

# UNIX : ASSIGNMENT 01

NAME : SAI CHARITHA

SEC : A

ROLL NO : 422128

## FILTER COMMANDS

### 1) HEAD

head --help

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ head --help
Usage: head [OPTION]... [FILE]...
Print the first 10 lines of each FILE to standard output.
With more than one FILE, precede each with a header giving the file name.

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

Mandatory arguments to long options are mandatory for short options too.
  -c, --bytes=[-]NUM      print the first NUM bytes of each file;
                           with the leading '-', print all but the last
                           NUM bytes of each file
  -n, --lines=[-]NUM      print the first NUM lines instead of the first 10;
                           with the leading '-', print all but the last
                           NUM lines of each file
  -q, --quiet, --silent   never print headers giving file names
  -v, --verbose            always print headers giving file names
  -z, --zero-terminated   line delimiter is NUL, not newline
  --help                  display this help and exit
  --version               output version information and exit

NUM may have a multiplier suffix:
b 512, kB 1024, K 1024, MB 1000*1000, M 1024*1024,
GB 1000*1000*1000, G 1024*1024*1024, and so on for T, P, E, Z, Y.
Binary prefixes can be used, too: KiB=K, MiB=M, and so on.

GNU coreutils online help: <https://www.gnu.org/software/coreutils/>
Full documentation <https://www.gnu.org/software/coreutils/head>
or available locally via: info '(coreutils) head invocation'
```

### head -version

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ head --version
head (GNU coreutils) 8.32
Copyright (C) 2020 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 David MacKenzie and Jim Meyering.
```

## head -options

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ head -c 10 cherry.txt
hi!
how r student@ai-HP-ProDesk-600-G4-MT:~/422128$ head -n 2 cherry.txt
hi!
how r u?
student@ai-HP-ProDesk-600-G4-MT:~/422128$ head -q cherry.txt
hi!
how r u?
how do u do?
waste and useful fellow PAVITHRA;
student@ai-HP-ProDesk-600-G4-MT:~/422128$ head -v cherry.txt
==> cherry.txt <==
hi!
how r u?
how do u do?
waste and useful fellow PAVITHRA;
student@ai-HP-ProDesk-600-G4-MT:~/422128$ head -z cherry.txt
hi!
how r u?
how do u do?
waste and useful fellow PAVITHRA;
```

## 2) Tail

### Tail -options

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ tail -F cherry.txt
hi!
how r u?
how do u do?
this is sai charitha!
^C
student@ai-HP-ProDesk-600-G4-MT:~/422128$ tail -n 3 cherry.txt
how r u?
how do u do?
this is sai charitha!
student@ai-HP-ProDesk-600-G4-MT:~/422128$ tail -q cherry.txt
hi!
how r u?
how do u do?
this is sai charitha!
student@ai-HP-ProDesk-600-G4-MT:~/422128$ tail -s cherry.txt
tail: invalid number of seconds: 'cherry.txt'
student@ai-HP-ProDesk-600-G4-MT:~/422128$ tail -s 10 cherry.txt
hi!
how r u?
how do u do?
this is sai charitha!
```

```

student@ai-HP-ProDesk-600-G4-MT:~/422128$ tail -v cherry.txt
==> cherry.txt <==
hi!
how r u?
how do u do?
this is sai charitha!
student@ai-HP-ProDesk-600-G4-MT:~/422128$ tail -z cherry.txt
hi!
how r u?
how do u do?
this is sai charitha!
student@ai-HP-ProDesk-600-G4-MT:~/422128$ tail -z 2 cherry.txt
tail: cannot open '2' for reading: No such file or directory
==> cherry.txt <==
hi!
how r u?
how do u do?
this is sai charitha!

```

```

student@ai-HP-ProDesk-600-G4-MT:~/422128$ tail -c 10 cherry.txt
PAVITHRA;
student@ai-HP-ProDesk-600-G4-MT:~/422128$ tail -c 10 cherry.txt
charitha!
student@ai-HP-ProDesk-600-G4-MT:~/422128$ tail -f cherry.txt
hi!
how r u?
how do u do?
this is sai charitha!
hey..what do u want?
^C
student@ai-HP-ProDesk-600-G4-MT:~/422128$ cat cherry.txt
hi!
how r u?
how do u do?
this is sai charitha!
student@ai-HP-ProDesk-600-G4-MT:~/422128$ tail -F cherry.txt
hi!
how r u?
how do u do?
this is sai charitha!
^C

```

Tail -version

```

student@ai-HP-ProDesk-600-G4-MT:~/422128$ tail --version
tail (GNU coreutils) 8.32
Copyright (C) 2020 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 Paul Rubin, David MacKenzie, Ian Lance Taylor,
and Jim Meyering.

```

Tai; -help

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ tail --help
Usage: tail [OPTION]... [FILE]...
Print the last 10 lines of each FILE to standard output.
With more than one FILE, precede each with a header giving the file name.

