples]$ cp 1234.txt linux.txt
[carora18@mtrx-node01pd examples]$ ls
1234.txt 1a4.txt 6u9.txt abcdef.txt abc.txt hij.Txt
123.TXT 456.txt ab2.html abcde.txt def.text linux.txt
[carora18@mtrx-node01pd examples]$ mv 1234.txt linux1.txt
[carora18@mtrx-node01pd examples]$ ls
123.TXT 456.txt ab2.html abcde.txt def.text linux1.txt
1a4.txt 6u9.txt abcdef.txt abc.txt hij.TxtT linux.txt
[carora18@mtrx-node01pd examples]$ rm linux.txt
[carora18@mtrx-node01pd examples]$ ls
123.TXT 456.txt ab2.html abcde.txt def.text linux1.txt
1a4.txt 6u9.txt abcdef.txt abc.txt hij.TxtT
[carora18@mtrx-node01pd examples]$
```

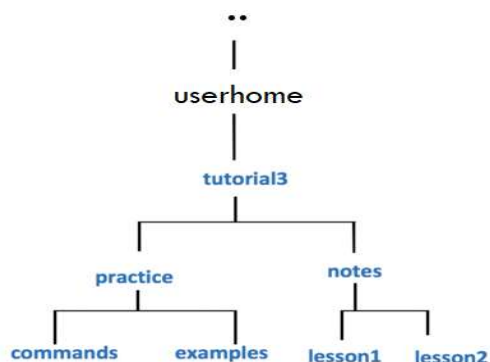
17. Issue the following Linux command: **file *.[tT][xX][tT]**

What is the purpose of this command? Which files are contained in this output?

Ans:- This command display the file type of all the files in the current directory that have .txt or .TXT as their extension, regardless of the case.

```
carora18@mtrx-node01pd:~/tutorial3/practice/examples
[carora18@mtrx-node01pd examples]$ file *.[tT][xX][tT]
123.TXT:      empty
1a4.txt:      empty
456.txt:      empty
6u9.txt:      empty
abcdef.txt:   empty
abcde.txt:    empty
abc.txt:      empty
hij.TxtT:     empty
linux1.txt:   ASCII text
[carora18@mtrx-node01pd examples]$
```

18. Change to the **commands** directory using an **absolute** pathname (use the diagram on right-side for reference).



Ans:- `cd /userhome/tutorial3/practice/commands`

```
carora18@mtrx-node01pd:~/tutorial3/practice/commands
[carora18@mtrx-node01pd examples]$ cd /home/carora18/tutorial3/practice/commands
[carora18@mtrx-node01pd commands]$
```

19. Issue a Linux command to confirm that you are now in the **commands** directory.

Ans: -

```
carora18@mtrx-node01pd:~/tutorial3/practice/commands
[carora18@mtrx-node01pd examples]$ cd /home/carora18/tutorial3/practice/commands
[carora18@mtrx-node01pd commands]$ pwd
/home/carora18/tutorial3/practice/commands
[carora18@mtrx-node01pd commands]$
```

20. Issue the following Linux command (lowercase "l" NOT the number "1"):

cp /bin/l* .

View the contents of the contents directory. What did this command do?

Ans: -

```
carora18@mtrx-node01pd:~/tutorial3/practice/commands
[carora18@mtrx-node01pd commands]$ cp /bin/l* .
[carora18@mtrx-node01pd commands]$ ls
lame          ldapurl          libpng-config    login           lsscsi
last          ldapwhoami       libtool          loginctl        lua
lastb         ld.bfd           libtoolize       logname         luac
lastlog       ldd              link             logresolve     luatex
latex         ld.gold          linux32          look            luatex
latex2html    leaftoppm        linux64          lprsetup.sh    luit
lchfn         lefty            linux-boot-prober ls              lwp-download
lchsh         less             lispmtopgm       lsattr          lwp-dump
ld            lessecho         list_titles      lsblk           lwp-mirror
ldapadd       lesskey          ln               lscpu           lwp-request
ldapcompare   lesspipe.sh      lneato           lsdiff          lynx
ldapdelete    lex              loadkeys         lsinitrd        lz4
ldapexop      lexgrog          loadunimap       lsipc           lz4c
ldapmodify    libbluray_test   locale           lslocks         lz4cat
ldapmodrdn    libgnutls-config localectl         lslogins
ldappasswd    libnetcfg        localedef        lsmem
ldapsearch    libpng15-config  logger           lsns
```

This command copy all the files in the /bin directory that start with the letter l to the current working directory (.).

21. Issue the following Linux command: **rm ***

View the contents of the contents directory. What did this command do?

Ans:-

