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Roll No:422163

Section:CSE-A

1)Write Shell scripts for commands:more,nl,nice,passwd,pr,rlogin,rcp,rsh,talk,telnet,tput,tty,uname,wc,who,write

●more command

```
ammulu@LAPTOP-I4949DCG:~$ cd unix
ammulu@LAPTOP-I4949DCG:~/unix$ cat more.sh
more -d a.txt
more -f a.txt
more -c a.txt
more -s a.txt
more -u a.txt
more +/print a.txt
more +3 a.txt
cat a.txt | moreammulu@LAPTOP-I4949DCG:~/unix$ █
```

Output:

ajay manager account 45000

sunil clerk account 25000

varun manager sales 50000

amit manager account 47000

tarun peon sales 15000

deepak clerk sales 23000

sunil peon sales 13000

satvik director purchase 80000awk '{print
\$1,\$4}' a.txt

```
awk '{print NR,$0}' a.txt
```

```
awk '{print $1,$NF}' a.txt
```

```
awk 'NR==3, NR==6 {print NR,$0}' a.txt
```

```
awk '{print NR "- " $1}' a.txt
```

ajay manager account 45000

sunil clerk account 25000

varun manager sales 50000

amit manager account 47000

tarun peon sales 15000

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ajay manager account 45000

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awk '{print NR,\$0}' a.txt
awk '{print \$1,\$NF}' a.txt
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awk '{print NR "- " \$1}' a.txt
ajay manager account 45000
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satvik director purchase 80000awk '{print
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awk '{print NR,\$0}' a.txt
awk '{print \$1,\$NF}' a.txt
awk 'NR==3, NR==6 {print NR,\$0}' a.txt

```
awk '{print NR "- " $1}' a.txt
ajay manager account 45000
sunil clerk account 25000
varun manager sales 50000
amit manager account 47000
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deepak clerk sales 23000
sunil peon sales 13000
satvik director purchase 80000awk '{print
$1,$4}' a.txt
awk '{print NR,$0}' a.txt
awk '{print $1,$NF}' a.txt
awk 'NR==3, NR==6 {print NR,$0}' a.txt
awk '{print NR "- " $1}' a.txt
```

...skipping

```
deepak clerk sales 23000
sunil peon sales 13000
satvik director purchase 80000awk '{print
$1,$4}' a.txt
awk '{print NR,$0}' a.txt
```

```
awk '{print $1,$NF}' a.txt
```

```
awk 'NR==3, NR==6 {print NR,$0}' a.txt
```

```
awk '{print NR "- " $1}' a.txt
```

varun manager sales 50000

amit manager account 47000

tarun peon sales 15000

deepak clerk sales 23000

sunil peon sales 13000

```
satvik director purchase 80000awk '{print  
$1,$4}' a.txt
```

```
awk '{print NR,$0}' a.txt
```

```
awk '{print $1,$NF}' a.txt
```

```
awk 'NR==3, NR==6 {print NR,$0}' a.txt
```

```
awk '{print NR "- " $1}' a.txt
```

ajay manager account 45000

sunil clerk account 25000

varun manager sales 50000

amit manager account 47000

tarun peon sales 15000

deepak clerk sales 23000

sunil peon sales 13000

satvik director purchase 80000awk '{print \$1,\$4}' a.txt

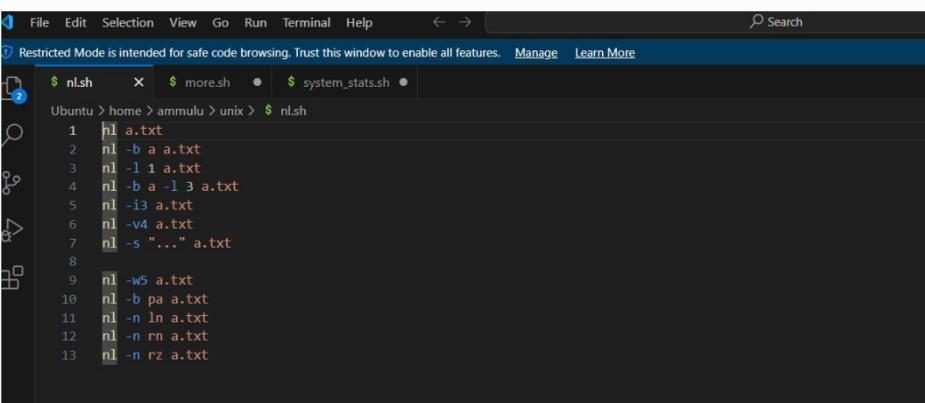
awk '{print NR,\$0}' a.txt

awk '{print \$1,\$NF}' a.txt

awk 'NR==3,NR==6 {print NR,\$0}' a.txt

awk '{print NR "- " \$1}' a.txt

● nl command



The screenshot shows a terminal window with a dark theme. The title bar says 'nl.sh' and the path is 'Ubuntu > home > ammulu > unix > \$ nl.sh'. The terminal window contains the following text:

```
1 nl a.txt
2 nl -b a.txt
3 nl -l 1 a.txt
4 nl -b a -l 3 a.txt
5 nl -l3 a.txt
6 nl -v4 a.txt
7 nl -s "..." a.txt
8
9 nl -w5 a.txt
10 nl -b pa a.txt
11 nl -n ln a.txt
12 nl -n rn a.txt
13 nl -n rz a.txt
```

Output:

- 1 ajay manager account 45000
- 2 sunil clerk account 25000
- 3 varun manager sales 50000
- 4 amit manager account 47000
- 5 tarun peon sales 15000
- 6 deepak clerk sales 23000
- 7 sunil peon sales 13000
- 8 satvik director purchase 80000awk

```
'{print $1,$4}' a.txt
```

```
9 awk '{print NR,$0}' a.txt
```

```
10 awk '{print $1,$NF}' a.txt
```

```
11 awk 'NR==3, NR==6 {print NR,$0}'
```

```
a.txt
```

```
12 awk '{print NR "- " $1}' a.txt
```

```
1 ajay manager account 45000
```

```
2 sunil clerk account 25000
```

```
3 varun manager sales 50000
```

```
4 amit manager account 47000
```

```
5 tarun peon sales 15000
```

```
6 deepak clerk sales 23000
```

```
7 sunil peon sales 13000
```

```
8 satvik director purchase 80000awk
```

```
'{print $1,$4}' a.txt
```

```
9 awk '{print NR,$0}' a.txt
```

```
10 awk '{print $1,$NF}' a.txt
```

```
11 awk 'NR==3, NR==6 {print NR,$0}'
```

```
a.txt
```

```
12 awk '{print NR "- " $1}' a.txt
```

```
1 ajay manager account 45000
```

2 sunil clerk account 25000
3 varun manager sales 50000
4 amit manager account 47000
5 tarun peon sales 15000
6 deepak clerk sales 23000
7 sunil peon sales 13000
8 satvik director purchase 80000awk

'{print \$1,\$4}' a.txt

9 awk '{print NR,\$0}' a.txt
10 awk '{print \$1,\$NF}' a.txt
11 awk 'NR==3, NR==6 {print NR,\$0}'

a.txt

12 awk '{print NR "- " \$1}' a.txt
1 ajay manager account 45000
2 sunil clerk account 25000
3 varun manager sales 50000
4 amit manager account 47000
5 tarun peon sales 15000
6 deepak clerk sales 23000
7 sunil peon sales 13000
8 satvik director purchase 80000awk

```
'{print $1,$4}' a.txt
```

```
9 awk '{print NR,$0}' a.txt
```

```
10 awk '{print $1,$NF}' a.txt
```

```
11 awk 'NR==3, NR==6 {print NR,$0}'
```

```
a.txt
```

```
12 awk '{print NR "- " $1}' a.txt
```

```
1 ajay manager account 45000
```

```
4 sunil clerk account 25000
```

```
7 varun manager sales 50000
```

```
10 amit manager account 47000
```

```
13 tarun peon sales 15000
```

```
16 deepak clerk sales 23000
```

```
19 sunil peon sales 13000
```

```
22 satvik director purchase 80000awk
```

```
'{print $1,$4}' a.txt
```

```
25 awk '{print NR,$0}' a.txt
```

```
28 awk '{print $1,$NF}' a.txt
```

```
31 awk 'NR==3, NR==6 {print NR,$0}'
```

```
a.txt
```

```
34 awk '{print NR "- " $1}' a.txt
```

```
4 ajay manager account 45000
```

