Unix assignment 1

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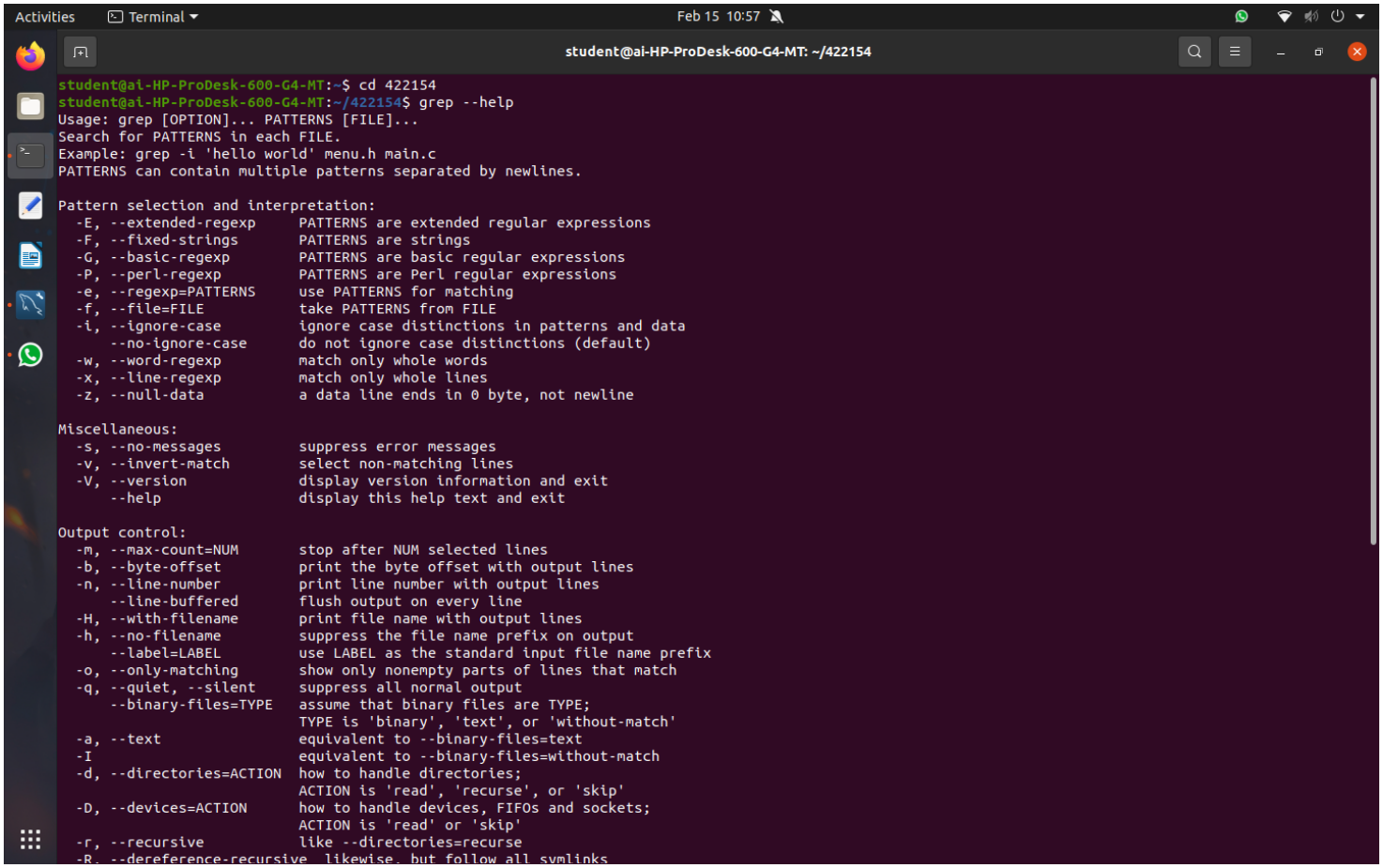
Section : A
Roll no : 422154

Write shell scripts for searching for various patterns using

1)grep



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student@ai-HP-ProDesk-600-G4-MT: ~/422154
  -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],
      --colour[=WHEN]       use markers to highlight the matching strings;
                            WHEN is 'always', 'never', or 'auto'
  -U, --binary              do not strip CR characters at EOL (MSDOS/Windows)

When FILE is '-', read standard input.  With no FILE, read '.' if
recursive, '-' otherwise.  With fewer than two FILEs, assume -h.
Exit status is 0 if any line (or file if -L) is selected, 1 otherwise;
if any error occurs and -q is not given, the exit status is 2.