```
carora18@mtrx-node01pd:~/tutorial3/practice/commands
[carora18@mtrx-node01pd commands]$ rm *
[carora18@mtrx-node01pd commands]$ ls
[carora18@mtrx-node01pd commands]$ pwd
/home/carora18/tutorial3/practice/commands
[carora18@mtrx-node01pd commands]$
```

rm command is used to remove/delete the files. rm* command deleted all the files from commands

22. Issue the following Linux command (lowercase "l" NOT the number "1"):

cp /bin/l? .

View the contents of the contents directory. What did this command do?

Ans: -

```
carora18@mtrx-node01pd:~/tutorial3/practice/commands
[carora18@mtrx-node01pd commands]$ cp /bin/l? .
[carora18@mtrx-node01pd commands]$ ls
ld ln ls
[carora18@mtrx-node01pd commands]$
```

This command copies all the files in the /bin directory whose names start with l and have one more character after that to the current working directory (.).

23. Issue the following Linux command: **rm l[!s]**

View the contents of the contents directory. What did this command do?

Ans: -

```
carora18@mtrx-node01pd:~/tutorial3/practice/commands
[carora18@mtrx-node01pd commands]$ rm l[!s]
[carora18@mtrx-node01pd commands]$ ls
ls
[carora18@mtrx-node01pd commands]$
```

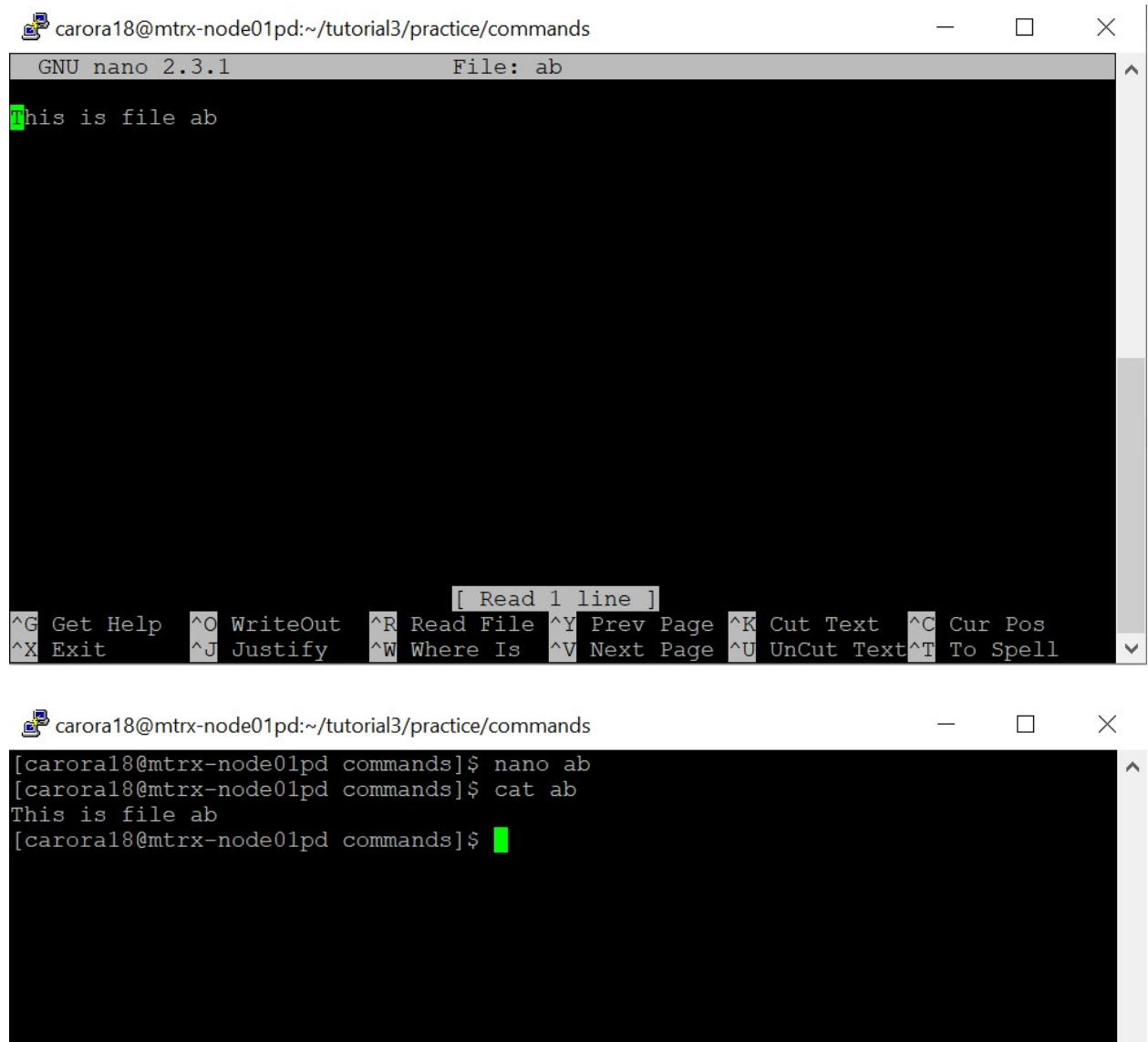
This command removes all the files in the current directory whose names start with l and do not end with s.

24. Use a text editor (nano or vi) to create the file called **ab** in the **commands** directory that contains the line of text below,