5 sunil clerk account 25000
6 varun manager sales 50000
7 amit manager account 47000
8 tarun peon sales 15000
9 deepak clerk sales 23000
10 sunil peon sales 13000
11 satvik director purchase 80000awk
'{print \$1,\$4}' a.txt
12 awk '{print NR,\$0}' a.txt
13 awk '{print \$1,\$NF}' a.txt
14 awk 'NR==3, NR==6 {print NR,\$0}'
a.txt
15 awk '{print NR "- " \$1}' a.txt
1...ajay manager account 45000
2...sunil clerk account 25000
3...varun manager sales 50000
4...amit manager account 47000
5...tarun peon sales 15000
6...deepak clerk sales 23000
7...sunil peon sales 13000
8...satvik director purchase 80000awk

'{print \$1,\$4}' a.txt

9...awk '{print NR,\$0}' a.txt

10...awk '{print \$1,\$NF}' a.txt

11...awk 'NR==3, NR==6 {print NR,\$0}'

a.txt

12...awk '{print NR "- " \$1}' a.txt

1 ajay manager account 45000

2 sunil clerk account 25000

3 varun manager sales 50000

4 amit manager account 47000

5 tarun peon sales 15000

6 deepak clerk sales 23000

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8 satvik director purchase 80000awk

'{print \$1,\$4}' a.txt

9 awk '{print NR,\$0}' a.txt

10 awk '{print \$1,\$NF}' a.txt

11 awk 'NR==3, NR==6 {print NR,\$0}'

a.txt

12 awk '{print NR "- " \$1}' a.txt

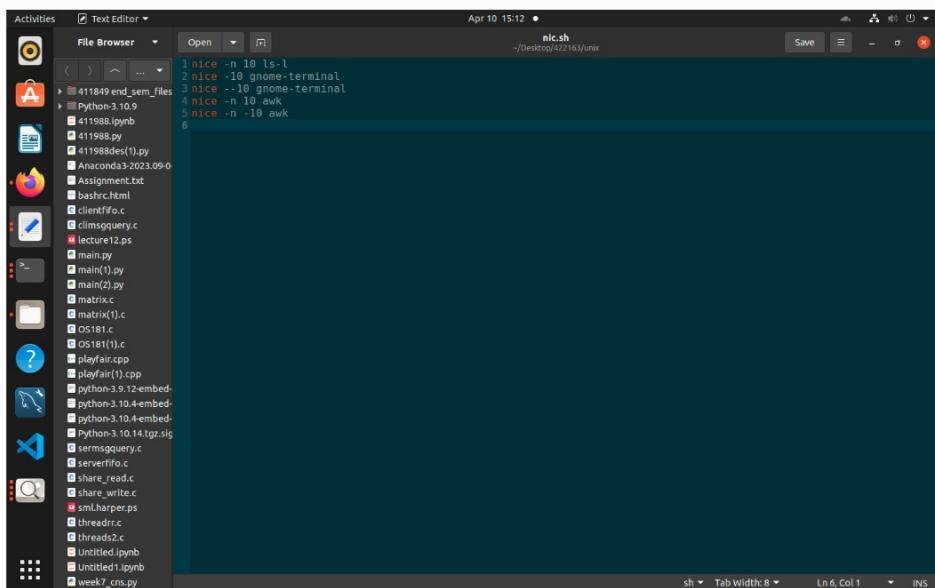
1 ajay manager account 45000

2 sunil clerk account 25000
3 varun manager sales 50000
4 amit manager account 47000
5 tarun peon sales 15000
6 deepak clerk sales 23000
7 sunil peon sales 13000
8 satvik director purchase 80000awk
'{print \$1,\$4}' a.txt
9 awk '{print NR,\$0}' a.txt
10 awk '{print \$1,\$NF}' a.txt
11 awk 'NR==3, NR==6 {print NR,\$0}'
a.txt
12 awk '{print NR "- " \$1}' a.txt
1 ajay manager account 45000
2 sunil clerk account 25000
3 varun manager sales 50000
4 amit manager account 47000
5 tarun peon sales 15000
6 deepak clerk sales 23000
7 sunil peon sales 13000
8 satvik director purchase 80000awk

```
'{print $1,$4}' a.txt
9      awk '{print NR,$0}' a.txt
10     awk '{print $1,$NF}' a.txt
11     awk 'NR==3, NR==6 {print NR,$0}'
a.txt
12     awk '{print NR "- " $1}' a.txt
1  ajay manager account 45000
2  sunil clerk account 25000
3  varun manager sales 50000
4  amit manager account 47000
5  tarun peon sales 15000
6  deepak clerk sales 23000
7  sunil peon sales 13000
8  satvik director purchase 80000awk
'{print $1,$4}' a.txt
9  awk '{print NR,$0}' a.txt
10     awk '{print $1,$NF}' a.txt
11     awk 'NR==3, NR==6 {print NR,$0}'
a.txt
12     awk '{print NR "- " $1}' a.txt
000001  ajay manager account 45000
```

000002 sunil clerk account 25000
000003 varun manager sales 50000
000004 amit manager account 47000
000005 tarun peon sales 15000
000006 deepak clerk sales 23000
000007 sunil peon sales 13000
000008 satvik director purchase
80000awk '{print \$1,\$4}' a.txt
000009 awk '{print NR,\$0}' a.txt
000010 awk '{print \$1,\$NF}' a.txt
000011 awk 'NR==3, NR==6 {print NR,\$0}'
a.txt
000012 awk '{print NR "- " \$1}' a.txt

● nice command

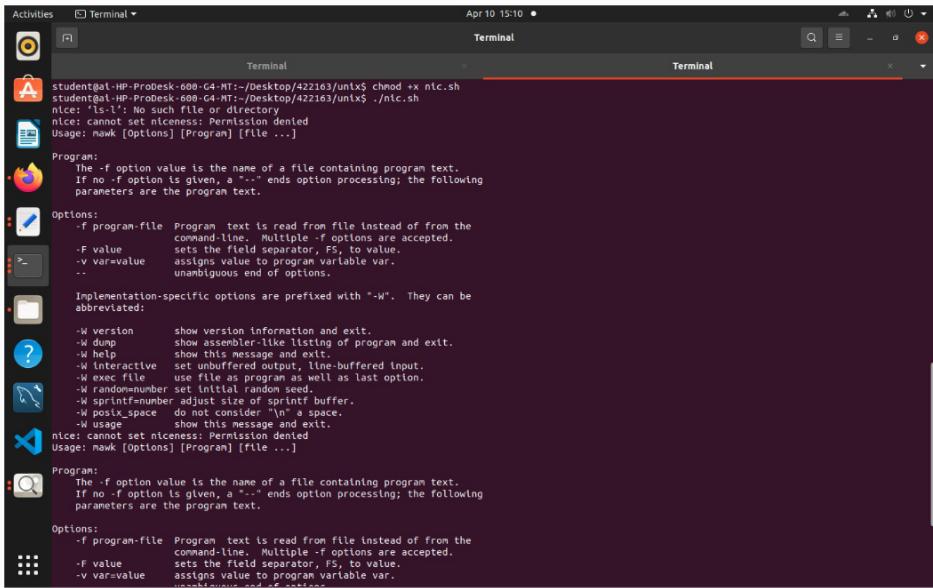


The screenshot shows a Linux desktop environment with a terminal window open. The terminal window title is 'nic.sh' and the path is '/Desktop/422163/unix'. The terminal content displays the following command history:

```
1 nice -n 10 ls -l
2 nice -10 gnome-terminal
3 nice --10 gnome-terminal
4 nice -n 10 awk
5 nice -n -10 awk
6
```

The desktop environment includes a file browser on the left showing various files and a terminal window on the right.