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

Mandatory arguments to long options are mandatory for short options too.
  -c, --bytes=[+]NUM          output the last NUM bytes; or use -c +NUM to
                              output starting with byte NUM of each file
  -f, --follow[={name|descriptor}]
                              output appended data as the file grows;
                              an absent option argument means 'descriptor'
  -F                          same as --follow=name --retry
  -n, --lines=[+]NUM          output the last NUM lines, instead of the last 10;
                              or use -n +NUM to output starting with line NUM
  --max-unchanged-stats=N     with --follow=name, reopen a FILE which has not
                              changed size after N (default 5) iterations
                              to see if it has been unlinked or renamed
                              (this is the usual case of rotated log files);
                              with inotify, this option is rarely useful
  --pid=PID                  with -f, terminate after process ID, PID dies
  -q, --quiet, --silent      never output headers giving file names
  --retry                    keep trying to open a file if it is inaccessible
  -s, --sleep-interval=N     with -f, sleep for approximately N seconds
                              (default 1.0) between iterations;
                              with inotify and --pid=P, check process P at
                              least once every N seconds
  -v, --verbose              always output headers giving file names
  -z, --zero-terminated      line delimiter is NUL, not newline
  --help                    display this help and exit
  --version                  output version information and exit
```

### 3)CUT

Cut --version

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ cut --version
cut (GNU coreutils) 8.32
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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 David M. Ihnat, David MacKenzie, and Jim Meyering.
```

## Cut -help

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ cut --help
Usage: cut OPTION... [FILE]...
Print selected parts of lines from each FILE to standard output.

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

Mandatory arguments to long options are mandatory for short options too.
  -b, --bytes=LIST      select only these bytes
  -c, --characters=LIST select only these characters
  -d, --delimiter=DELIM use DELIM instead of TAB for field delimiter
  -f, --fields=LIST     select only these fields; also print any line
                        that contains no delimiter character, unless
                        the -s option is specified
  -n                    (ignored)
  --complement           complement the set of selected bytes, characters
                        or fields
  -s, --only-delimited  do not print lines not containing delimiters
  --output-delimiter=STRING use STRING as the output delimiter
                        the default is to use the input delimiter
  -z, --zero-terminated line delimiter is NUL, not newline
  --help                display this help and exit
  --version              output version information and exit
```

## Cut -options

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ cut -c 1- state.txt
Andhra Pradesh
Karnataka
Haryana
Tamilnadu
Korea
Kerala
Rajasthan
student@ai-HP-ProDesk-600-G4-MT:~/422128$ cut -f 1 state.txt
Andhra Pradesh
Karnataka
Haryana
Tamilnadu
Korea
Kerala
Rajasthan
student@ai-HP-ProDesk-600-G4-MT:~/422128$ cut -f 4 state.txt
Andhra Pradesh
Karnataka
Haryana
Tamilnadu
Korea
Kerala
Rajasthan
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ cut -b 3 state.txt
d
r
r
m
r
r
j
student@ai-HP-ProDesk-600-G4-MT:~/422128$ cut -b -5 state.txt
Andhr
Karna
Harya
Tamil
Korea
Keral
Rajas
student@ai-HP-ProDesk-600-G4-MT:~/422128$ cut -c 2,3,5 state.txt
ndr
ara
ara
aml
ora
erl
ajs
student@ai-HP-ProDesk-600-G4-MT:~/422128$ cut -c 1-7 state.txt
Andhra
Karnata
Haryana
Tamilna
Korea
Kerala
Rajasth
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ cut -d " " -f 1 state.txt
Andhra
Karnataka
Haryana
Tamilnadu
Korea
Kerala
Rajasthan
student@ai-HP-ProDesk-600-G4-MT:~/422128$ cut -d ":" -f 1 state.txt
Andhra Pradesh
Karnataka
Haryana
Tamilnadu
Korea
Kerala
Rajasthan
```

```

student@ai-HP-ProDesk-600-G4-MT:~/422128$ cut -d ":" -f 1 state.txt
Andhra Pradesh
Karnataka
Haryana
Tamilnadu
Korea
Kerala
Rajasthan
student@ai-HP-ProDesk-600-G4-MT:~/422128$ cut -d ":" -f 1-4 state.txt
Andhra Pradesh
Karnataka
Haryana
Tamilnadu
Korea
Kerala
Rajasthan
student@ai-HP-ProDesk-600-G4-MT:~/422128$ cut --complement -d ":" -f 1 state.txt
Andhra Pradesh
Karnataka
Haryana
Tamilnadu
Korea
Kerala
Rajasthan
student@ai-HP-ProDesk-600-G4-MT:~/422128$ cut --complement -d " " -f 1 state.txt
Pradesh
Karnataka
Haryana
Tamilnadu
Korea
Kerala
Rajasthan
student@ai-HP-ProDesk-600-G4-MT:~/422128$ cut --complement -c 5 state.txt
Andha Pradesh
Karntaka
Haryna
Taminadu
Kore
Keraa
Rajathan