Report bugs to: bug-grep@gnu.org
GNU grep home page: <http://www.gnu.org/software/grep/>
General help using GNU software: <https://www.gnu.org/gethelp/>
student@ai-HP-ProDesk-600-G4-MT:~/422154$ 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
<https://git.sv.gnu.org/cgit/grep.git/tree/AUTHORS>.
student@ai-HP-ProDesk-600-G4-MT:~/422154$
```

```
Activities   Terminal   Feb 15 11:01
student@ai-HP-ProDesk-600-G4-MT: ~/422154
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
<https://git.sv.gnu.org/cgit/grep.git/tree/AUTHORS>.
student@ai-HP-ProDesk-600-G4-MT:~/422154$ grep -i "andhra" state.txt
andhra pradesh
andhra pradesh
andhra pradesh
student@ai-HP-ProDesk-600-G4-MT:~/422154$ grep -i "pradesh" state.txt
andhra pradesh
arunachal pradesh
andhra pradesh
andhra pradesh
student@ai-HP-ProDesk-600-G4-MT:~/422154$ grep -c "andhra" state.txt
3
student@ai-HP-ProDesk-600-G4-MT:~/422154$ grep -c "goa" state.txt
2
student@ai-HP-ProDesk-600-G4-MT:~/422154$ grep -w "andhra" state.txt
andhra pradesh
andhra pradesh
andhra pradesh
student@ai-HP-ProDesk-600-G4-MT:~/422154$ grep -i "andh" state.txt
andhra pradesh
andhra pradesh
andhra pradesh
student@ai-HP-ProDesk-600-G4-MT:~/422154$ grep -w "andh" state.txt
student@ai-HP-ProDesk-600-G4-MT:~/422154$ grep -0 "karnataka" state.txt
karnataka
--
karnataka
student@ai-HP-ProDesk-600-G4-MT:~/422154$ grep -n "karnataka" state.txt
10:karnataka
13:karnataka
student@ai-HP-ProDesk-600-G4-MT:~/422154$ grep -n "andhra" state.txt
1:andhra pradesh
11:andhra pradesh
12:andhra pradesh
student@ai-HP-ProDesk-600-G4-MT:~/422154$ grep -n "pradesh" state.txt
1:andhra pradesh
2:arunachal pradesh
11:andhra pradesh
12:andhra pradesh
student@ai-HP-ProDesk-600-G4-MT:~/422154$
```

2) pr

```
student@ai-HP-ProDesk-600-G4-MT:~/422154$ 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
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422154$ 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>.
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422154$ pr state.txt

2024-02-14 15:55                    state.txt                    Page 1


andhra pradesh
arunachal pradesh
bihar
hariyana
telanagana
west bengal
tamil nadu
maharastra
goa
karnataka
andhra pradesh
andhra pradesh
karnataka
goa
west bengal
hariyana
bihar
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422154$ pr -t state.txt
andhra pradesh
arunachal pradesh
bihar
hariyana
telanagana
west bengal
tamil nadu
maharastra
goa
karnataka
andhra pradesh
andhra pradesh
karnataka
goa
west bengal
hariyana
bihar
student@ai-HP-ProDesk-600-G4-MT:~/422154$
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422154$ pr -d state.txt

2024-02-14 15:55                    state.txt                    Page 1

andhra pradesh
arunachal pradesh
bihar
hariyana
telanagana
west bengal
tamil nadu
maharastra
goa
karnataka
andhra pradesh
andhra pradesh
karnataka
goa
west bengal
hariyana
bihar
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422154$ pr -t state.txt
andhra pradesh
arunachal pradesh
bihar
hariyana
telanagana
west bengal
tamil nadu
maharastra
goa
karnataka
andhra pradesh
andhra pradesh
karnataka
goa
west bengal
hariyana
bihar
student@ai-HP-ProDesk-600-G4-MT:~/422154$
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422154$ pr -t -w 20 state.txt
andhra pradesh
arunachal pradesh
bihar
hariyana
telanagana
west bengal
tamil nadu
maharastra
goa
karnataka
andhra pradesh
andhra pradesh
karnataka
goa
west bengal
hariyana
bihar
student@ai-HP-ProDesk-600-G4-MT:~/422154$
```

```
karnataka
goa
west bengal
hariyana
bihar
student@ai-HP-ProDesk-600-G4-MT:~/422154$ pr -i state.txt

2024-02-14 15:55                    state.txt                    Page 1

andhra pradesh
arunachal pradesh
bihar
hariyana
telanagana
west bengal
tamil nadu
maharastra
goa
karnataka
andhra pradesh
andhra pradesh
karnataka
goa
west bengal
hariyana
bihar
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422154$ pr state.txt


2024-02-14 15:55                    state.txt                    Page 1


andhra pradesh
arunachal pradesh
bihar
hariyana
telanagana
west bengal
tamil nadu
maharastra
goa
karnataka
andhra pradesh
andhra pradesh
karnataka
goa
west bengal
hariyana
bihar
```

3)head

```
student@ai-HP-ProDesk-600-G4-MT:~/422154$ 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 1000, 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.

GNU coreutils online help: <https://www.gnu.org/software/coreutils/>
Full documentation at: <https://www.gnu.org/software/coreutils/head>
or available locally via: info '(coreutils) head invocation'
student@ai-HP-ProDesk-600-G4-MT:~/422154$ head --version
head (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 David MacKenzie and Jim Meyering.
student@ai-HP-ProDesk-600-G4-MT:~/422154$
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422154$ cat state.txt
andhra pradesh
arunachal pradesh
bihar
hariyana
telanagana
west bengal
tamil nadu
maharastra
goa
karnataka
andhra pradesh
andhra pradesh
karnataka
goa
west bengal
hariyana
bihar
student@ai-HP-ProDesk-600-G4-MT:~/422154$ cat capital.txt
amaravathi
hyderabad
dispur
banglour
chennai
student@ai-HP-ProDesk-600-G4-MT:~/422154$ head -n 5 state.txt
andhra pradesh
arunachal pradesh
bihar
hariyana
telanagana
student@ai-HP-ProDesk-600-G4-MT:~/422154$ head -c 10 state.txt
andhra prastudent@ai-HP-ProDesk-600-G4-MT:~/422154$ head -q state.txt
andhra pradesh
arunachal pradesh
bihar
hariyana
telanagana
west bengal
tamil nadu
maharastra
goa
karnataka
student@ai-HP-ProDesk-600-G4-MT:~/422154$
```