Output:



```

student@el-HP-ProDesk-600-G4-MT:~/Desktop/422163/unix$ chmod +x nice.sh
student@el-HP-ProDesk-600-G4-MT:~/Desktop/422163/unix$ ./nice.sh
nice: 'ls-l': No such file or directory
Usage: nawk [Options] [Program] [file ...]

Program:
  The -f option value is the name of a file containing program text.
  If no -f option is given, a "--" ends option processing; the following
  parameters are the program text.

Options:
  -f program-file  Program text is read from file instead of from the
                    command-line.  Multiple -f options are accepted.
  -F value         sets the field separator, FS, to value.
  -v var=value     assigns value to program variable var.
  --
  unambiguous end of options.

Implementation-specific options are prefixed with "-W".  They can be
abbreviated.

  -W version       show version information and exit.
  -W dump          show assembler-like listing of program and exit.
  -W help          show this message and exit.
  -W interactive   set the terminal to line-buffered input.
  -W exec file     use file as program as well as last option.
  -W randomnumber  set initial random seed.
  -W sprint=number adjust size of sprint buffer.
  -W posix_space   do not consider "\n" a space.
  -W usage         show this message and exit.

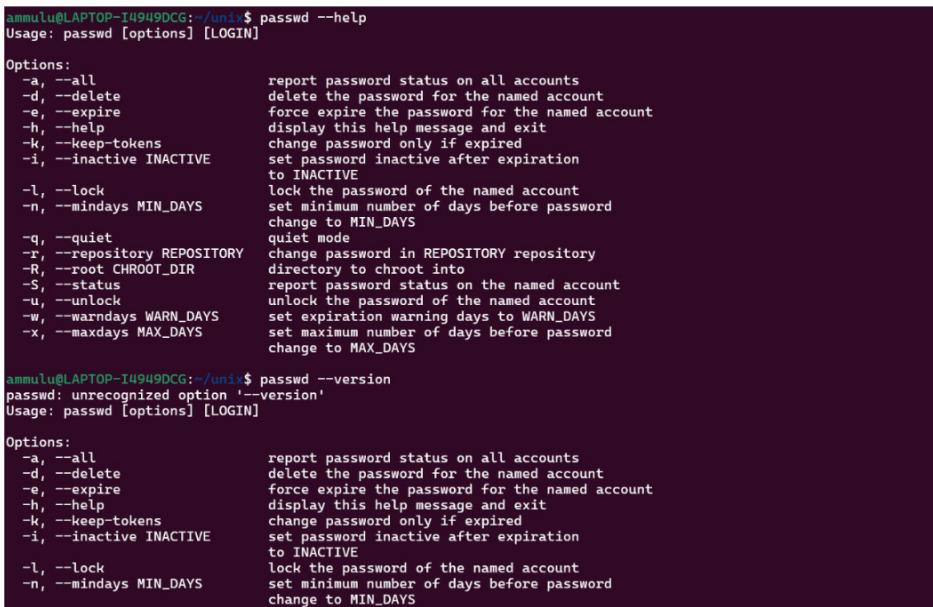
nice: cannot set nice ness: Permission denied
Usage: nawk [Options] [Program] [file ...]

Program:
  The -f option value is the name of a file containing program text.
  If no -f option is given, a "--" ends option processing; the following
  parameters are the program text.

Options:
  -f program-file  Program text is read from file instead of from the
                    command-line.  Multiple -f options are accepted.
  -F value         sets the field separator, FS, to value.
  -v var=value     assigns value to program variable var.
  --
  unambiguous end of options.

```

passwd command



```

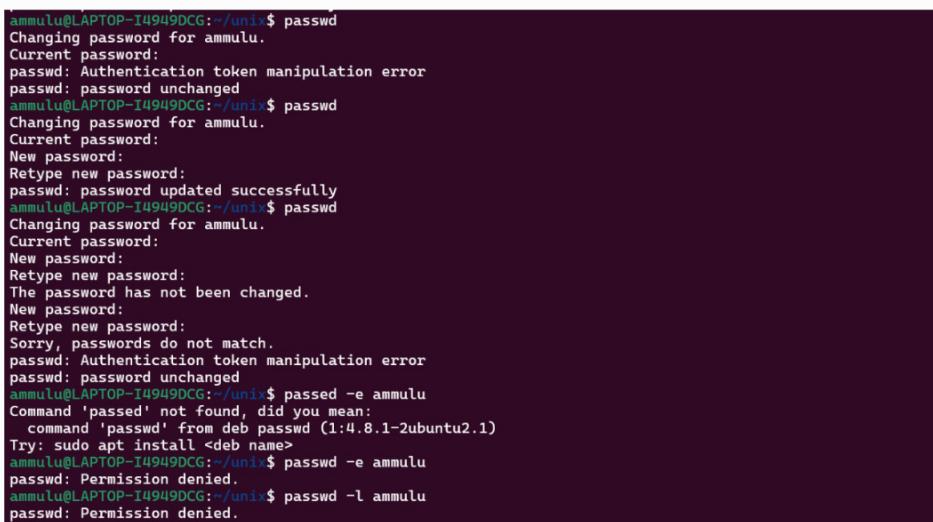
ammulu@LAPTOP-I4949DCG:~/unix$ passwd --help
Usage: passwd [options] [LOGIN]

Options:
  -a, --all           report password status on all accounts
  -d, --delete        delete the password for the named account
  -e, --expire        force expire the password for the named account
  -h, --help          display this help message and exit
  -k, --keep-tokens   change password only if expired
  -i, --inactive INACTIVE
                      set password inactive after expiration
                      to INACTIVE
  -l, --lock          lock the password of the named account
  -n, --mindays MIN_DAYS
                      set minimum number of days before password
                      change to MIN_DAYS
  -q, --quiet         quiet mode
  -r, --repository REPOSITORY
                      change password in REPOSITORY repository
  -R, --root CHROOT_DIR
                      directory to chroot into
  -S, --status        report password status on the named account
  -u, --unlock        unlock the password of the named account
  -w, --warndays WARN_DAYS
                      set expiration warning days to WARN_DAYS
  -x, --maxdays MAX_DAYS
                      set maximum number of days before password
                      change to MAX_DAYS

ammulu@LAPTOP-I4949DCG:~/unix$ passwd --version
passwd: unrecognized option '--version'
Usage: passwd [options] [LOGIN]

Options:
  -a, --all           report password status on all accounts
  -d, --delete        delete the password for the named account
  -e, --expire        force expire the password for the named account
  -h, --help          display this help message and exit
  -k, --keep-tokens   change password only if expired
  -i, --inactive INACTIVE
                      set password inactive after expiration
                      to INACTIVE
  -l, --lock          lock the password of the named account
  -n, --mindays MIN_DAYS
                      set minimum number of days before password
                      change to MIN_DAYS

```



```

ammulu@LAPTOP-I4949DCG:~/unix$ passwd
Changing password for ammulu.
Current password:
passwd: Authentication token manipulation error
passwd: password unchanged
ammulu@LAPTOP-I4949DCG:~/unix$ passwd
Changing password for ammulu.
Current password:
New password:
Retype new password:
passwd: password updated successfully
ammulu@LAPTOP-I4949DCG:~/unix$ passwd
Changing password for ammulu.
Current password:
New password:
Retype new password:
The password has not been changed.
New password:
Retype new password:
Sorry, passwords do not match.
passwd: Authentication token manipulation error
passwd: password unchanged
ammulu@LAPTOP-I4949DCG:~/unix$ passed -e ammulu
Command 'passed' not found, did you mean:
  command 'passwd' from deb passwd (1:4.8.1-2ubuntu2.1)
Try: sudo apt install <deb name>
ammulu@LAPTOP-I4949DCG:~/unix$ passwd -e ammulu
passwd: Permission denied.
ammulu@LAPTOP-I4949DCG:~/unix$ passwd -l ammulu
passwd: Permission denied.

