

Connect Life and Learning

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Deliverable:	In-Class Tasks Week 4 Assignment
Course Name:	NTWK8141-24S-Sec3-Linux Server

Date Assigned:	29/05/2024
Date Due:	30/05/2024
Rules:	 Individual. Cheating is not allowed. Plagiarism counts as cheating! That FAILURE to submit work in the course can result in a grade of 'F' or 'I' for failure to complete the course!

In Class Task: Manuals

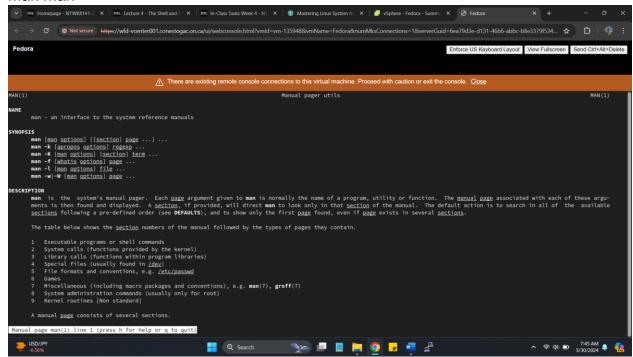
Open tty terminal 4. Type man man and figure out how to get the following output: Ubuntu:

firefox (1) - a free and open source web browser from Mozilla Fedora:

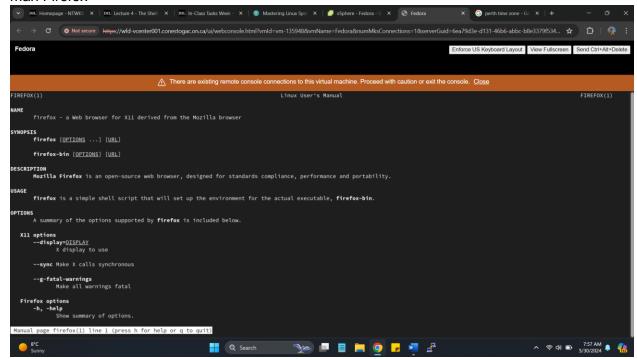
firefox (1) -a web browser for X11 derived from the Mozilla browser

Then: Complete the Real World Scenario: Finding Help Information in Chapter 6

man man



man Firefox



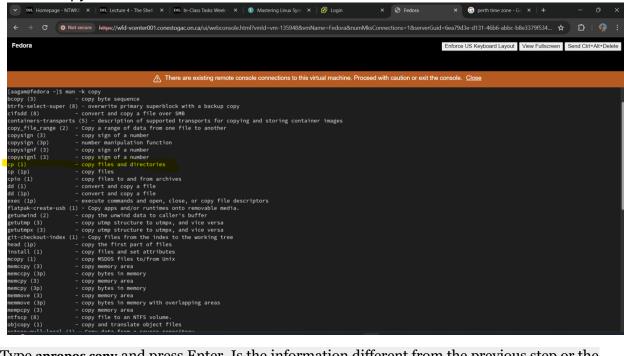
Real World Scenario

FINDING HELP INFORMATION

In command prompt, type man-k copy and press Enter.

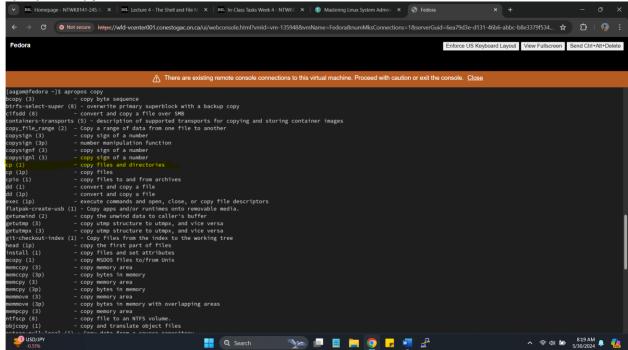
several lines of text are listed. The information displayed in the previous step results from a keyword search, where <code>copy</code> was the keyword. The <code>man -k</code> command searches through each man page's Name and Description sections, looking for the specified keyword. And if found, it displays the man page's Name information

man -k copy



Type apropos copy and press Enter. Is the information different from the previous step or the same? (You may need to use the Shift+Page Up key combination to see the text that has scrolled out of view on the screen. You can press either Enter or Shift+Page Down to get back to the prompt.) You should find the same information, because apropos is essentially an equivalent command to man -k.