and then save editing changes to this file:

This is file ab

Ans: -

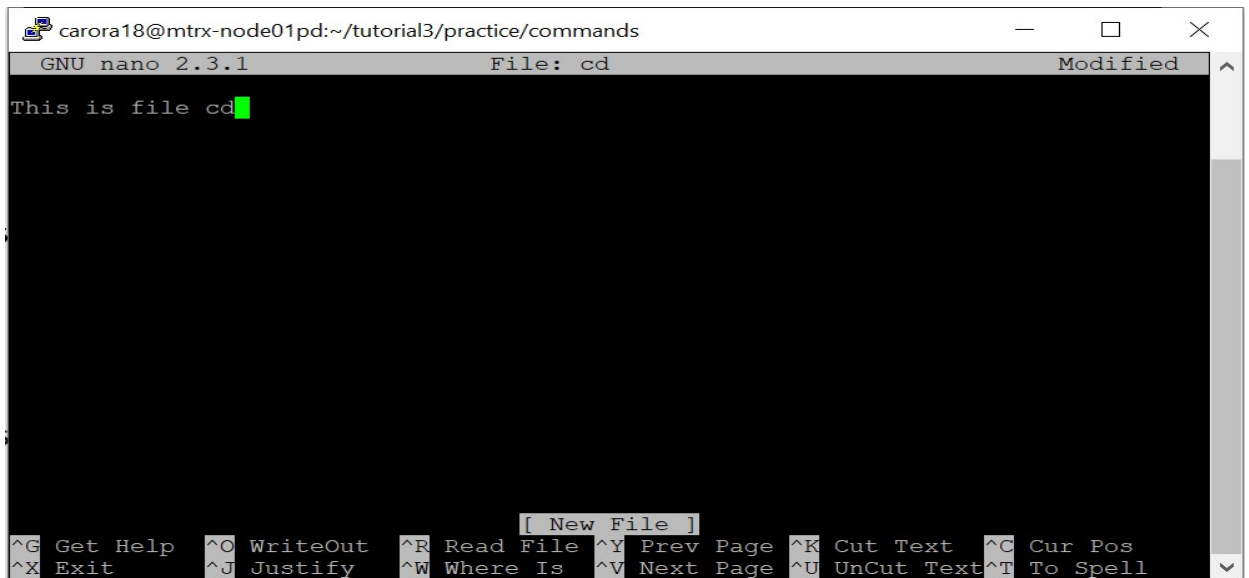


The first screenshot shows the nano text editor interface. The title bar indicates the user is 'carora18@mtx-node01pd' in the directory '~/tutorial3/practice/commands'. The editor window shows the file 'ab' with the text 'this is file ab'. The bottom status bar displays various keyboard shortcuts: ^G Get Help, ^O WriteOut, ^R Read File, ^Y Prev Page, ^K Cut Text, ^C Cur Pos, ^X Exit, ^J Justify, ^W Where Is, ^V Next Page, ^U UnCut Text, and ^T To Spell. A message '[Read 1 line]' is also visible.

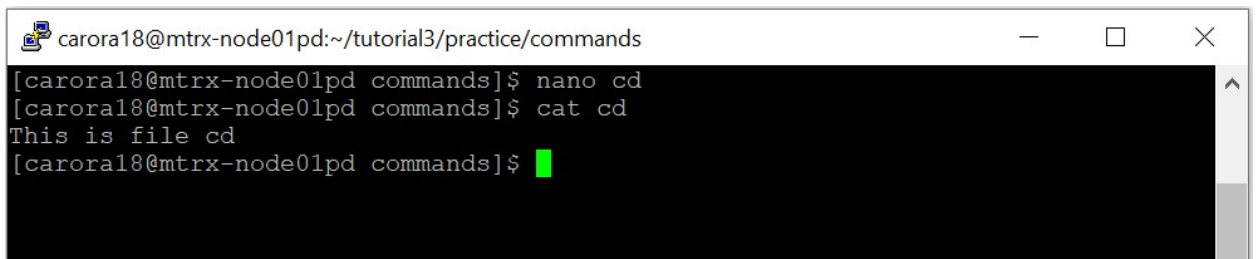
The second screenshot shows a terminal window with the same user and directory. It displays the commands used to create and view the file: `[carora18@mtx-node01pd commands]$ nano ab` and `[carora18@mtx-node01pd commands]$ cat ab`. The output of the `cat` command is 'This is file ab'.

25. Use a text editor (nano or vi) to create the file called **cd** in the **commands** directory that contains the line of text below,
and then save editing changes to this file:
This is file cd

Ans: -



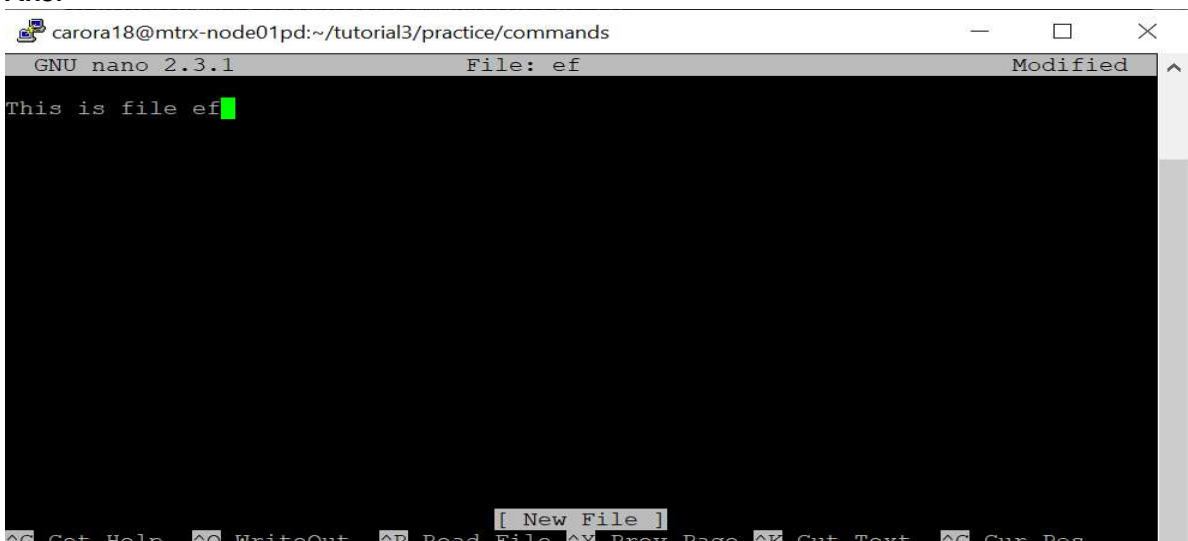
```
carora18@mtrx-node01pd:~/tutorial3/practice/commands
GNU nano 2.3.1      File: cd      Modified
This is file cd
[ New File ]
^G Get Help  ^O WriteOut  ^R Read File ^Y Prev Page ^K Cut Text  ^C Cur Pos
^X Exit      ^J Justify   ^W Where Is  ^V Next Page ^U UnCut Text ^T To Spell
```