```

opr command

```
Activities Terminal ▾ Feb 14 16:37
student@ai-HP-ProDesk-600-G4-MT: ~/422163
Try 'sort --help' for more information.
student@ai-HP-ProDesk-600-G4-MT: ~/422163$ sort --version
sort (GNU coreutils) 8.30
Copyright (C) 2018 Free Software Foundation, Inc.
License GPLv3+: GNU GPL version 3 or later <https://gnu.org/licenses/gpl.html>.
This is free software: you are free to change and redistribute it.
There is NO WARRANTY, to the extent permitted by law.

Written by Mike Haertel and Paul Eggert.
student@ai-HP-ProDesk-600-G4-MT: ~/422163$ pr -help
Usage: pr [OPTION]... [FILE]...
Paginate or columnate FILE(s) for printing.

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

Mandatory arguments to long options are mandatory for short options too.
+FIRST_PAGE[:LAST_PAGE], --pages=FIRST_PAGE[:LAST_PAGE]
    begin [stop] printing with page FIRST_[LAST_]PAGE
-COLUMN, --columns=COLUMN
    output COLUMN columns and print columns down,
    unless -a is used. Balance number of lines in the
    columns on each page
-a, --across
    print columns across rather than down, used together
    with -COLUMN
-c, --show-control-chars
    use hat notation (^G) and octal backslash notation
-d, --double-space
    double space the output
-D, --date-format=FORMAT
    use FORMAT for the header date
-e[CHAR[WIDTH]], --expand-tabs[=CHAR[WIDTH]]
    expand input CHARs (TABs) to tab WIDTH (8)
-F, -f, --form-feed
    use form feeds instead of newlines to separate pages
    (by a 3-line page header with -F or a 5-line header
    and trailer without -F)
-h, --header=HEADER
```

```
Activities Terminal ▾ Feb 14 16:38
student@ai-HP-ProDesk-600-G4-MT: ~/422163
With no FILE, or when FILE is -, read standard input.

Mandatory arguments to long options are mandatory for short options too.
+FIRST_PAGE[:LAST_PAGE], --pages=FIRST_PAGE[:LAST_PAGE]
    begin [stop] printing with page FIRST_[LAST_]PAGE
-COLUMN, --columns=COLUMN
    output COLUMN columns and print columns down,
    unless -a is used. Balance number of lines in the
    columns on each page
-a, --across
    print columns across rather than down, used together
    with -COLUMN
-c, --show-control-chars
    use hat notation (^G) and octal backslash notation
-d, --double-space
    double space the output
-D, --date-format=FORMAT
    use FORMAT for the header date
-e[CHAR[WIDTH]], --expand-tabs[=CHAR[WIDTH]]
    expand input CHARs (TABs) to tab WIDTH (8)
-F, -f, --form-feed
    use form feeds instead of newlines to separate pages
    (by a 3-line page header with -F or a 5-line header
    and trailer without -F)
-h, --header=HEADER
    use a centered HEADER instead of filename in page header,
    -h "" prints a blank line, don't use -h"
-t[CHAR[WIDTH]], --output-tabs[=CHAR[WIDTH]]
    replace spaces with CHARs (TABs) to tab WIDTH (8)
-J, --join-lines
    merge full lines, turns off -W line truncation, no column
    alignment, --sep-string[=STRING] sets separators
-l, --length=PAGE_LENGTH
    set the page length to PAGE_LENGTH (66) lines
    (default number of lines of text 56, and with -F 63).
    implies -t if PAGE_LENGTH <= 10
-m, --merge
    print all files in parallel, one in each column,
    truncate lines, but join lines of full length with -J
-n[SEP[DIGITS]], --number-lines[=SEP[DIGITS]]
    number lines, use DIGITS (5) digits, then SEP (TAB),
    default counting starts with 1st line of input file
-N, --first-line-number=NUMBER
    start counting with NUMBER at 1st line of first
    page printed (see +FIRST_PAGE)
-o, --indent=Margin
    offset each line with Margin (zero) spaces, do not
    affect -w or -W, Margin will be added to PAGE_WIDTH
-r, --no-file-warnings
    omit warning when a file cannot be opened
-s[CHAR], --separator[=CHAR]
    separate columns by a single character, default for CHAR
    is the <TAB> character without -w and 'no char' with -w.
    -s[CHAR] turns off line truncation of all 3 column
    options (-COLUMN|-a -COLUMN|-m) except -w is set
-S[STRING], --sep-string[=STRING]
    separate columns by STRING,
    without -S: Default separator <TAB> with -J and <space>
    otherwise (same as -S " "), no effect on column options
-t, --omit-header
    omit page headers and trailers;
    implied if PAGE_LENGTH <= 10
-T, --omit-pagination
    omit page headers and trailers, eliminate any pagination
    by form feeds set in input files
-v, --show-nonprinting
    use octal backslash notation
-w, --width=PAGE_WIDTH
    set page width to PAGE_WIDTH (72) characters for
    multiple text-column output only, -s[char] turns off (72)
-W, --page-width=PAGE_WIDTH
    set page width to PAGE_WIDTH (72) characters always,
```

```
Activities Terminal ▾ Feb 14 16:38
student@ai-HP-ProDesk-600-G4-MT: ~/422163
set the page length to PAGE_LENGTH (66) lines
    (default number of lines of text 56, and with -F 63).
    implies -t if PAGE_LENGTH <= 10
-m, --merge
    print all files in parallel, one in each column,
    truncate lines, but join lines of full length with -J
-n[SEP[DIGITS]], --number-lines[=SEP[DIGITS]]
    number lines, use DIGITS (5) digits, then SEP (TAB),
    default counting starts with 1st line of input file
-N, --first-line-number=NUMBER
    start counting with NUMBER at 1st line of first
    page printed (see +FIRST_PAGE)
-o, --indent=Margin
    offset each line with Margin (zero) spaces, do not
    affect -w or -W, Margin will be added to PAGE_WIDTH
-r, --no-file-warnings
    omit warning when a file cannot be opened
-s[CHAR], --separator[=CHAR]
    separate columns by a single character, default for CHAR
    is the <TAB> character without -w and 'no char' with -w.
    -s[CHAR] turns off line truncation of all 3 column
    options (-COLUMN|-a -COLUMN|-m) except -w is set
-S[STRING], --sep-string[=STRING]
    separate columns by STRING,
    without -S: Default separator <TAB> with -J and <space>
    otherwise (same as -S " "), no effect on column options
-t, --omit-header
    omit page headers and trailers;
    implied if PAGE_LENGTH <= 10
-T, --omit-pagination
    omit page headers and trailers, eliminate any pagination
    by form feeds set in input files
-v, --show-nonprinting
    use octal backslash notation
-w, --width=PAGE_WIDTH
    set page width to PAGE_WIDTH (72) characters for
    multiple text-column output only, -s[char] turns off (72)
-W, --page-width=PAGE_WIDTH
    set page width to PAGE_WIDTH (72) characters always,
```

```
Activities Terminal ▾ Feb 14 16:38 student@ai-HP-ProDesk-600-G4-MT: ~/422163
[s] [CHAR], --separator[=CHAR]
    separate columns by a single character, default for CHAR
    is the <TAB> character without -w and 'no char' with -w.
    -s[CHAR] turns off line truncation of all 3 column
    options (-COLUMN|-a -COLUMN|-m) except -w is set
-S[STRING], --sep-string[=STRING]
    separate columns by STRING,
    without -S: Default separator <TAB> with -J and <space>
    otherwise (same as -S " "), no effect on column options
-t, --omit-header
    omit page headers and trailers;
    implied if PAGE_LENGTH <= 10
-T, --omit-pagination
    omit page headers and trailers, eliminate any pagination
    by form feeds set in input files
-v, --show-nonprinting
    use octal backslash notation
-w, --width=PAGE_WIDTH
    set page width to PAGE_WIDTH (72) characters for
    multiple text-column output only, -s[char] turns off (72)
-W, --page-width=PAGE_WIDTH
    set page width to PAGE_WIDTH (72) characters always,
    truncate lines, except -J option is set, no interference
    with -S or -S
--help
    display this help and exit
--version
    output version information and exit

GNU coreutils online help: <https://www.gnu.org/software/coreutils/>
Full documentation at: <https://www.gnu.org/software/coreutils/pr>
or available locally via: info '(coreutils) pr invocation'
student@ai-HP-ProDesk-600-G4-MT: ~/422163$ pr -3 file1.txt

2024-02-14 16:17          file1.txt          Page 1

He is Smart      You are INtelligent      He is Smart
```

```
Activities Terminal ▾ Feb 14 16:38 student@ai-HP-ProDesk-600-G4-MT: ~/422163
[s] or available locally via: info '(coreutils) pr invocation'
student@ai-HP-ProDesk-600-G4-MT: ~/422163$ pr -3 file1.txt

2024-02-14 16:17          file1.txt          Page 1

He is Smart      You are INtelligent      He is Smart
```

```
Activities Terminal ▾ Feb 14 16:38 student@ai-HP-ProDesk-600-G4-MT: ~/422163
[s] student@ai-HP-ProDesk-600-G4-MT: ~/422163$ pr -t file1.txt
He is Smart
You are INtelligent
He is Smart
student@ai-HP-ProDesk-600-G4-MT: ~/422163$ pr -d file1.txt

2024-02-14 16:17          file1.txt          Page 1

He is Smart
You are INtelligent
He is Smart
```

```
Activities Terminal Feb 14 16:38
student@ai-HP-ProDesk-600-G4-MT: ~/422163$ pr --version
pr (GNU coreutils) 8.30
Copyright (C) 2018 Free Software Foundation, Inc.
License GPLv3+: GNU GPL version 3 or later <https://gnu.org/licenses/gpl.html>.
This is free software: you are free to change and redistribute it.
There is NO WARRANTY, to the extent permitted by law.

Written by Pete TerMaat and Roland Huebner.
student@ai-HP-ProDesk-600-G4-MT: ~/422163$ pr -a file1.txt

2024-02-14 16:17          file1.txt          Page 1

He is Smart
You are INtelligent
He is Smart
```

```
Activities Terminal Feb 14 16:38
student@ai-HP-ProDesk-600-G4-MT: ~/422163$ pr -n file1.txt

2024-02-14 16:17          file1.txt          Page 1

1 He is Smart
2 You are INtelligent
3 He is Smart
```