apropos copy



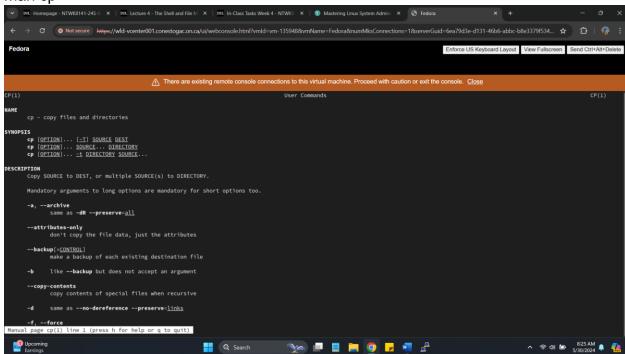
another man page search utility. This one requires you to know the name of the command. Type **whatis cp** and press Enter. You should see at least a single line of text.

whatis cp

```
[aagam@fedora ~]$ whatis cp
cp (1) - copy files and directories
cp (1p) - copy files
[aagam@fedora ~]$
```

type man cp and press Enter

man cp



Real World Scenario

USING COMMAND COMPLETION FOR SPEED

- 1. Type cat/p and stop.
- 2. Press the Tab key. The Bash shell will partially complete the command, which should now look like cat /proc/.
- 3. At the partially completed command's end, type ve and stop.
- 4. Press the Tab key. The Bash shell will complete the command, which should now look like cat /proc/version.
- 5. Press the Enter key and view the current Linux kernel's version.

Using "Tab key"

```
Cashing Table Nev

[asgam@fedora ~]s cat /p

cat: /p: No such file or directory

[asgam@fedora ~]s cat /proc/

cat: /proc. Is a directory

[asgam@fedora ~]s cat /proc/ve

cat: /proc. Ve: No such file or directory

[asgam@fedora ~]s cat /proc. No such file or directory

[asgam@fedora ~]s cat /proc. No such file or directory

[asgam@fedora ~]s cat /proc. No such file or directory

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[asgam@fedora ~]s cat /proc. No such file or directory

[asgam@fedora ~]s cat /proc. No such fil
```

In-Class Task: Env Variables

- Complete Ch 6 Real World Scenario
- "Redefining Default Environment Variables"

Change your Bash shell prompt's appearance by typing PS1="\$" and pressing Enter

PS1="\$"

```
[aagam@fedora ~]$ $
bash: $: command not found...
[aagam@fedora ~]$ PS1="$ "
$
```

typing **bash** and pressing Enter. You should see that the prompt returned to the appearance you recorded in above step. That's because you did not globalize the environment variable setting

bash

```
[aagam@fedora ~]$ $
bash: $: command not found...
[aagam@fedora ~]$ PS1="$ "
$ bash
[aagam@fedora ~]$
```

Leave the child shell, by typing exit and pressing Enter.

Exit

```
[aagam@fedora ~]$ $
bash: $: command not found...
[aagam@fedora ~]$ PS1="$ "
$ bash
[aagam@fedora ~]$ PS1="$ "
$ exit
exit
$
```

```
export PS1="Hello: ", and press Enter.
```

See whether this new Bash shell prompt setting will survive going into a subshell by typing **bash** and pressing Enter. You should see that the prompt still looks like it did when you set it in above step. This is due to you using the <code>export</code> command, which made the prompt variable setting global.

export PS1="Hello: "

bash

```
[aagam@fedora ~]$ export PS1="Hello: "
Hello: bash
Hello:
```

Leave the child shell by typing exit and pressing Enter. It won't look like anything happened, because you get no messages and the prompt does not change

```
[aagam@fedora ~]$ export PS1="Hello: "
Hello: bash
Hello:
Hello: exit
exit
Hello: exit
```

Remove your prompt setting by typing **unset PS1** and pressing Enter. Wow! Now you have no prompt. That's because you removed the value of PS1

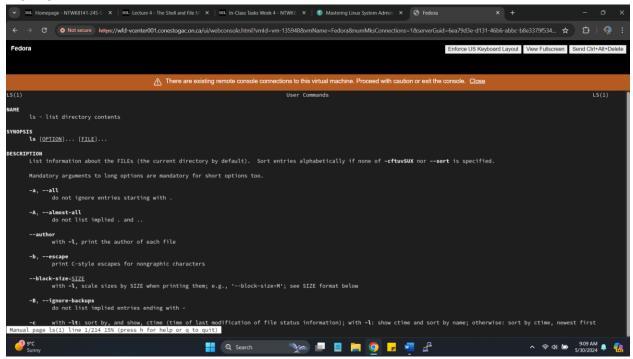
unset PS1

```
[aagam@fedora ~]$ unset PS1
```