```

## 4) PASTE

### Paste -help

```

student@ai-HP-ProDesk-600-G4-MT:~/422128$ paste --help
Usage: paste [OPTION]... [FILE]...
Write lines consisting of the sequentially corresponding lines from
each FILE, separated by TABs, to standard output.

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

Mandatory arguments to long options are mandatory for short options too.
  -d, --delimiters=LIST    reuse characters from LIST instead of TABs
  -s, --serial              paste one file at a time instead of in parallel
  -z, --zero-terminated    line delimiter is NUL, not newline
  --help                   display this help and exit
  --version                 output version information and exit

```



## Paste --version

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ paste --version
paste (GNU coreutils) 8.32
Copyright (C) 2020 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 David M. Ihnat and David MacKenzie.
```

## Paste -options

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ paste cherry.txt state.txt
hi!      Andhra Pradesh
how r u?      Karnataka
how do u do?   Haryana
this is sai charitha!  Tamilnadu
           Korea
           Kerala
           Rajasthan
student@ai-HP-ProDesk-600-G4-MT:~/422128$ paste -d "|" cherry.txt state.txt
hi!|Andhra Pradesh
how r u?|Karnataka
how do u do?|Haryana
this is sai charitha!|Tamilnadu
|Korea
|Kerala
|Rajasthan
student@ai-HP-ProDesk-600-G4-MT:~/422128$ paste -z cherry.txt state.txt
hi!
how r u?
how do u do?
this is sai charitha!
      Andhra Pradesh
Karnataka
Haryana
Tamilnadu
Korea
Kerala
Rajasthan
student@ai-HP-ProDesk-600-G4-MT:~/422128$
```

## 5)SORT

### Sort --version

```
student@ai-HP-ProDesk-600-G4-MT:~$ 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.
```



## Sort -help

```
student@a1-HP-ProDesk-600-G4-MT:~/422128$ sort --help
Usage: sort [OPTION]... [FILE]...
  or: sort [OPTION]... --files0-from=F
Write sorted concatenation of all FILE(s) to standard output.

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

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

-b, --ignore-leading-blanks  ignore leading blanks
-d, --dictionary-order       consider only blanks and alphanumeric characters
-f, --ignore-case            fold lower case to upper case characters
-g, --general-numeric-sort   compare according to general numerical value
-i, --ignore-nonprinting     consider only printable characters
-M, --month-sort             compare (unknown) < 'JAN' < ... < 'DEC'
-h, --human-numeric-sort     compare human readable numbers (e.g., 2K 1G)
-n, --numeric-sort           compare according to string numerical value
-R, --random-sort            shuffle, but group identical keys.  See shuf(1)
    --random-source=FILE     get random bytes from FILE
-r, --reverse                reverse the result of comparisons
    --sort=WORD              sort according to WORD:
                             general-numeric -g, human-numeric -h, month -M,
                             numeric -n, random -R, version -V
-V, --version-sort          natural sort of (version) numbers within text

Other options:

    --batch-size=NMERGE      merge at most NMERGE inputs at once;
                             for more use temp files
-c, --check, --check=diagnose-first  check for sorted input; do not sort
-C, --check=quiet, --check=silent    like -c, but do not report first bad line
    --compress-program=PROG  compress temporaries with PROG;
                             decompress them with PROG -d
--debug                      annotate the part of the line used to sort,
                             and warn about questionable usage to stderr
    --files0-from=F          read input from the files specified by
                             NUL-terminated names in file F;
                             If F is - then read names from standard input
-k, --key=KEYDEF             sort via a key; KEYDEF gives location and type
-m, --merge                  merge already sorted files; do not sort
-o, --output=FILE            write result to FILE instead of standard output
-s, --stable                 stabilize sort by disabling last-resort comparison
-S, --buffer-size=SIZE       use SIZE for main memory buffer
-t, --field-separator=SEP    use SEP instead of non-blank to blank transition
-T, --temporary-directory=DIR  use DIR for temporaries, not $TMPDIR or /tmp;
                             multiple options specify multiple directories
    --parallel=N            change the number of sorts run concurrently to N
-u, --unique                  with -c, check for strict ordering;
                             without -c, output only the first of an equal run
-z, --zero-terminated        line delimiter is NUL, not newline
    --help                  display this help and exit
    --version                output version information and exit
```

## Sort -options

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ sort state.txt
```

```
Andhra Pradesh  
Haryana  
Karnataka  
Kerala  
Korea  
Rajasthan  
Tamilnadu
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ sort -b state.txt
```

```
Andhra Pradesh  
Haryana  
Karnataka  
Kerala  
Korea  
Rajasthan  
Tamilnadu
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ sort -d state.txt
```

```
Andhra Pradesh  
Haryana  
Karnataka  
Kerala  
Korea  
Rajasthan  
Tamilnadu
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ sort -f state.txt
```