```
carora18@mtrx-node01pd:~/tutorial3/practice/commands
[carora18@mtrx-node01pd commands]$ nano cd
[carora18@mtrx-node01pd commands]$ cat cd
This is file cd
[carora18@mtrx-node01pd commands]$
```

26. Use a text editor (nano or vi) to create the file called **ef** in the **commands** directory that contains the line of text below, and then save editing changes to this file:
This is file ef

Ans: -

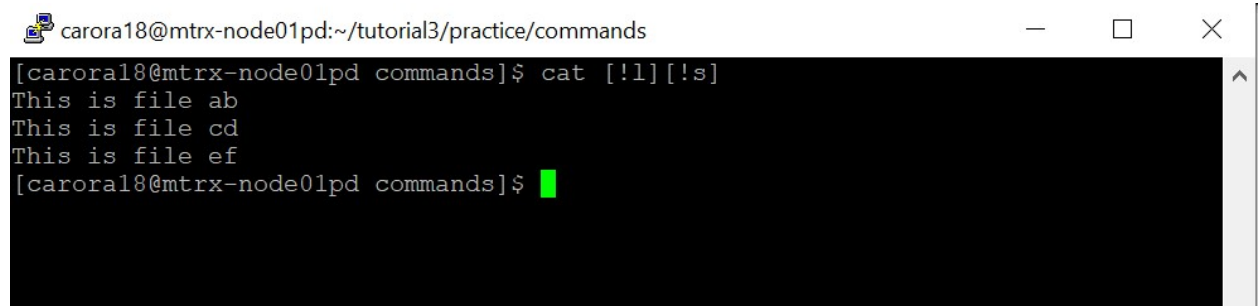