```
Activities  Terminal  Feb 15 11:50
student@ai-HP-ProDesk-600-G4-MT: ~/422154
student@ai-HP-ProDesk-600-G4-MT: ~/422154   student@ai-HP-ProDesk-600-G4-MT: ~/422154   student@ai-HP-ProDesk-600-G4-MT: ~/422154
student@ai-HP-ProDesk-600-G4-MT:~/422154$ head -c 10 state.txt
andhra prastudent@ai-HP-ProDesk-600-G4-MT:~/422154$ head -q state.txt
andhra pradesh
arunachal pradesh
bihar
hariyana
telanagana
west bengal
tamil nadu
maharastra
goa
karnataka
student@ai-HP-ProDesk-600-G4-MT:~/422154$ head -v state.txt
==> state.txt <==
andhra pradesh
arunachal pradesh
bihar
hariyana
telanagana
west bengal
tamil nadu
maharastra
goa
karnataka
student@ai-HP-ProDesk-600-G4-MT:~/422154$ head -z state.txt
andhra pradesh
arunachal pradesh
bihar
hariyana
telanagana
west bengal
tamil nadu
maharastra
goa
karnataka
andhra pradesh
andhra pradesh
karnataka
goa
west bengal
hariyana
bihar
student@ai-HP-ProDesk-600-G4-MT:~/422154$
```

4)tail

```
Activities  Terminal  Feb 15 11:51
student@ai-HP-ProDesk-600-G4-MT: ~/422154
student@ai-HP-ProDesk-600-G4-MT: ...   student@ai-HP-ProDesk-600-G4-MT: ...   student@ai-HP-ProDesk-600-G4-MT: ...   student@ai-HP-ProDesk-600-G4-MT: ...
student@ai-HP-ProDesk-600-G4-MT:~/422154$ 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

NUM may have a multiplier suffix:
b 512, kB 1000, 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.

With --follow (-f), tail defaults to following the file descriptor, which
means that even if a tail'ed file is renamed, tail will continue to track
its end.  This default behavior is not desirable when you really want to
track the actual name of the file, not the file descriptor (e.g., log
rotation).  Use --follow=name in that case.  That causes tail to track the
```

```
                              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

NUM may have a multiplier suffix:
b 512, kB 1000, 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.

With --follow (-f), tail defaults to following the file descriptor, which
means that even if a tail'ed file is renamed, tail will continue to track
its end.  This default behavior is not desirable when you really want to
track the actual name of the file, not the file descriptor (e.g., log
rotation).  Use --follow=name in that case.  That causes tail to track the
named file in a way that accommodates renaming, removal and creation.

GNU coreutils online help: <https://www.gnu.org/software/coreutils/>
Full documentation at: <https://www.gnu.org/software/coreutils/tail>
or available locally via: info '(coreutils) tail invocation'
student@ai-HP-ProDesk-600-G4-MT:~/422154$ tail --version
tail (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 Paul Rubin, David MacKenzie, Ian Lance Taylor,
and Jim Meyering.
student@ai-HP-ProDesk-600-G4-MT:~/422154$
```

```
hariyana
bihar
student@ai-HP-ProDesk-600-G4-MT:~/422154$ tail -f state.txt
maharastra
goa
karnataka
andhra pradesh
andhra pradesh
karnataka
goa
west bengal
hariyana
bihar
^C
student@ai-HP-ProDesk-600-G4-MT:~/422154$ tail -n 5 state.txt
karnataka
goa
west bengal
hariyana
bihar
student@ai-HP-ProDesk-600-G4-MT:~/422154$ tail -q state.txt
maharastra
goa
karnataka
andhra pradesh
andhra pradesh
karnataka
goa
west bengal
hariyana
bihar
student@ai-HP-ProDesk-600-G4-MT:~/422154$ tail -s 20 state.txt
maharastra
goa
karnataka
andhra pradesh
andhra pradesh
karnataka
goa
west bengal
hariyana
bihar
student@ai-HP-ProDesk-600-G4-MT:~/422154$
```

```
Written by Paul Rubin, David MacKenzie, Ian Lance Taylor,
and Jim Meyering.
student@ai-HP-ProDesk-600-G4-MT:~/422154$ tail -c 20 state.txt
ngal
hariyana
bihar
student@ai-HP-ProDesk-600-G4-MT:~/422154$ tail -f state.txt
maharastra
goa
karnataka
andhra pradesh
andhra pradesh
karnataka
goa
west bengal
hariyana
bihar
^C
student@ai-HP-ProDesk-600-G4-MT:~/422154$ tail -n 5 state.txt
karnataka
goa
west bengal
hariyana
bihar
student@ai-HP-ProDesk-600-G4-MT:~/422154$ tail -q state.txt
maharastra
goa
karnataka
andhra pradesh
andhra pradesh
karnataka
goa
west bengal
hariyana
bihar
student@ai-HP-ProDesk-600-G4-MT:~/422154$ tail -s 20 state.txt
maharastra
goa
karnataka
andhra pradesh
andhra pradesh
karnataka
```