```
Andhra Pradesh  
Haryana  
Karnataka  
Kerala  
Korea  
Rajasthan  
Tamilnadu
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ sort -g state.txt
1 Tamilnadu
2 Karnataka
2 Kerala
4 Korea
5 Rajasthan
6 Andhra Pradesh
9 Haryana
student@ai-HP-ProDesk-600-G4-MT:~/422128$ sort -i state.txt
1 Tamilnadu
2 Karnataka
2 Kerala
4 Korea
5 Rajasthan
6 Andhra Pradesh
9 Haryana
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ sort -i state.txt
1 Tamilnadu
2 Karnataka
2 Kerala
4 Korea
5 Rajasthan
6 Andhra Pradesh
9 Haryana
student@ai-HP-ProDesk-600-G4-MT:~/422128$ sort -M state.txt
1 Tamilnadu
2 Karnataka
2 Kerala
4 Korea
5 Rajasthan
6 Andhra Pradesh
9 Haryana
student@ai-HP-ProDesk-600-G4-MT:~/422128$ sort -h state.txt
1 Tamilnadu
2 Karnataka
2 Kerala
4 Korea
5 Rajasthan
6 Andhra Pradesh
9 Haryana
student@ai-HP-ProDesk-600-G4-MT:~/422128$ sort -n state.txt
1 Tamilnadu
2 Karnataka
2 Kerala
4 Korea
5 Rajasthan
6 Andhra Pradesh
9 Haryana
student@ai-HP-ProDesk-600-G4-MT:~/422128$ sort state.txt
1 Tamilnadu
2 Karnataka
2 Kerala
4 Korea
5 Rajasthan
6 Andhra Pradesh
9 Haryana
student@ai-HP-ProDesk-600-G4-MT:~/422128$ sort -R state.txt
4 Korea
9 Haryana
6 Andhra Pradesh
2 Karnataka
5 Rajasthan
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ sort -m state.txt
6 Andhra Pradesh
2 Karnataka
9 Haryana
1 Tamilnadu
4 Korea
2 Kerala
5 Rajasthan
```

```
2 Kerala
4 Korea
5 Rajasthan
6 Andhra Pradesh
9 Haryana
student@ai-HP-ProDesk-600-G4-MT:~/422128$ sort -R state.txt
4 Korea
9 Haryana
6 Andhra Pradesh
2 Karnataka
5 Rajasthan
2 Kerala
1 Tamilnadu
student@ai-HP-ProDesk-600-G4-MT:~/422128$ sort -r state.txt
9 Haryana
6 Andhra Pradesh
5 Rajasthan
4 Korea
2 Kerala
2 Karnataka
1 Tamilnadu
student@ai-HP-ProDesk-600-G4-MT:~/422128$ sort -V state.txt
1 Tamilnadu
2 Karnataka
2 Kerala
4 Korea
5 Rajasthan
6 Andhra Pradesh
9 Haryana
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ sort -k 2 state.txt
6 Andhra Pradesh
9 Haryana
2 Karnataka
2 Kerala
4 Korea
5 Rajasthan
1 Tamilnadu
student@ai-HP-ProDesk-600-G4-MT:~/422128$ touch a.txt
student@ai-HP-ProDesk-600-G4-MT:~/422128$ sort -m state.txt a.txt
6 Andhra Pradesh
2 Karnataka
9 Haryana
1 Tamilnadu
4 Korea
2 Kerala
5 Rajasthan
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ sort -o a.txt state.txt
student@ai-HP-ProDesk-600-G4-MT:~/422128$ cat a.txt
Andhra 34
China 26
Delhi 49
Hyderabad 10
Korea 84
Mahaboobnagar 57
Telangana 63
student@ai-HP-ProDesk-600-G4-MT:~/422128$ cat state.txt
Andhra 34
Telangana 63
Korea 84
China 26
Hyderabad 10
Mahaboobnagar 57
Delhi 49
student@ai-HP-ProDesk-600-G4-MT:~/422128$ sort -u state.txt
Andhra 34
China 26
Delhi 49
Hyderabad 10
Korea 84
Mahaboobnagar 57
Telangana 63
student@ai-HP-ProDesk-600-G4-MT:~/422128$ sort -z state.txt
Andhra 34
Telangana 63
Korea 84
China 26
Hyderabad 10
Mahaboobnagar 57
Delhi 49
```

## 6)UNIQ

Uniq --version

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ uniq --version
uniq (GNU coreutils) 8.32
Copyright (C) 2020 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 Richard M. Stallman and David MacKenzie.
```

Uniq -help

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ uniq --help
Usage: uniq [OPTION]... [INPUT [OUTPUT]]
Filter adjacent matching lines from INPUT (or standard input),
writing to OUTPUT (or standard output).

With no options, matching lines are merged to the first occurrence.