In-Class Task: man pages

- Ch 7– type man Is and find the options that do the following:
- set the color to never
- · won't display backups
- list unsorted

man Is



set the color to never

```
-1 list one file per line

---belp display this help and exit

---version

output version information and exit

The SIZE argument is an integer and optional unit (example: 10K is 10+1024). Units are K,M,G,T,P,E,Z,Y (powers of 1024) or KB,MB,... (powers of 1000). Binary prefixes can be used, toos KiBaK, Misels, and so on.

The TIME_STYLE argument can be full-iso, long-iso, iso, locale, or +FORMAT. FORMAT is interpreted like in date(1). If FORMAT is FORMATI; help FORMAT applies to non-recent files and FORMAT2 to recent files. TIME_STYLE prefixed with 'posix-' takes effect only outside the POSIX locale. Also the TIME_STYLE environment variable sets the default style to use.

The WHEN argument defaults to 'always' and can also be 'auto' or 'never'.

Using color to distinguish file types is disabled both by default and with *-color=party.* Nith --color=party, ls emits color codes only when standard output is connected to a terminal. The Ls_COLORS environment variable can change the settings. Use the directors(1) command to set it.

Exit status:

0 if OK,

1 if minor problems (e.g., cannot access subdirectory),

2 if serious trouble (e.g., cannot access command-line argument).

AUTHOR

Written by Richard M. Stallman and David MacKenzie.

REPORTING BUSS

GNU corecutis online help: chttps://mww.gnu.org/software/coreutis/>
Report any translation bugs to chttps://raws.lationproject.org/team/>
REPORTING BUSS

GNU corecutis online help: chttps://raws.gnu.org/software/coreutis/>
Report any translation bugs to chttps://raws.gnu.org/software/coreutis/>
REPORTING BUSS

GNU corecutis online help: chttps://raws.gnu.org/software/coreutis/>
REPORTING BUSS

GNU corecutis on him help: chttps://raws.
```

man ls | grep color

```
[aagam@fedora -]$ man ls | grep color
--color|smitch]
color the output WHEN; more info below
Using color to distinguish file types is disabled both by default and with --color auto, ls emits color codes only when standard output is connected to a terminal. The LS_COLORS environment variable can change the settings. Use the directors(1) command to set it.
directors(1)
```

won't display backups

```
DESCRIPTION

List information about the FILEs (the current directory by default). Sort entries alphabetically if none of -cftwSUX nor --sort is specified.

Mandatory arguments to long options are mandatory for short options too.

-a, --all
do not ignore entries starting with .

-A, --almost-all
do not list implied . and ..

--author
with -l, print the author of each file

-b, --escape
print C-style escapes for nongraphic characters

--block-size-SIZE
with -l, scale sizes by SIZE when printing them; e.g., '--block-size=M'; see SIZE format below

-8, --ignore-backupp
do not list implied entries ending with -

-c with -lt: sort by, and show, ctime (time of last modification of file status information); with -l: show ctime and sort by name; otherwise: sort by ctime, newest first

-C list entries by columns

--color(=MEIN)
color the output WHEN; more info below

-d, --directory
List directories themselves, not their contents

Manual page 15(1) line 3 (preas h for help or q to quit)
```

man Is | grep backup

```
[aagam@fedora ~]$ man ls | grep backup

-B, --ignore-backups

[aagam@fedora ~]$
```

list unsorted

```
change the default of using modification times; access time (-u): atime, access, use; change time (-c): ctime, status; birth time: birth, creation; with -1, WORD determines which time to show; with --sort-time, sort by WORD (newest first)

--time-style-IDME STYLE

time/date format with -1; see TIME_STYLE below

--t sort by time, newest first; see --time

--T, --tabsize=COLS

assume tab stops at each COLS instead of 8

-u with -1t: sort by, and show, access time; with -1: show access time and sort by name; otherwise: sort by access time, newest first

--U do not sort; list entries in directory order

--v natural sort of (version) numbers within text

--w, --width=COLS

set output width to COLS. 0 means no limit

--x list entries by lines instead of by columns

--x sort alphabetically by entry extension

--z, --context

print any security context of each file

--zero end each output line with NUL, not newline

--1 list one file per line

Manual page ls(1) line 141 (press h for help or q to quit)
```

man ls | grep sort

```
[agam@fedora -] s man is | grep sort
List information about the FILEs (the current directory by default). Sort entries alphabetically if none of -cftuvSUX nor --sort is specified.

-c with -lt: sort by, and show, ctime (time of last modification of file status information); with -l: show ctime and sort by name; otherwise: sort by ctime, newest first group directories before files; can be augmented with a --sort option, but any use of --sort=none (-U) disables grouping reverse order while sorting

-5 sort by file size, largest first
--sort=WOBD
sort by WORD instead of name: none (-U), size (-S), time (-t), version (-v), extension (-X), width with -l, WORD determines which time to show; with --sort=time, sort by WORD (newest first)

-t sort by time, newest first; see --time
-u with -lt: sort by, and show, access time; with -l: show access time and sort by name; otherwise: sort by access time, newest first
-u with -lt: sort by, and show, access time; with -l: show access time and sort by name; otherwise: sort by access time, newest first
-u natural sort of (version) numbers within text
-x sort alphabetically by entry extension
-assamefedora -15
```