```
carora18@mtrx-node01pd:~/tutorial3/practice/commands
GNU nano 2.3.1      File: ef      Modified
This is file ef
[ New File ]
^G Get Help  ^O WriteOut  ^R Read File ^Y Prev Page ^K Cut Text  ^C Cur Pos
```


28. Issue the following Linux command: **cat [!l][!s]**

View the contents of the contents directory. What did this command do? Does the output look better? If so, why?

Ans: -

A terminal window titled 'carora18@mtrx-node01pd:~/tutorial3/practice/commands'. The prompt is '[carora18@mtrx-node01pd commands]\$'. The command entered is 'cat [!l][!s]'. The output is 'This is file ab', 'This is file cd', and 'This is file ef'. The prompt returns to '[carora18@mtrx-node01pd commands]\$' with a green cursor.

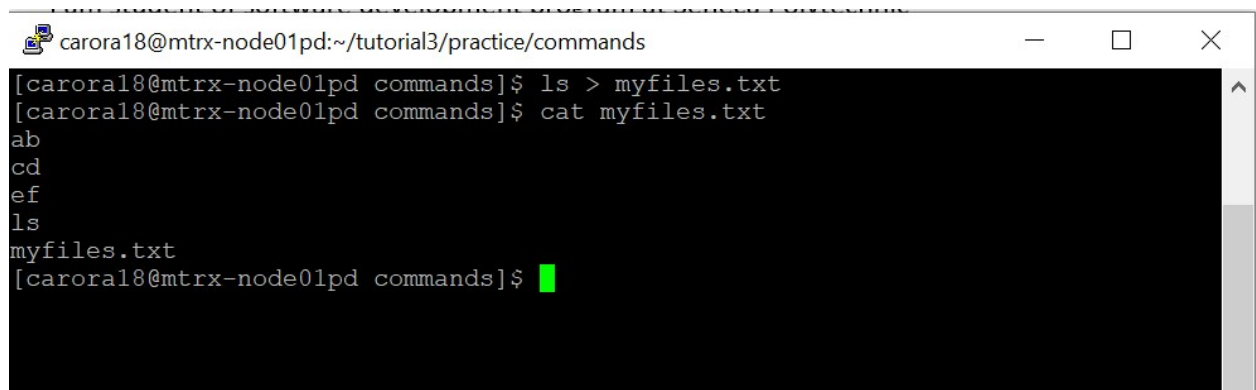
```
carora18@mtrx-node01pd:~/tutorial3/practice/commands
[carora18@mtrx-node01pd commands]$ cat [!l][!s]
This is file ab
This is file cd
This is file ef
[carora18@mtrx-node01pd commands]$
```

This command displays the contents of all the files in the current directory whose names do not start with l and do not end with s. The [!l] part is a pattern that matches any single character except l, and the [!s] part is a pattern that matches any single character except s. Yes, the output look better because the command excludes the files whose names start with l and end with s, which might have different formats or contents than the other files.

Activity 2: Piping and Redirection

1. Write command to transfer the output of ls command to a file myfiles.txt

Ans: -

A terminal window titled 'carora18@mtrx-node01pd:~/tutorial3/practice/commands'. The prompt is '[carora18@mtrx-node01pd commands]\$'. The command entered is 'ls > myfiles.txt'. The prompt returns to '[carora18@mtrx-node01pd commands]\$'. The second command entered is 'cat myfiles.txt'. The output is 'ab', 'cd', 'ef', 'ls', and 'myfiles.txt'. The prompt returns to '[carora18@mtrx-node01pd commands]\$' with a green cursor.