Orlogin command

```
Activities Terminal Apr 10 15:03
Terminal
Terminal
CPU Usage:
Xcpu(s): 6.2 us, 1.5 sy, 0.0 nt, 88.2 id, 4.1 wa, 0.0 ht, 0.0 st, 0.0 st

Machine: 172.58.4.18
The authenticity of host '172.58.4.18 (172.58.4.18)' can't be established.
ECDSA key fingerprint is SHA256:xdNsxFqySLCtopqWTow3cV51zVbF7t+1UKXLY.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '172.58.4.18' (ECDSA) to the list of known hosts.

Memory Usage:
total        used        free      shared  buff/cache   available
Mem:   13781       2698      9389        13       3092      12751
Swap:      2947          0       2047

CPU Usage:
Xcpu(s): 8.6 us, 1.0 sy, 0.0 nt, 88.3 id, 2.0 wa, 0.0 ht, 0.0 st, 0.0 st

student@ai-HP-ProDesk-600-G4-MT: ~/Desktop/422163$ rlogin 127.0.0.1
Welcome to Ubuntu 20.04.5 LTS (GNU/Linux 5.15.0-53-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

1 device has a firmware upgrade available.
Run 'fwupdmgr get-upgrades' for more information.

451 updates can be applied immediately.
386 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

New release '22.04.3 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

Your Hardware Enablement Stack (HWE) is supported until April 2025.
Last login: Sat Mar 30 15:48:52 2024 from 192.168.122.1
student@ai-HP-ProDesk-600-G4-MT: ~$ rlogin -l hope domain.com
^C
student@ai-HP-ProDesk-600-G4-MT: ~$ rlogin -h
usage: ssh [-46AaCfGgKkMmngTtVvXxYy] [-B bind_interface]
           [-b bind_address] [-c cipher_spec] [-D [bind_address]:port]
           [-E log_file] [-e escape_char] [-f configfile] [-i pkcs11]
           [-L [bind_address]:[bind_port]:[remote_address]:[remote_port]]
           [-l login_name] [-o option] [-p port] [-R [bind_address]:[bind_port]:[remote_address]:[remote_port]] [-u user]
```

Orcp command

```

Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\W_SOJUJAWA\Desktop> ssh student@172.50.4.16:Desktop
student@172.50.4.16's password:
awk.sh
lmmelu@LAPTOP-IE69490CG:~$ ssh student@172.50.4.16
usage: ssh [-l login_name] [-c cipher_spec] [-b bind_address] [-p port]
           [-E log_file] [-e escape_char] [-F configfile] [-i pkcs11]
           [-i identity_file] [-J [user@]host[:port]] [-L address]
           [-l login_name] [-o option] [-O option] [-D port] [-P port]
           [-Q question] [-R address] [-S ctl_path] [-W host[:port]]
           [-w local_tun:remote_tun] destination [command [argument ...]]
lmmelu@LAPTOP-IE69490CG:~$ ssh student@172.50.4.16
student@172.50.4.16's password:
Welcome to Ubuntu 20.04.5 LTS (GNU/Linux 5.15.0-53-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

1 device has a firmware upgrade available.
Run 'fwupdmgr get-upgrades' for more information.

551 updates can be applied immediately.
366 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

New release '22.04.1 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

Your Hardware Enablement Stack (HWE) is supported until April 2025.
Last Login: Wed Apr 10 14:42:21 2024 from 127.0.0.1
student@172.50.4.16:~$ ls
1234.txt      demolitar      exam_1.c      hello      qmn      state      wildcards
422365      dem.o          exam_2.c      hello.c     ques      StringBufferDemo.class      write

```

Orsh command

```
ammulu@LAPTOP-I4949DCG: $ rsh student@172.50.4.38
student@172.50.4.38's password:
Welcome to Ubuntu 20.04.3 LTS (GNU/Linux 5.11.0-43-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

1 device has a firmware upgrade available.
Run 'fwupdmgr get-upgrades' for more information.

559 updates can be applied immediately.
459 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable
```

```
The list of available updates is more than a week old.  
To check for new updates run: sudo apt update  
New release '22.04.3 LTS' available.  
Run 'do-release-upgrade' to upgrade to it.
```

```
Your Hardware Enablement Stack (HWE) is supported until April 2025.
Last login: Wed Apr  3 14:34:48 2024 from 172.50.11.219
student@ai-HP-ProDesk-600-G4-MT:~$ exit
logout
Connection to 172.50.4.38 closed.
ammulu@LAPTOP-I4949DCG:~$ wsl
Command 'wsl' not found, but can be installed with:
sudo apt install wsl
ammulu@LAPTOP-I4949DCG:~$ █
```

talk command

```
Ubuntu (Running) - Oracle VM VirtualBox
Activities Terminal Apr 10 14:00
sridhar@sridhar-VirtualBox:~
```

k) in auto mode
Processing triggers for man-db (2.11.2-1) ...
sridhar@sridhar-VirtualBox:~\$ sudo apt install talk
/etc/sudoers:48:16: syntax error
sridhar ALL:ALL:(ALL:ALL) ALL
^
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Suggested packages:
 talkd
The following NEW packages will be installed:
 talk
0 upgraded, 1 newly installed, 0 to remove and 1 not upgraded.
Need to get 17.4 kB of archives.
After this operation, 54.3 kB of additional disk space will be used.
Get:1 http://archive.ubuntu.com/ubuntu lunar/universe amd64 talk amd64 0.17-18 [17.4 kB]
Fetched 17.4 kB in 1s (17.8 kB/s)
Selecting previously unselected package talk.
(Reading database ... 212580 files and directories currently installed.)
Preparing to unpack .../talk_0.17-18_amd64.deb ...
Unpacking talk (0.17-18) ...
Setting up talk (0.17-18) ...
Processing triggers for man-db (2.11.2-1) ...
sridhar@sridhar-VirtualBox:~\$ talk root
[Service connection established.]
hi
[Checking for invitation on caller's machine]
this is your us[Checking for invitation on caller's machine]
er sridhar
[Checking for invitation on caller's machine]
^C
sridhar@sridhar-VirtualBox:~\$