Mandatory arguments to long options are mandatory for short options too.
  -c, --count           prefix lines by the number of occurrences
  -d, --repeated        only print duplicate lines, one for each group
  -D                    print all duplicate lines
  --all-repeated[=METHOD] like -D, but allow separating groups
                        with an empty line;
                        METHOD={none(default),prepend,separate}
  -f, --skip-fields=N   avoid comparing the first N fields
  --group[=METHOD]     show all items, separating groups with an empty line;
                        METHOD={separate(default),prepend,append,both}
  -i, --ignore-case     ignore differences in case when comparing
  -s, --skip-chars=N    avoid comparing the first N characters
  -u, --unique          only print unique lines
  -z, --zero-terminated line delimiter is NUL, not newline
  -w, --check-chars=N   compare no more than N characters in lines
  --help               display this help and exit
  --version            output version information and exit
```

## Uniq –options

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ uniq state.txt
Andhra 34
Telangana 63
Korea 84
China 26
Hyderabad 10
Mahaboobnagar 57
Delhi 49
student@ai-HP-ProDesk-600-G4-MT:~/422128$ uniq -c state.txt
  2 Andhra 34
  1 Telangana 63
  1 Korea 84
  2 China 26
  1 Hyderabad 10
  1 Mahaboobnagar 57
  1 Delhi 49
student@ai-HP-ProDesk-600-G4-MT:~/422128$ uniq -d state.txt
Andhra 34
China 26
student@ai-HP-ProDesk-600-G4-MT:~/422128$ uniq -D state.txt
Andhra 34
Andhra 34
China 26
China 26
```



```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ uniq -i state.txt
```

```
Andhra 34  
Telangana 63  
Korea 84  
China 26  
Hyderabad 10  
Mahaboobnagar 57  
Delhi 49
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ uniq -s state.txt  
uniq: state.txt: invalid number of bytes to skip
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ uniq -s 6 state.txt
```

```
Andhra 34  
Telangana 63  
Korea 84  
China 26  
Hyderabad 10  
Mahaboobnagar 57  
Delhi 49
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ uniq -s 2 state.txt
```

```
Andhra 34  
Telangana 63  
Korea 84  
China 26  
Hyderabad 10  
Mahaboobnagar 57  
Delhi 49
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ uniq -u state.txt
```

```
Telangana 63  
Korea 84  
Hyderabad 10  
Mahaboobnagar 57  
Delhi 49
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ uniq -z state.txt
```

```
Andhra 34  
Andhra 34  
Telangana 63  
Korea 84  
China 26  
China 26  
Hyderabad 10  
Mahaboobnagar 57  
Delhi 49
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ uniq -w state.txt
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ uniq -w 5 state.txt
```

```
Andhra 34  
Telangana 63  
Korea 84  
China 26  
Hyderabad 10  
Mahaboobnagar 57  
Delhi 49
```

## 7)tr

Tr -help

```
student@a1-HP-ProDesk-600-G4-MT:~/422128$ tr --help
Usage: tr [OPTION]... SET1 [SET2]
Translate, squeeze, and/or delete characters from standard input,
writing to standard output.

-c, -C, --complement      use the complement of SET1
-d, --delete              delete characters in SET1, do not translate
-s, --squeeze-repeats     replace each sequence of a repeated character
                           that is listed in the last specified SET,
                           with a single occurrence of that character
-t, --truncate-set1       first truncate SET1 to length of SET2
--help                   display this help and exit
--version                output version information and exit
```

SETs are specified as strings of characters. Most represent themselves.  
Interpreted sequences are:

\NNN	character with octal value NNN (1 to 3 octal digits)
\\	backslash
\a	audible BEL
\b	backspace
\f	form feed
\n	new line
\r	return
\t	horizontal tab
\v	vertical tab
CHAR1-CHAR2	all characters from CHAR1 to CHAR2 in ascending order
[CHAR*]	in SET2, copies of CHAR until length of SET1
[CHAR*REPEAT]	REPEAT copies of CHAR, REPEAT octal if starting with 0
[:alnum:]	all letters and digits
[:alpha:]	all letters
[:blank:]	all horizontal whitespace
[:cntrl:]	all control characters
[:digit:]	all digits
[:graph:]	all printable characters, not including space
[:lower:]	all lower case letters
[:print:]	all printable characters, including space
[:punct:]	all punctuation characters
[:space:]	all horizontal or vertical whitespace
[:upper:]	all upper case letters
[:xdigit:]	all hexadecimal digits
[=CHAR=]	all characters which are equivalent to CHAR

Tr --version

```
student@a1-HP-ProDesk-600-G4-MT:~/422128$ tr --version
tr (GNU coreutils) 8.32
Copyright (C) 2020 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 Jim Meyering.
```