```
hariyana
bihar
^C
student@ai-HP-ProDesk-600-G4-MT:~/422154$ tail -n 5 state.txt
karnataka
goa
west bengal
hariyana
bihar
student@ai-HP-ProDesk-600-G4-MT:~/422154$ tail -q state.txt
maharastra
goa
karnataka
andhra pradesh
andhra pradesh
karnataka
goa
west bengal
hariyana
bihar
student@ai-HP-ProDesk-600-G4-MT:~/422154$ tail -s 20 state.txt
maharastra
goa
karnataka
andhra pradesh
andhra pradesh
karnataka
goa
west bengal
hariyana
bihar
student@ai-HP-ProDesk-600-G4-MT:~/422154$ tail -s 20 state.txt
maharastra
goa
karnataka
andhra pradesh
andhra pradesh
karnataka
goa
west bengal
hariyana
bihar
student@ai-HP-ProDesk-600-G4-MT:~/422154$
```

5)cut

```
Activities   Terminal   Feb 15 11:57
student@ai-HP-ProDesk-600-G4-MT: ~/422154
student@ai-HP-ProDesk-600-G4-MT: ...   student@ai-HP-ProDesk-600-G4-MT: ...   student@ai-HP-ProDesk-600-G4-MT: ...   student@ai-HP-ProDesk-600-G4-MT: ...
student@ai-HP-ProDesk-600-G4-MT:~/422154$ cut --verison
cut: unrecognized option '--verison'
Try 'cut --help' for more information.
student@ai-HP-ProDesk-600-G4-MT:~/422154$ 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

Use one, and only one of -b, -c or -f.  Each LIST is made up of one
range, or many ranges separated by commas.  Selected input is written
in the same order that it is read, and is written exactly once.
Each range is one of:

  N     N'th byte, character or field, counted from 1
  N-    from N'th byte, character or field, to end of line
  N-M   from N'th to M'th (included) byte, character or field
  -M    from first to M'th (included) byte, character or field

GNU coreutils online help: <https://www.gnu.org/software/coreutils/>
Full documentation at: <https://www.gnu.org/software/coreutils/cut>
or available locally via: info '(coreutils) cut invocation'
student@ai-HP-ProDesk-600-G4-MT:~/422154$ cut --version
cut (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>.
```

```
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

Use one, and only one of -b, -c or -f.  Each LIST is made up of one
range, or many ranges separated by commas.  Selected input is written
in the same order that it is read, and is written exactly once.
Each range is one of:

  N     N'th byte, character or field, counted from 1
  N-    from N'th byte, character or field, to end of line
  N-M   from N'th to M'th (included) byte, character or field
  -M    from first to M'th (included) byte, character or field

GNU coreutils online help: <https://www.gnu.org/software/coreutils/>
Full documentation at: <https://www.gnu.org/software/coreutils/cut>
or available locally via: info '(coreutils) cut invocation'
student@ai-HP-ProDesk-600-G4-MT:~/422154$ cut --version
cut (GNU coreutils) 8.30
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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.
student@ai-HP-ProDesk-600-G4-MT:~/422154$
```

```
a
s
r
h
student@ai-HP-ProDesk-600-G4-MT:~/422154$ cut -b 1,2,3 state.txt
and
aru
bih
har
tel
wes
tam
mah
goa
kar
and
and
kar
goa
wes
har
bih
student@ai-HP-ProDesk-600-G4-MT:~/422154$ cut -b 3-7 state.txt
dhra
unach
har
riyan
lanag
st be
mil n
haras
a
rnata
dhra
dhra
rnata
a
st be
riyan
har
student@ai-HP-ProDesk-600-G4-MT:~/422154$ cut -c 2,3,4 state.txt
ndh
run
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422154$ cut -c 2,3,4 state.txt
ndh
run
iha
ari
ela
est
ami
aha
oa
arn
ndh
ndh
arn
oa
est
ari
iha
student@ai-HP-ProDesk-600-G4-MT:~/422154$ cut -d " : " -f 1 state.txt
cut: the delimiter must be a single character
Try 'cut --help' for more information.
student@ai-HP-ProDesk-600-G4-MT:~/422154$ cut -d " : " -f1 state.txt
cut: the delimiter must be a single character
Try 'cut --help' for more information.
student@ai-HP-ProDesk-600-G4-MT:~/422154$ cat state.txt
andhra pradesh
arunachal pradesh
bihar
hariyana
telanagana
west bengal
tamil nadu
maharastra
goa
karnataka
andhra pradesh
andhra pradesh
karnataka
goa
west bengal
hariyana
bihar
student@ai-HP-ProDesk-600-G4-MT:~/422154$ cut --complement -d " " -f 1 state.txt
```