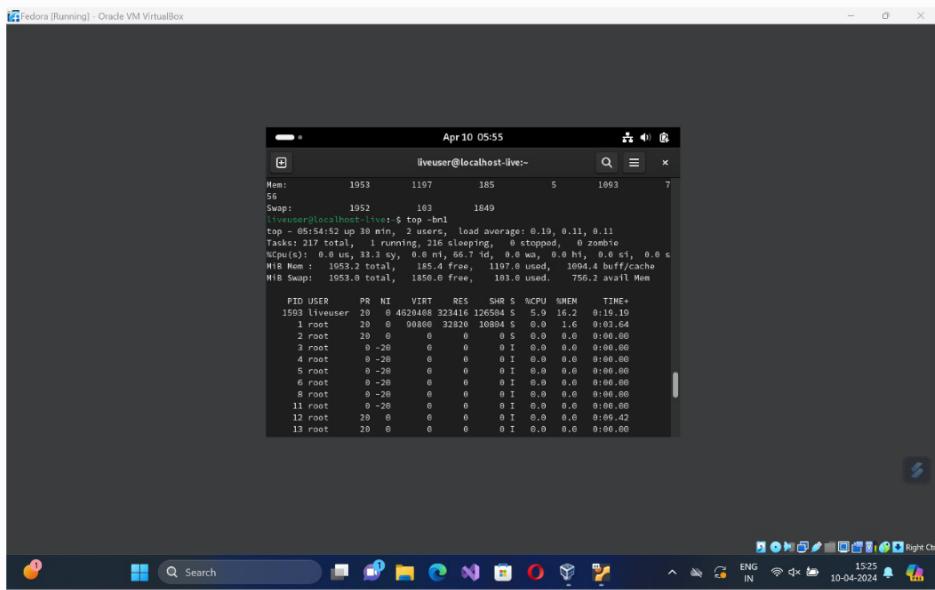
telnet command

```
Fedor (Running) - Oracle VM VirtualBox
Activities Terminal Apr 10 05:53
liveuser@localhost-live:~$ telnet 10.0.2.15 23
```

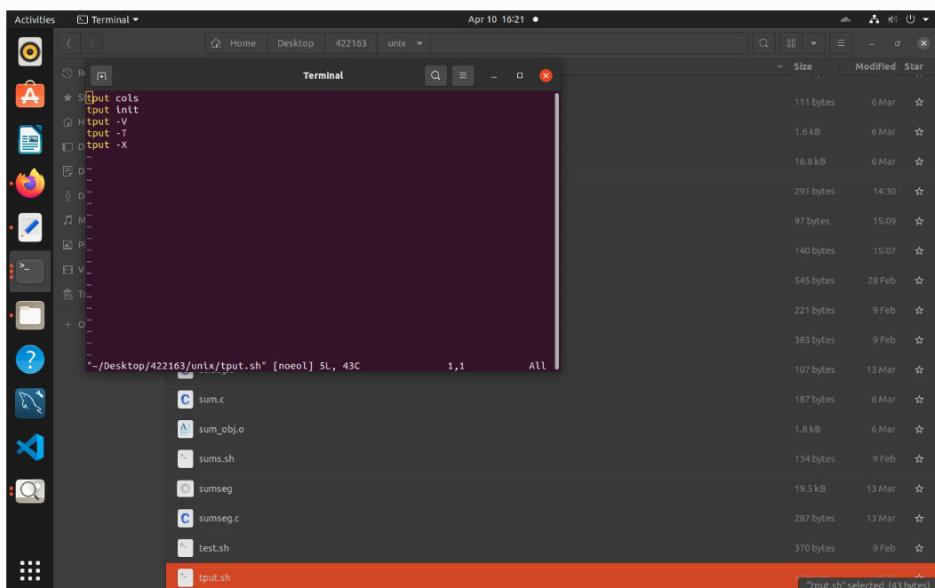
Running scriptlet: telnet-1:0.17-90.fc39.x86_64
Verifying : telnet-1:0.17-90.fc39.x86_64
1/1
1/1
Installed:
telnet-1:0.17-90.fc39.x86_64
Complete!
liveuser@localhost-live:~\$ telnet 10.0.2.15 23
Trying 10.0.2.15...
Connected to 10.0.2.15.
Escape character is '^?'.
Kernel 6.5.0-200.fc39.x86_64 on an x86_64 (1)
[liveuser@localhost-live:~]\$ hi
password:
Login incorrect
localhost-live login: liveuser
Last login: Wed Apr 10 05:24:19 on ttys0
[liveuser@localhost-live:~]\$ ls
Desktop Documents Downloads Music Pictures Public Templates Videos
[liveuser@localhost-live:~]\$

```
Fedor (Running) - Oracle VM VirtualBox
Activities Terminal Apr 10 05:55
liveuser@localhost-live:~$
```

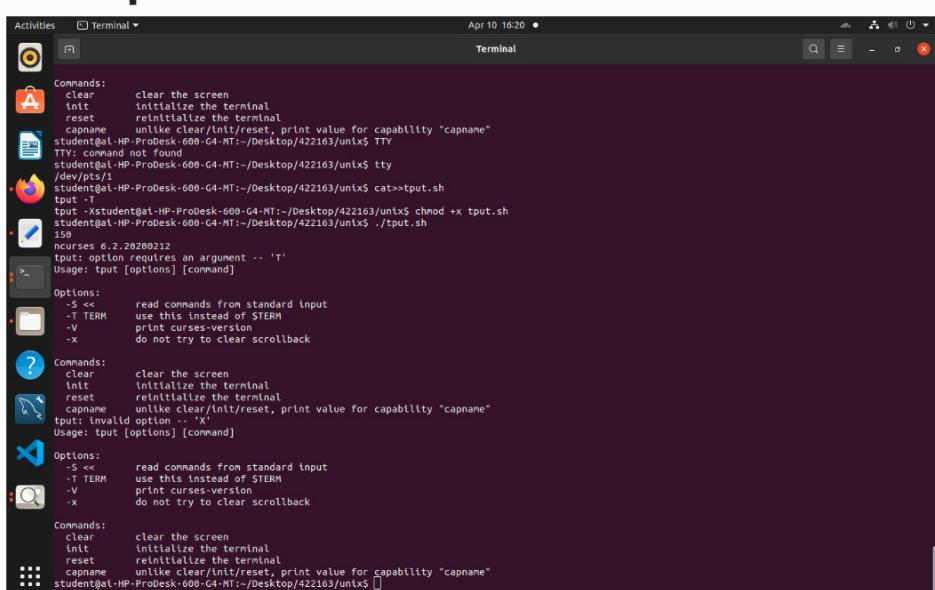
localhost-live login: liveuser
Last login: Wed Apr 10 05:24:19 on ttys0
[liveuser@localhost-live:~]\$ ls
Desktop Documents Downloads Music Pictures Public Templates Videos
[liveuser@localhost-live:~]\$ c
[liveuser@localhost-live:~]\$ exit
logout
connection closed by foreign host.
[liveuser@localhost-live:~]\$ free -m
total used free shared buff/cache avail
Mem: 1053 1197 185 5 1063 7
Swap: 1052 103 1849
[liveuser@localhost-live:~]\$ top -b -n 1
top - 05:54:52 up 30 min, 2 users, load average: 0.19, 0.11, 0.11
Tasks: 217 total, 1 running, 216 sleeping, 0 stopped, 0 zombie
%Cpu(s): 0.0 us, 22.3 sy, 0.6 ni, 66.7 id, 0.0 wa, 0.0 hi, 0.0 ci, 0.0 c
MiB Mem : 1053.0 total, 185.6 free, 1197.0 used, 1064.4 buff/cache
MiB Swap: 1053.0 total, 183.0 free, 183.0 used, 756.2 avail Mem