In-Class Task: Files

• Complete Ch 7 Working with Files

Real World Scenario

From your Home directory CLI prompt, create a directory by entering the command **mkdir test**. Change to that directory by entering the command **cd test**, and then enter the command **ls -1** to look at the directory contents.

mkdir test

cd test

ls -l

```
[aagam@fedora ~]$ mkdir test
[aagam@fedora ~]$ cd test
[aagam@fedora test]$ ls -l
total 0
[aagam@fedora test]$
```

From the CLI prompt, enter the command touch test1. This creates a test file to work with.

touch test1

ls -l

```
[aagam@fedora test]$ touch test1
[aagam@fedora test]$ ls -l
total 0
-rw-r--r--. 1 aagam aagam 0 May 30 09:19 test1
[aagam@fedora test]$
```

From the CLI prompt, create another file that's a hard link to the first file by entering the command In test1 test2. List the inodes of the files using the command by typing Is -iI to ensure they are hard linked.

In test1 test2

ls -il

```
[aagam@fedora test]$ ln test1 test2
[aagam@fedora test]$ ls -il
total 0
3784 -rw-r--r--. 2 aagam aagam 0 May 30 09:19 test1
3784 -rw-r--r--. 2 aagam aagam 0 May 30 09:19 test1
3784 -rw-r--r--. 2 aagam aagam 0 May 30 09:19 test2
[aagam@fedora test]$
```

Save some data in the test1 file by entering the command echo "Testing" >> test1. Enter the command is -1 to see the file size of both the test1 and test2 files. They should have both changed.

echo "Testing" >> test1

ls -l

```
3/84 -rw-r--r--. 2 aagam aagam 0 May 30 09:19 test2
[aagam@fedora test]$ echo "Testing" >> test1
[aagam@fedora test]$ ls -l
total 8
-rw-r--r--. 2 aagam aagam 8 May 30 09:24 test1
-rw-r--r--. 2 aagam aagam 8 May 30 09:24 test2
[aagam@fedora test]$
```

Remove the test1 file by entering the command rm test1. Enter the command is to list the remaining file

rm test1

```
[aagam@fedora test]$ rm test1
[aagam@fedora test]$ ls -l
total 4
-rw-r--r--. 1 aagam aagam 8 May 30 09:24 test2
[aagam@fedora test]$
```

In-Class Task: Archives

Complete Ch 7 Working with File Archives

Real World Scenario

From the CLI prompt, create a new directory by entering the command mkdir mytest1, and then create another new directory by entering the command mkdir mytest2.

Create a few new files in the mytest1 directory by entering these commands:

touch mytest1/test1

```
touch mytest1/test2
touch mytest1/test3
touch mytest1/test4
```

Change to the mytest1 directory by entering the command cd mytest1, and then enter the command ls-l to ensure the files exist:

mkdir mytest1

mkdir mytest2

touch mytest1/test1

touch mytest1/test2

touch mytest1/test3

touch mytest1/test4

cd mytest1

ls -l

Archive the files by entering the command tar-cvf test.tar test*. You should see the following output:

tar -cvf test tar test*

```
[aagam@fedora mytest1]$ tar -cvf test.tar test*
test1
test2
test3
test4
tar: test.tar: file is the archive; not dumped
[aagam@fedora mytest1]$
```

Copy the test.tar archive file to the mytest2 directory using the command cp test.tar ../mytest2

```
cd test.tar ../mytest2
```

Change to the mytest2 directory by entering the command cd ../mytest2, and then list the directory contents by entering the command Is -I.

cd ../mytest2

ls -l

```
[aagam@fedora mytest1]$ cd ../mytest2
[aagam@fedora mytest2]$ ls -l
total 12
-rw-r--r-. 1 aagam aagam 10240 May 30 09:47 test.tar
[aagam@fedora mytest2]$
```

Extract the archive file using the command tar -xvf test.tar. Enter the command Is -I to ensure the files have been extracted.

tar -xvf test.tar

ls -l