```
west bengal
hariyana
bihar
student@ai-HP-ProDesk-600-G4-MT:~/422154$ cut --complement -d " " -f 1 state.txt
pradesh
pradesh
bihar
hariyana
telanagana
bengal
nadu
maharastra
goa
karnataka
pradesh
pradesh
karnataka
goa
bengal
hariyana
bihar
student@ai-HP-ProDesk-600-G4-MT:~/422154$ cut -d " : " -f 1 state.txt
cut: the delimiter must be a single character
Try 'cut --help' for more information.
student@ai-HP-ProDesk-600-G4-MT:~/422154$ cut --complement -c 4-8 state.txt
andradesh
arul pradesh
bih
har
telna
wesgal
tamdu
mahra
goa
kara
andradesh
andradesh
kara
goa
wesgal
har
bih
student@ai-HP-ProDesk-600-G4-MT:~/422154$
```

```
Activities  Terminal  Feb 15 12:38
student@ai-HP-ProDesk-600-G4-MT: ~/422154
student@ai-HP-ProDesk-600-G4-MT: ...  student@ai-HP-ProDesk-600-G4-MT: ...  student@ai-HP-ProDesk-600-G4-MT: ...  student@ai-HP-ProDesk-600-G4-MT: ...
student@ai-HP-ProDesk-600-G4-MT:~/422154$ cut -b s state.txt
cut: invalid byte/character position ‘s’
Try 'cut --help' for more information.
student@ai-HP-ProDesk-600-G4-MT:~/422154$ cut -b 5 state.txt
r
a
r
y
n

l
r

a
r
r
a


y
r
student@ai-HP-ProDesk-600-G4-MT:~/422154$ cut -c 3 state.txt
d
u
h
r
l
s
m
h
a
r
d
d
r
a
s
r
h
student@ai-HP-ProDesk-600-G4-MT:~/422154$ cut -b 1,2,3 state.txt
and
aru
bih
```

6)paste

```
Activities  Terminal  Feb 15 12:33
student@ai-HP-ProDesk-600-G4-MT: ~/422154
student@ai-HP-ProDesk-600-G4-MT: ~/422154  student@ai-HP-ProDesk-600-G4-MT: ~/422154  student@ai-HP-ProDesk-600-G4-MT: ~/422154
student@ai-HP-ProDesk-600-G4-MT:~/422154$ 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

GNU coreutils online help: <https://www.gnu.org/software/coreutils/>
Full documentation at: <https://www.gnu.org/software/coreutils/paste>
or available locally via: info '(coreutils) paste invocation'
student@ai-HP-ProDesk-600-G4-MT:~/422154$ paste --version
paste (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 David M. Ihnat and David MacKenzie.
student@ai-HP-ProDesk-600-G4-MT:~/422154$ paste state.txt capital.txt
andhra pradesh  amaravathi
arunachal pradesh       hyderabad
bihar   dispur
hariyana        banglour
telanagana      chennai
west bengal
tamil nadu
maharastra
goa
karnataka
andhra pradesh
andhra pradesh
karnataka
goa
west bengal
hariyana
bihar
```

```
west bengal
hariyana
bihar
student@ai-HP-ProDesk-600-G4-MT:~/422154$ paste -d " | "state.txt capital.txt
amaravathi
hyderabad
dispur
banglour
chennai
student@ai-HP-ProDesk-600-G4-MT:~/422154$ paste -d " | " state.txt capital.txt
andhra pradesh amaravathi
arunachal pradesh hyderabad
bihar dispur
hariyana banglour
telanagana chennai
west bengal
tamil nadu
maharastra
goa
karnataka
andhra pradesh
andhra pradesh
karnataka
goa
west bengal
hariyana
bihar
student@ai-HP-ProDesk-600-G4-MT:~/422154$ paste -s -d " : " state.txt capital.txt
andhra pradesh arunachal pradesh:bihar hariyana telanagana:west bengal tamil nadu maharastra:goa karnataka andhra pradesh:andhra pradesh karnataka goa:w
est bengal hariyana bihar
amaravathi hyderabad:dispur banglour chennai
student@ai-HP-ProDesk-600-G4-MT:~/422154$ paste -z state.txt capital.txt
andhra pradesh
arunachal pradesh
bihar
hariyana
telanagana
west bengal
tamil nadu
maharastra
goa
karnataka
andhra pradesh
```


```
bihar dispur
hariyana banglour
telanagana chennai
west bengal
tamil nadu
maharastra
goa
karnataka
andhra pradesh
andhra pradesh
karnataka
goa
west bengal
hariyana
bihar
student@ai-HP-ProDesk-600-G4-MT:~/422154$ paste -s -d " : " state.txt capital.txt
andhra pradesh arunachal pradesh:bihar hariyana telanagana:west bengal tamil nadu maharastra:goa karnataka andhra pradesh:andhra pradesh karnataka goa:w
est bengal hariyana bihar
amaravathi hyderabad:dispur banglour chennai
student@ai-HP-ProDesk-600-G4-MT:~/422154$ paste -z state.txt capital.txt
andhra pradesh
arunachal pradesh
bihar
hariyana
telanagana
west bengal
tamil nadu
maharastra
goa
karnataka
andhra pradesh
andhra pradesh
karnataka
goa
west bengal
hariyana
bihar
```


```
        amaravathi
hyderabad
dispur
banglour
chennai
student@ai-HP-ProDesk-600-G4-MT:~/422154$
```

7)sort

```
Written by David M. Ihnat, David MacKenzie, and Jim Meyering.
student@ai-HP-ProDesk-600-G4-MT:~/422154$ 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
```

```
  -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

KEYDEF is F[.C][OPTS][,F[.C][OPTS]] for start and stop position, where F is a
field number and C a character position in the field; both are origin 1, and
the stop position defaults to the line's end.  If neither -t nor -b is in
effect, characters in a field are counted from the beginning of the preceding
whitespace.  OPTS is one or more single-letter ordering options [bdfgiMhnRrV],
which override global ordering options for that key.  If no key is given, use
the entire line as the key.  Use --debug to diagnose incorrect key usage.