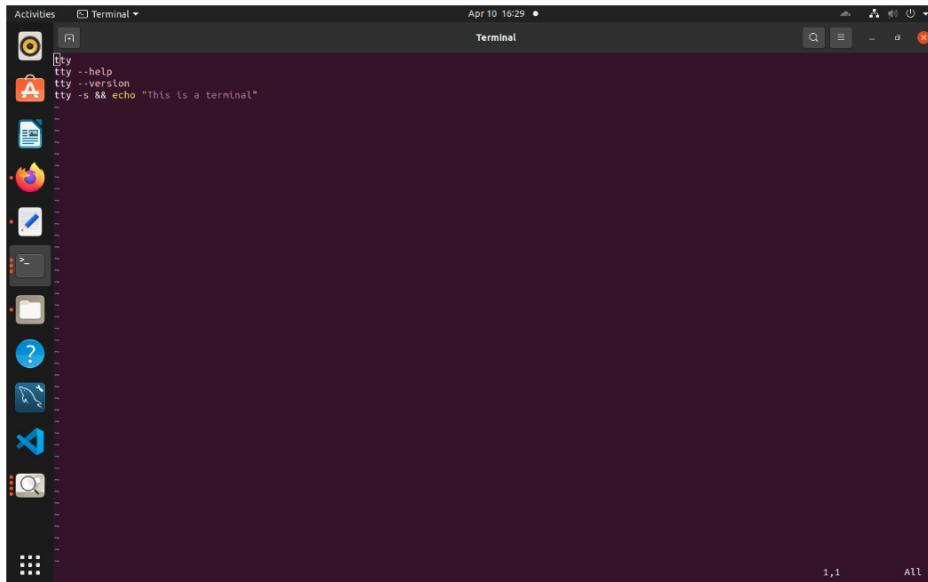
Output command



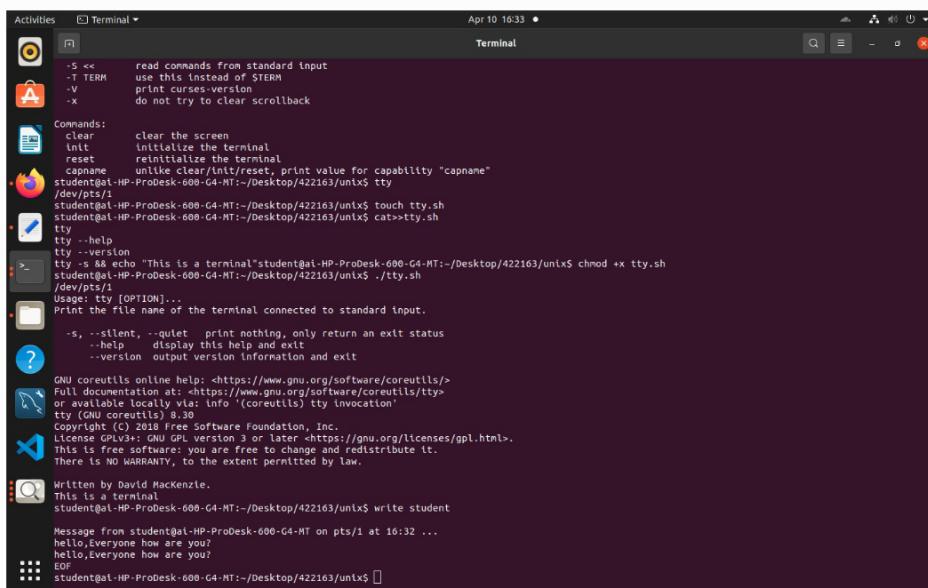
Output:



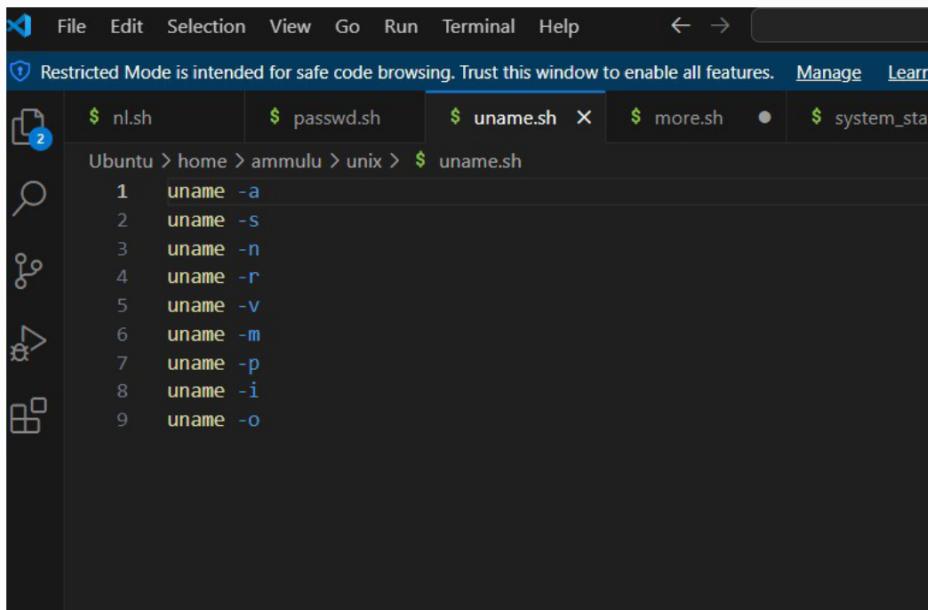
tty command



Output:



● uname command



Output:Linux LAPTOP-I4949DCG

5.15.146.1-microsoft-standard-WSL2 #1

SMP Thu Jan 11 04:09:03 UTC 2024

x86_64 x86_64 x86_64 GNU/Linux

Linux

LAPTOP-I4949DCG

5.15.146.1-microsoft-standard-WSL2

#1 SMP Thu Jan 11 04:09:03 UTC 2024

x86_64

x86_64

x86_64

GNU/Linux

Linux LAPTOP-I4949DCG 5.15.146.1-

microsoft-standard-WSL2 #1 SMP Thu Jan

11 04:09:03 UTC 2024 x86_64 x86_64

x86_64 GNU/Linux

Linux

LAPTOP-I4949DCG

5.15.146.1-microsoft-standard-WSL2

#1 SMP Thu Jan 11 04:09:03 UTC 2024

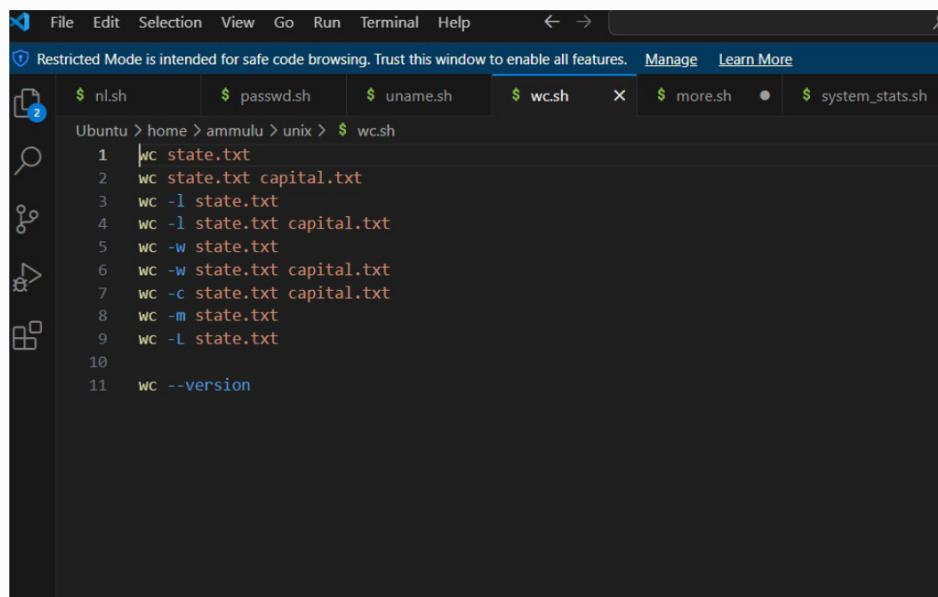
x86_64

x86_64

x86_64

GNU/Linux

● wc command



A screenshot of a terminal window with a dark theme. The window title is 'wc.sh'. The terminal shows the following command and its output:

```
Ubuntu > home > ammulu > unix > $ wc.sh
1  |wc state.txt
2  wc state.txt capital.txt
3  wc -l state.txt
4  wc -l state.txt capital.txt
5  wc -w state.txt
6  wc -w state.txt capital.txt
7  wc -c state.txt capital.txt
8  wc -m state.txt
9  wc -L state.txt
10
11  wc --version
```

Output:

4 7 56 state.txt

4 7 56 state.txt

4 5 38 capital.txt

8 12 94 total

4 state.txt

4 state.txt

4 capital.txt

8 total

7 state.txt

7 state.txt

5 capital.txt

12 total

56 state.txt

38 capital.txt

94 total

56 state.txt

17 state.txt

wc (GNU coreutils) 8.32

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change and redistribute it.

There is NO WARRANTY, to the extent
permitted by law.

Written by Paul Rubin and David
MacKenzie.

● who command

```

$ who
 1 who
 2 who -m -H
 3 who -p -H
 4 who -T -H
 5 who -u
 6 who -b -H
 7 who -d -H
 8 who -l -H
 9 who -q -H
10 who -r
11 who -a
12 whoami

```

Output:

```

ammulu pts/1 2024-04-10 06:58
NAME LINE TIME COMMENT
NAME LINE TIME PID COMMENT
NAME LINE TIME COMMENT
ammulu - pts/1 2024-04-10 06:58
ammulu pts/1 2024-04-10 06:58 00:31 415
NAME LINE TIME PID COMMENT
system boot 2024-04-10 06:58
NAME LINE TIME IDLE PID COMMENT EXIT
pts/2 2024-04-10 07:19 5478 id=ts/2 term=0 exit=0
NAME LINE TIME IDLE PID COMMENT
LOGIN console 2024-04-10 06:58 218 id=cons
LOGIN tty1 2024-04-10 06:58 227 id=tty1
ammulu
# users=1
run-level 5 2024-04-10 06:58
system boot 2024-04-10 06:58
run-level 5 2024-04-10 06:58
LOGIN console 2024-04-10 06:58 218 id=cons
LOGIN tty1 2024-04-10 06:58 227 id=tty1
ammulu - pts/1 2024-04-10 06:58 00:31 415
      pts/2 2024-04-10 07:19 5478 id=ts/2 term=0 exit=0
ammulu

```

write command

```

Welcome to Ubuntu 20.04.3 LTS (GNU/Linux 5.11.0-43-generic x86_64)

 * Documentation: https://help.ubuntu.com
 * Management: https://landscape.canonical.com
 * Support: https://ubuntu.com/advantage

1 device has a firmware upgrade available.
Run 'fuppdmgr get-upgrades' for more information.

559 updates can be applied immediately.
459 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

The list of available updates is more than a week old.
To check for new updates run: sudo apt update
New release '22.04.3 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

Your Hardware Enablement Stack (HWE) is supported until April 2025.
Last login: Wed Apr 10 15:37:10 2024 from 172.50.14.45
student@ai-HP-ProDesk-600-G4-MT:~$ write student

Message from student@ai-HP-ProDesk-600-G4-MT on pts/3 at 16:35 ...
This is beautiful.isn't it?CThis is beautiful.isn't it?
EOF
student@ai-HP-ProDesk-600-G4-MT:~$ write student /dev/pts/1
student is not logged in on pts/1
student@ai-HP-ProDesk-600-G4-MT:~$ exit
logout
Connection to 172.50.4.38 closed.
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422163/unix$ hostname -I
172.50.4.18 172.50.4.16 192.168.122.1
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422163/unix$ whoami
student
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422163/unix$ tty
/dev/pts/1
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422163/unix$ write student /dev/pts/1

Message from student@ai-HP-ProDesk-600-G4-MT on pts/1 at 16:38 ...
good morning
good morning
EOF
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422163/unix$ 

```

2)Write a shell script that list the memory usage and cpu usage of multiple machines

```
#!/bin/bash

# List of remote machines
machines=("172.50.4.60" "127.0.0.1"
"172.50.4.18")

# SSH into each machine and retrieve
# memory and CPU usage
for machine in "${machines[@]}"; do
echo "Machine: $machine"
ssh "$machine" "echo 'Memory Usage:';
free -m; echo " ; echo 'CPU Usage:'; top -bn1
| grep 'Cpu(s)"'
echo ""
done
```

Output:

Activities Terminal Apr 10 14:37

```
student@el-HP-ProDesk-600 G4-MT:~/Desktop/422163/untx$ hostname -i
172.50.4.18 172.50.4.16 192.168.132.1
student@el-HP-ProDesk-600 G4-MT:~/Desktop/422163/untx$ chmod +x mac.sh
student@el-HP-ProDesk-600 G4-MT:~/Desktop/422163/untx$ ./mac.sh
Machine: 172.50.4.60
The authenticity of host '172.50.4.60 (172.50.4.60)' can't be established.
ECDSA key fingerprint is SHA256:xdLNseF2qySLGopqWT0w3cWS1zVbF7tL1UKXLXY.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '172.50.4.60' (ECDSA) to the list of known hosts.
Memory Usage:
total used free shared buff/cache available
Mem: 15782 1374 11722 6 2685 14098
Swap: 2047 0 2047
CPU Usage:
%CPU(s): 4.8 us, 1.1 sy, 0.0 nt, 93.1 ld, 1.1 wa, 0.0 hi, 0.0 st, 0.0 st
Machine: 127.0.0.1
The authenticity of host '127.0.0.1 (127.0.0.1)' can't be established.
ECDSA key fingerprint is SHA256:xdLNseF2qySLGopqWT0w3cWS1zVbF7tL1UKXLXY.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '127.0.0.1' (ECDSA) to the list of known hosts.
Memory Usage:
total used free shared buff/cache available
Mem: 15781 2699 9390 13 3690 12751
Swap: 2047 0 2047
CPU Usage:
%CPU(s): 0.2 us, 1.5 sy, 0.0 nt, 88.2 ld, 4.1 wa, 0.0 hi, 0.0 st, 0.0 st
Machine: 172.50.4.18
The authenticity of host '172.50.4.18 (172.50.4.18)' can't be established.
ECDSA key fingerprint is SHA256:xdLNseF2qySLGopqWT0w3cWS1zVbF7tL1UKXLXY.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '172.50.4.18' (ECDSA) to the list of known hosts.
Memory Usage:
total used free shared buff/cache available
Mem: 15781 2698 9389 13 3692 12751
Swap: 2047 0 2047
CPU Usage:
%CPU(s): 8.6 us, 1.0 sy, 0.0 nt, 88.3 ld, 2.0 wa, 0.0 hi, 0.0 st, 0.0 st
student@el-HP-ProDesk-600 G4-MT:~/Desktop/422163/untx$
```