## Tr -options

```
hi i am haritha
student@ai-HP-ProDesk-600-G4-MT:~/422128$ echo "i am 422128" | tr -d [:digit:]
i am
student@ai-HP-ProDesk-600-G4-MT:~/422128$ echo "i am 422128" | tr -d [:alnum:]
422128
student@ai-HP-ProDesk-600-G4-MT:~/422128$ echo "i am 422128" | tr -d [:alpha:]
422128
student@ai-HP-ProDesk-600-G4-MT:~/422128$ echo "i am 422128" | tr -d [:blank:]
iam422128
student@ai-HP-ProDesk-600-G4-MT:~/422128$ echo "i am 422128" | tr -d [:cntrl:]
i am 422128student@ai-HP-ProDesk-600-G4-MT:~/422128$ echo "i am 422128" | tr -d [:graph:]
422128
student@ai-HP-ProDesk-600-G4-MT:~/422128$ echo "i am 422128" | tr -d [:lower:]
422128
student@ai-HP-ProDesk-600-G4-MT:~/422128$ echo "i am 422128" | tr -d [:upper:]
i am 422128
student@ai-HP-ProDesk-600-G4-MT:~/422128$ echo "i am 422128" | tr -d [:print:]
422128
student@ai-HP-ProDesk-600-G4-MT:~/422128$ echo "i am !" 422128" | tr -d [:punct:]
echo "i am 'apt --fix-broken install' 422128" | tr -d [:punct:]
i am apt fixbroken install 422128
student@ai-HP-ProDesk-600-G4-MT:~/422128$ echo "i am 422128" | tr -d [:space:]
iam422128student@ai-HP-ProDesk-600-G4-MT:~/422128$ echo "i am 422128" | tr -d [:upper:]
i am 422128
student@ai-HP-ProDesk-600-G4-MT:~/422128$ echo "i am 422128" | tr -d [:xdigit:]
i m
student@ai-HP-ProDesk-600-G4-MT:~/422128$ echo "i am SAI 422128" | tr -d [:upper:]
i am 422128
student@ai-HP-ProDesk-600-G4-MT:~/422128$ echo "i am SAI 422128" | tr -d [=SAI=]
tr: SAI: equivalence class operand must be a single character
student@ai-HP-ProDesk-600-G4-MT:~/422128$ echo "i am SAI 422128" | tr -d [=CHAR=]
tr: CHAR: equivalence class operand must be a single character
student@ai-HP-ProDesk-600-G4-MT:~/422128$ echo "i am SAI 422128" | tr -d [=s=]
i am SAI 422128
student@ai-HP-ProDesk-600-G4-MT:~/422128$ echo "i am SAI 422128" | tr -d [=S=]
i am AI 422128
student@ai-HP-ProDesk-600-G4-MT:~/422128$ echo "i am SAI 422128" | tr -s a
i am SAI 422128
student@ai-HP-ProDesk-600-G4-MT:~/422128$ echo "i am sai charitha 422128" | tr -s a
i am sai charitha 422128
student@ai-HP-ProDesk-600-G4-MT:~/422128$ echo "i am ssai charitha 422128" | tr -s s
i am sai charitha 422128
student@ai-HP-ProDesk-600-G4-MT:~/422128$ echo "i am ssai charitha 422128" | tr -t
tr: missing operand
Try 'tr --help' for more information.
student@ai-HP-ProDesk-600-G4-MT:~/422128$ echo "i am ssai charitha 422128" | tr -t 5
```

## 8)pr

Pr ---version

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ pr --version
pr (GNU coreutils) 8.32
Copyright (C) 2020 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.
```

## Pr -help

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ 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
    use a centered HEADER instead of filename in page header,
    -h "" prints a blank line, don't use -h""
-i[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)
```

## Pr -options

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ pr state.txt

2024-02-14 15:53                                state.txt                                Page 1

Andhra 34
Andhra 34
Telangana 63
Korea 84
China 26
China 26
Hyderabad 10
Mahaboobnagar 57
Delhi 49
```



```

-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,
    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

```

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ pr -3 state.txt
```

```

2024-02-14 15:53                                state.txt                                Page 1

Andhra 34                                Korea 84                                Hyderabad 10
Andhra 34                                China 26                                Mahaboobnagar 57
Telangana 63                            China 26                                Delhi 49

```

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ pr -7 state.txt
```

```

2024-02-14 15:53                                state.txt                                Page 1