```
carora18@mtrx-node01pd:~/tutorial3/practice/commands
[carora18@mtrx-node01pd commands]$ ls > myfiles.txt
[carora18@mtrx-node01pd commands]$ cat myfiles.txt
ab
cd
ef
ls
myfiles.txt
[carora18@mtrx-node01pd commands]$
```

2. Write command to transfer the output of who command to a file *user.txt*

Ans: -

```
carora18@mtrx-node01pd:~/tutorial3/practice/commands
[carora18@mtrx-node01pd commands]$ who > user.txt
[carora18@mtrx-node01pd commands]$ cat user.txt
skchu3 pts/0 2024-01-28 14:48 (10.29.1.21)
cchand3 pts/1 2024-01-28 15:31 (10.29.0.111)
iattah pts/2 2024-01-28 13:15 (10.29.3.111)
fkhurum pts/3 2024-01-28 14:05 (10.29.2.98)
tarandeep-kaur6 pts/4 2024-01-28 15:39 (10.29.0.92)
sturkson pts/5 2024-01-28 14:44 (10.29.3.55)
vhsouza-da-silva pts/6 2024-01-28 15:44 (10.29.1.47)
mfshahriyar-bin-lati pts/8 2024-01-28 14:58 (10.29.0.131)
hsingh973 pts/9 2024-01-28 14:58 (10.29.1.24)
amurtaza4 pts/10 2024-01-28 15:59 (10.29.1.54)
mmuskan14 pts/11 2024-01-28 15:57 (10.29.1.69)
carora18 pts/13 2024-01-28 15:18 (10.29.0.98)
aabonifacio pts/14 2024-01-28 15:39 (10.29.2.89)
kpatel434 pts/15 2024-01-28 15:55 (10.29.1.200)
kmsoe pts/16 2024-01-28 15:55 (10.248.229.211)
tbtouhid pts/17 2024-01-28 16:04 (10.29.1.58)
mthomas60 pts/18 2024-01-28 16:00 (10.29.0.124)
gzhang57 pts/19 2024-01-28 16:06 (10.29.1.36)
[carora18@mtrx-node01pd commands]$
```

3. Using nano editor to write following text in a file *myfile.txt*
I am student of software development program at Seneca Polytechnic
I am first year student of Seneca

Ans: -

```
carora18@mtrx-node01pd:~/tutorial3/practice/commands
GNU nano 2.3.1 File: myfile.txt
I am student of software development program at Seneca Polytechnic
I am first year student of Seneca
[ Wrote 2 lines ]
^G Get Help ^O WriteOut ^R Read File ^Y Prev Page ^K Cut Text ^C Cur Pos
^X Exit ^J Justify ^W Where Is ^V Next Page ^U UnCut Text ^T To Spell
```

```
carora18@mtrx-node01pd:~/tutorial3/practice/commands
[carora18@mtrx-node01pd commands]$ nano myfile.txt
[carora18@mtrx-node01pd commands]$ cat myfile.txt
I am student of software development program at Seneca Polytechnic
I am first year studend of Seneca
[carora18@mtrx-node01pd commands]$
```

4. Write command to search word Seneca in file myfile.txt

Ans: -

```
carora18@mtrx-node01pd:~/tutorial3/practice/commands
[carora18@mtrx-node01pd commands]$ nano myfile.txt
[carora18@mtrx-node01pd commands]$ cat myfile.txt
I am student of software development program at Seneca Polytechnic
I am first year studend of Seneca
[carora18@mtrx-node01pd commands]$ grep Seneca myfile.txt
I am student of software development program at Seneca Polytechnic
I am first year studend of Seneca
[carora18@mtrx-node01pd commands]$
```