SIZE may be followed by the following multiplicative suffixes:
% 1% of memory, b 1, K 1024 (default), and so on for M, G, T, P, E, Z, Y.

*** WARNING ***
The locale specified by the environment affects sort order.
Set LC_ALL=C to get the traditional sort order that uses
native byte values.

GNU coreutils online help: <https://www.gnu.org/software/coreutils/>
Full documentation at: <https://www.gnu.org/software/coreutils/sort>
or available locally via: info '(coreutils) sort invocation'
student@ai-HP-ProDesk-600-G4-MT:~/422154$ 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:~/422154$
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422154$ sort state.txt
andhra pradesh
andhra pradesh
andhra pradesh
arunachal pradesh
bihar
bihar
goa
goa
hariyana
hariyana
karnataka
karnataka
maharastra
tamil nadu
telanagana
west bengal
west bengal
student@ai-HP-ProDesk-600-G4-MT:~/422154$ sort -b state.txt capital.txt
amaravathi
andhra pradesh
andhra pradesh
andhra pradesh
arunachal pradesh
banglour
bihar
bihar
chennai
dispur
goa
goa
hariyana
hariyana
hyderabad
karnataka
karnataka
maharastra
tamil nadu
telanagana
west bengal
west bengal
student@ai-HP-ProDesk-600-G4-MT:~/422154$ sort -d number.txt
```

```
west bengal
student@ai-HP-ProDesk-600-G4-MT:~/422154$ sort -d number.txt

1
2
3
324
354
4
45
45
5
543
567
68980
7456
789
8
student@ai-HP-ProDesk-600-G4-MT:~/422154$ sort -f number.txt

1
2
3
324
354
4
45
45
5
543
567
68980
7456
789
8
student@ai-HP-ProDesk-600-G4-MT:~/422154$ sort -f number.txt

1
2
3
324
354
4
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422154$ sort -f number.txt

1
2
3
324
354
4
45
45
5
543
567
68980
7456
789
8
student@ai-HP-ProDesk-600-G4-MT:~/422154$ sort -f state.txt
andhra pradesh
andhra pradesh
andhra pradesh
arunachal pradesh
bihar
bihar
goa
goa
hariyana
hariyana
karnataka
karnataka
maharastra
tamil nadu
telanagana
west bengal
west bengal
student@ai-HP-ProDesk-600-G4-MT:~/422154$ sort -g number.txt

1
2
3
4
5
8
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422154$ sort -g number.txt

1
2
3
4
5
8
45
45
324
354
543
567
789
7456
68980
student@ai-HP-ProDesk-600-G4-MT:~/422154$ sort -i number.txt

1
2
3
324
354
4
45
45
5
543
567
68980
7456
789
8
student@ai-HP-ProDesk-600-G4-MT:~/422154$ sort -i state.txt
andhra pradesh
andhra pradesh
andhra pradesh
arunachal pradesh
bihar
bihar
goa
goa
```

```
68980
7456
789
8
student@ai-HP-ProDesk-600-G4-MT:~/422154$ sort -i state.txt
andhra pradesh
andhra pradesh
andhra pradesh
arunachal pradesh
bihar
bihar
goa
goa
hariyana
hariyana
karnataka
karnataka
maharastra
tamil nadu
telanagana
west bengal
west bengal
student@ai-HP-ProDesk-600-G4-MT:~/422154$ cat month.txt
january
may
december
august

student@ai-HP-ProDesk-600-G4-MT:~/422154$ sort -m month.txt
january
may
december
august

student@ai-HP-ProDesk-600-G4-MT:~/422154$ sort -h number.txt

1
2
3
4
5
8
45
```

```
354
543
567
789
7456
68980
student@ai-HP-ProDesk-600-G4-MT:~/422154$ sort -r state.txt
west bengal
west bengal
telanagana
tamil nadu
maharastra
karnataka
karnataka
hariyana
hariyana
goa
goa
bihar
bihar
arunachal pradesh
andhra pradesh
andhra pradesh
andhra pradesh
student@ai-HP-ProDesk-600-G4-MT:~/422154$ sort -R state.txt
hariyana
hariyana
andhra pradesh
andhra pradesh
andhra pradesh
maharastra
karnataka
karnataka
arunachal pradesh
bihar
bihar
goa
goa
tamil nadu
telanagana
west bengal
west bengal
student@ai-HP-ProDesk-600-G4-MT:~/422154$ sort -n number.txt
```

```
goa
tamil nadu
telanagana
west bengal
west bengal
student@ai-HP-ProDesk-600-G4-MT:~/422154$ sort -n number.txt