Andhra 34 Telangana China 26  China 26  Hyderabad Mahaboobn Delhi 49
Andhra 34 Korea 84

```

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ pr -t state.txt
```

```
Andhra 34
Andhra 34
Telangana 63
Korea 84
China 26
China 26
Hyderabad 10
Mahaboobnagar 57
Delhi 49
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ pr -d state.txt
```

```
2024-02-14 15:53
```

```
state.txt
```

```
Page 1
```

```
Andhra 34
Andhra 34
Telangana 63
Korea 84
China 26
China 26
Hyderabad 10
Mahaboobnagar 57
Delhi 49
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ pr -a state.txt
```

```
2024-02-14 15:53
```

```
state.txt
```

```
Page 1
```

```
Andhra 34
Andhra 34
Telangana 63
Korea 84
China 26
China 26
Hyderabad 10
Mahaboobnagar 57
Delhi 49
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ pr -c state.txt
```

```
2024-02-14 15:53                                state.txt                                Page 1
```

```
Andhra 34
Andhra 34
Telangana 63
Korea 84
China 26
China 26
Hyderabad 10
Mahaboobnagar 57
Delhi 49
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ pr -D state.txt
12/02/2024
```

```
state.txt                                         Page 1
```

```
12/02/2024
^C
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ pr -e state.txt
```

```
2024-02-14 15:53                                state.txt                                Page 1
```

```
Andhra 34
Andhra 34
Telangana 63
Korea 84
China 26
China 26
Hyderabad 10
Mahaboobnagar 57
Delhi 49
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ pr -m state.txt cherry.txt
```

```
2024-02-14 16:24                                Page 1
```

```
Andhra 34                                hi!
Andhra 34                                how r u?
Telangana 63                             how do u do?
Korea 84                                 this is sai charitha!
China 26
China 26
Hyderabad 10
Mahaboobnagar 57
Delhi 49
```



```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ pr -f state.txt
```

```
2024-02-14 15:53 state.txt Page 1
```

```
Andhra 34
Andhra 34
Telangana 63
Korea 84
China 26
China 26
Hyderabad 10
Mahaboobnagar 57
Delhi 49
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ pr -3 -f state.txt
```

```
2024-02-14 15:53 state.txt Page 1
```

```
Andhra 34      Korea 84      Hyderabad 10
Andhra 34      China 26     Mahaboobnagar 57
Telangana 63   China 26     Delhi 49
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ pr -h -f state.txt
```

```
2024-02-14 15:53 -f Page 1
```

```
Andhra 34
Andhra 34
Telangana 63
Korea 84
China 26
China 26
Hyderabad 10
Mahaboobnagar 57
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ pr -n 3 state.txt
pr: 3: No such file or directory
```

```
2024-02-14 15:53 state.txt Page 1
```

```
1 Andhra 34
2 Andhra 34
3 Telangana 63
4 Korea 84
5 China 26
6 China 26
7 Hyderabad 10
8 Mahaboobnagar 57
9 Delhi 49
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ pr -h state.txt
agDFEU
```

```
2024-02-14 16:23                                state.txt                                Page 1
```

```
agDFEU
^C
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ pr -i state.txt
```

```
2024-02-14 15:53                                state.txt                                Page 1
```

```
Andhra 34
Andhra 34
Telangana 63
Korea 84
China 26
China 26
Hyderabad 10
Mahaboobnagar 57
Delhi 49
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ pr -n -3 state.txt
```

```
2024-02-14 15:53                                state.txt                                Page 1
```

1	Andhra 34	4	Korea 84	7	Hyderabad 10
2	Andhra 34	5	China 26	8	Mahaboobnagar 5
3	Telangana 63	6	China 26	9	Delhi 49

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ pr -n state.txt
```

```
2024-02-14 15:53                                state.txt                                Page 1
```

```
1 Andhra 34
2 Andhra 34
3 Telangana 63
4 Korea 84
5 China 26
6 China 26
7 Hyderabad 10
8 Mahaboobnagar 57
9 Delhi 49
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ pr -T state.txt
```

```
Andhra 34
Andhra 34
Telangana 63
Korea 84
China 26
China 26
Hyderabad 10
Mahaboobnagar 57
Delhi 49
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ pr -t state.txt
```

```
Andhra 34
Andhra 34
Telangana 63
Korea 84
China 26
China 26
Hyderabad 10
Mahaboobnagar 57
Delhi 49
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ pr -v state.txt
```

```
2024-02-14 15:53
```

```
state.txt
```

```
Page 1
```

```
Andhra 34
Andhra 34
Telangana 63
Korea 84
China 26
China 26
Hyderabad 10
Mahaboobnagar 57
Delhi 49
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422128$ pr -w 5 -t state.txt
```

```
Andhra 34
Andhra 34
Telangana 63
Korea 84
China 26
China 26
Hyderabad 10
Mahaboobnagar 57
Delhi 49
```

```

student@ai-HP-ProDesk-600-G4-MT:~/422128$ pr -W 1 -t state.txt
A
A
T
K
C
C
H
M
D
student@ai-HP-ProDesk-600-G4-MT:~/422128$ pr -w 1- -t state.txt
pr: '-w PAGE_WIDTH' invalid number of characters: '1-'
student@ai-HP-ProDesk-600-G4-MT:~/422128$ pr -W 3 -t state.txt
And
And
Tel
Kor
Chi
Chi
Hyd
Mah
Del

```

## 9)GREP

Grep –version

```

student@ai-HP-ProDesk-600-G4-MT:~/422128$ grep --version
grep (GNU grep) 3.4
Copyright (C) 2020 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 others: see

```

Grep -option

```

student@ai-HP-ProDesk-600-G4-MT:~/422128$ grep -0 "delhi" state.txt
student@ai-HP-ProDesk-600-G4-MT:~/422128$ grep -0 "Delhi" state.txt
Delhi 49
student@ai-HP-ProDesk-600-G4-MT:~/422128$ grep -n "Delhi" state.txt
9:Delhi 49

```