1
2
3
4
5
8
45
45
324
354
543
567
789
7456
68980
student@ai-HP-ProDesk-600-G4-MT:~/422154$ sort -nr number.txt
68980
7456
789
567
543
354
324
45
45
8
5
4
3
2
1

student@ai-HP-ProDesk-600-G4-MT:~/422154$ cat matrix.txt
cat: matrix.txt: No such file or directory
student@ai-HP-ProDesk-600-G4-MT:~/422154$ touch matrix.txt
student@ai-HP-ProDesk-600-G4-MT:~/422154$
```

```
cat: matrix.txt: No such file or directory
student@ai-HP-ProDesk-600-G4-MT:~/422154$ touch matrix.txt
student@ai-HP-ProDesk-600-G4-MT:~/422154$ cat matrix.txt
1 23 22 45
11 33 66 22
7 8 6 5
9 8 4 3
student@ai-HP-ProDesk-600-G4-MT:~/422154$ sort -n -k1 matrix.txt
1 23 22 45
7 8 6 5
9 8 4 3
11 33 66 22
student@ai-HP-ProDesk-600-G4-MT:~/422154$ sort -n -k1 matrix.txt
1 23 22 45
7 8 6 5
9 8 4 3
11 33 66 22
student@ai-HP-ProDesk-600-G4-MT:~/422154$ sort -n -k2 matrix.txt
7 8 6 5
9 8 4 3
1 23 22 45
11 33 66 22
student@ai-HP-ProDesk-600-G4-MT:~/422154$ sort k1 matrix.txt
sort: cannot read: k1: No such file or directory
student@ai-HP-ProDesk-600-G4-MT:~/422154$ sort -k1 matrix.txt
11 33 66 22
1 23 22 45
7 8 6 5
9 8 4 3
student@ai-HP-ProDesk-600-G4-MT:~/422154$ sort -n -k2 matrix.txt
7 8 6 5
9 8 4 3
1 23 22 45
11 33 66 22
student@ai-HP-ProDesk-600-G4-MT:~/422154$ sort -k1 matrix.txt
11 33 66 22
1 23 22 45
7 8 6 5
9 8 4 3
student@ai-HP-ProDesk-600-G4-MT:~/422154$ sort -o state.txt
^C
student@ai-HP-ProDesk-600-G4-MT:~/422154$ touch output.txt
student@ai-HP-ProDesk-600-G4-MT:~/422154$ sort -o output.txt state.txt
```

```
7 8 6 5
9 8 4 3
1 23 22 45
11 33 66 22
student@ai-HP-ProDesk-600-G4-MT:~/422154$ sort -k1 matrix.txt
11 33 66 22
1 23 22 45
7 8 6 5
9 8 4 3
student@ai-HP-ProDesk-600-G4-MT:~/422154$ sort -o state.txt
^C
student@ai-HP-ProDesk-600-G4-MT:~/422154$ touch output.txt
student@ai-HP-ProDesk-600-G4-MT:~/422154$ sort -o output.txt state.txt
student@ai-HP-ProDesk-600-G4-MT:~/422154$ cat state.txt
andhra pradesh
arunachal pradesh
bihar
hariyana
telanagana
west bengal
tamil nadu
maharastra
goa
karnataka
andhra pradesh
andhra pradesh
karnataka
goa
west bengal
hariyana
bihar
student@ai-HP-ProDesk-600-G4-MT:~/422154$ sort -u state.txt
andhra pradesh
arunachal pradesh
bihar
goa
hariyana
karnataka
maharastra
tamil nadu
telanagana
west bengal
student@ai-HP-ProDesk-600-G4-MT:~/422154$
```

8)uniq

```
student@sp-OptiPlex-7070:~$ 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}
      --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

A field is a run of blanks (usually spaces and/or TABs), then non-blank
characters.  Fields are skipped before chars.

Note: 'uniq' does not detect repeated lines unless they are adjacent.
You may want to sort the input first, or use 'sort -u' without 'uniq'.
Also, comparisons honor the rules specified by 'LC_COLLATE'.

GNU coreutils online help: <https://www.gnu.org/software/coreutils/>
Full documentation at: <https://www.gnu.org/software/coreutils/uniq>
or available locally via: info '(coreutils) uniq invocation'
student@sp-OptiPlex-7070:~$ uniq --version
uniq (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 Richard M. Stallman and David MacKenzie.
student@sp-OptiPlex-7070:~$
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422154$ uniq -i state.txt
andhra pradesh
arunachal pradesh
bihar
hariyana
telanagana
west bengal
tamil nadu
maharastra
goa
karnataka
andhra pradesh
karnataka
goa
west bengal
hariyana
bihar
student@ai-HP-ProDesk-600-G4-MT:~/422154$ uniq -d state.txt
andhra pradesh
student@ai-HP-ProDesk-600-G4-MT:~/422154$ uniq -u state.txt
andhra pradesh
arunachal pradesh
bihar
hariyana
telanagana
west bengal
tamil nadu
maharastra
goa
karnataka
karnataka
goa
west bengal
hariyana
bihar
student@ai-HP-ProDesk-600-G4-MT:~/422154$ uniq -f 1 state.txt
andhra pradesh
bihar
west bengal
tamil nadu
maharastra
andhra pradesh
karnataka
west bengal
hariyana
student@ai-HP-ProDesk-600-G4-MT:~/422154$ uniq -i state.txt
```