```

student@ai-HP-ProDesk-600-G4-MT:~/422128$ grep -f state.txt
abcd
^C
student@ai-HP-ProDesk-600-G4-MT:~/422128$ cat state.txt
Andhra 34
Andhra 34
Telangana 63
Korea 84
China 26
China 26
Hyderabad 10
Mahaboobnagar 57
Delhi 49
student@ai-HP-ProDesk-600-G4-MT:~/422128$ grep -i state.txt
^C
student@ai-HP-ProDesk-600-G4-MT:~/422128$ grep -i "del" state.txt
Delhi 49
student@ai-HP-ProDesk-600-G4-MT:~/422128$ grep -c "tela" state.txt
0
student@ai-HP-ProDesk-600-G4-MT:~/422128$ grep -c "china" state.txt
0
student@ai-HP-ProDesk-600-G4-MT:~/422128$ grep -c "China" state.txt
2
student@ai-HP-ProDesk-600-G4-MT:~/422128$ grep -w "China" state.txt
China 26
China 26
student@ai-HP-ProDesk-600-G4-MT:~/422128$ grep -x "China" state.txt
student@ai-HP-ProDesk-600-G4-MT:~/422128$ grep -r "China" state.txt
China 26
China 26
student@ai-HP-ProDesk-600-G4-MT:~/422128$ grep -r "Delhi" state.txt
Delhi 49
student@ai-HP-ProDesk-600-G4-MT:~/422128$ grep -i "delhi" state.txt
Delhi 49

```

## Grep -help

```

--binary-files=TYPE    assume that binary files are TYPE;
                        TYPE is 'binary', 'text', or 'without-match'
-a, --text             equivalent to --binary-files=text
-I                     equivalent to --binary-files=without-match
-d, --directories=ACTION how to handle directories;
                        ACTION is 'read', 'recurse', or 'skip'
-D, --devices=ACTION  how to handle devices, FIFOs and sockets;
                        ACTION is 'read' or 'skip'
-r, --recursive        like --directories=recurse
-R, --dereference-recursive likewise, but follow all symlinks
--include=GLOB          search only files that match GLOB (a file pattern)
--exclude=GLOB          skip files that match GLOB
--exclude-from=FILE     skip files that match any file pattern from FILE
--exclude-dir=GLOB      skip directories that match GLOB
-L, --files-without-match print only names of FILES with no selected lines
-l, --files-with-matches print only names of FILES with selected lines
-c, --count             print only a count of selected lines per FILE
-T, --initial-tab      make tabs line up (if needed)
-Z, --null              print 0 byte after FILE name

Context control:
-B, --before-context=NUM print NUM lines of leading context
-A, --after-context=NUM  print NUM lines of trailing context
-C, --context=NUM        print NUM lines of output context
-NUM                     same as --context=NUM
--color[=WHEN],          use markers to highlight the matching strings;
--colour[=WHEN]          WHEN is 'always', 'never', or 'auto'
-U, --binary            do not strip CR characters at EOL (MSDOS/Windows)

```

```

student@a1-HP-ProDesk-600-G4-MT:~/422128$ grep --help
Usage: grep [OPTION]... PATTERNS [FILE]...
Search for PATTERNS in each FILE.
Example: grep -i 'hello world' menu.h main.c
PATTERNS can contain multiple patterns separated by newlines.

Pattern selection and interpretation:
-E, --extended-regexp  PATTERNS are extended regular expressions
-F, --fixed-strings    PATTERNS are strings
-G, --basic-regexp     PATTERNS are basic regular expressions
-P, --perl-regexp      PATTERNS are Perl regular expressions
-e, --regexp=PATTERNS  use PATTERNS for matching
-f, --file=FILE        take PATTERNS from FILE
-i, --ignore-case      ignore case distinctions in patterns and data
                        --no-ignore-case  do not ignore case distinctions (default)
-w, --word-regexp      match only whole words
-x, --line-regexp      match only whole lines
-z, --null-data        a data line ends in 0 byte, not newline

Miscellaneous:
-s, --no-messages      suppress error messages
-v, --invert-match      select non-matching lines
-V, --version           display version information and exit
    --help             display this help text and exit

Output control:
-m, --max-count=NUM    stop after NUM selected lines
-b, --byte-offset       print the byte offset with output lines
-n, --line-number      print line number with output lines
                        --line-buffered  flush output on every line
-H, --with-filename     print file name with output lines
-h, --no-filename       suppress the file name prefix on output
                        --label=LABEL   use LABEL as the standard input file name prefix
-o, --only-matching     show only nonempty parts of lines that match
-q, --quiet, --silent   suppress all normal output
                        --binary-files=TYPE
                        assume that binary files are TYPE;
                        TYPE is 'binary', 'text', or 'without-match'
-a, --text              equivalent to --binary-files=text
-I                      equivalent to --binary-files=without-match
-d, --directories=ACTION how to handle directories;
                        ACTION is 'read', 'recurse', or 'skip'
-D, --devices=ACTION   how to handle devices, FIFOs and sockets;
                        ACTION is 'read' or 'skip'
-r, --recursive         like --directories=recurse
-R, --dereference-recursive
                        likewise, but follow all symlinks
    --include=GLOB      search only files that match GLOB (a file pattern)

```