```
andhra pradesh
karnataka
west bengal
hariyana
student@ai-HP-ProDesk-600-G4-MT:~/422154$ uniq -i state.txt
andhra pradesh
arunachal pradesh
bihar
hariyana
telanagana
west bengal
tamil nadu
maharastra
goa
karnataka
andhra pradesh
karnataka
goa
west bengal
hariyana
bihar
student@ai-HP-ProDesk-600-G4-MT:~/422154$ uniq -s 12 state.txt
andhra pradesh
arunachal pradesh
bihar
andhra pradesh
karnataka
student@ai-HP-ProDesk-600-G4-MT:~/422154$ uniq -w 2 state.txt
andhra pradesh
arunachal pradesh
bihar
hariyana
telanagana
west bengal
tamil nadu
maharastra
goa
karnataka
andhra pradesh
karnataka
goa
west bengal
hariyana
bihar
student@ai-HP-ProDesk-600-G4-MT:~/422154$
```

```
student@ai-HP-ProDesk-600-G4-MT:~$ cd 422154
student@ai-HP-ProDesk-600-G4-MT:~/422154$ uniq state.txt
andhra pradesh
arunachal pradesh
bihar
hariyana
telanagana
west bengal
tamil nadu
maharastra
goa
karnataka
andhra pradesh
karnataka
goa
west bengal
hariyana
bihar
student@ai-HP-ProDesk-600-G4-MT:~/422154$ uniq -c state.txt
      1 andhra pradesh
      1 arunachal pradesh
      1 bihar
      1 hariyana
      1 telanagana
      1 west bengal
      1 tamil nadu
      1 maharastra
      1 goa
      1 karnataka
      2 andhra pradesh
      1 karnataka
      1 goa
      1 west bengal
      1 hariyana
      1 bihar
student@ai-HP-ProDesk-600-G4-MT:~/422154$ uniq d state.txt
uniq: d: No such file or directory
student@ai-HP-ProDesk-600-G4-MT:~/422154$ uniq -d state.txt
andhra pradesh
student@ai-HP-ProDesk-600-G4-MT:~/422154$ uniq -u state.txt
andhra pradesh
arunachal pradesh
bihar
hariyana
telanagana
west bengal
```

```
student@ai-HP-ProDesk-600-G4-MT:~/422154$ uniq d state.txt
uniq: d: No such file or directory
student@ai-HP-ProDesk-600-G4-MT:~/422154$ uniq -d state.txt
andhra pradesh
student@ai-HP-ProDesk-600-G4-MT:~/422154$ uniq -u state.txt
andhra pradesh
arunachal pradesh
bihar
hariyana
telanagana
west bengal
tamil nadu
maharastra
goa
karnataka
karnataka
goa
west bengal
hariyana
bihar
student@ai-HP-ProDesk-600-G4-MT:~/422154$ uniq -f 1 state.txt
andhra pradesh
bihar
west bengal
tamil nadu
maharastra
andhra pradesh
karnataka
west bengal
hariyana
student@ai-HP-ProDesk-600-G4-MT:~/422154$ uniq -i state.txt
andhra pradesh
arunachal pradesh
bihar
hariyana
telanagana
west bengal
tamil nadu
maharastra
goa
karnataka
andhra pradesh
karnataka
goa
west bengal
hariyana
```

9)tr

```
student@ai-HP-ProDesk-600-G4-MT:~/422154$ 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

Translation occurs if -d is not given and both SET1 and SET2 appear.
```

```
Activities   Terminal   Feb 15 11:56
student@ai-HP-ProDesk-600-G4-MT: ~/422154
student@ai-HP-ProDesk-600-G4-MT: ...   student@ai-HP-ProDesk-600-G4-MT: ...   student@ai-HP-ProDesk-600-G4-MT: ...   student@ai-HP-ProDesk-600-G4-MT: ...
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

Translation occurs if -d is not given and both SET1 and SET2 appear.
-t may be used only when translating.  SET2 is extended to length of
SET1 by repeating its last character as necessary.  Excess characters
of SET2 are ignored.  Only [:lower:] and [:upper:] are guaranteed to
expand in ascending order; used in SET2 while translating, they may
only be used in pairs to specify case conversion.  -s uses the last
specified SET, and occurs after translation or deletion.

GNU coreutils online help: <https://www.gnu.org/software/coreutils/>
Full documentation at: <https://www.gnu.org/software/coreutils/tr>
or available locally via: info '(coreutils) tr invocation'
student@ai-HP-ProDesk-600-G4-MT:~/422154$ tr --verison
tr: unrecognized option '--verison'
Try 'tr --help' for more information.
student@ai-HP-ProDesk-600-G4-MT:~/422154$
```

```
Activities   Terminal   Feb 14 16:05
student@ai-HP-ProDesk-600-G4-MT: ~/422154
student@ai-HP-ProDesk-600-G4-MT: ~/422154   student@ai-HP-ProDesk-600-G4-MT: ~/422154   student@ai-HP-ProDesk-600-G4-MT: ~/422154
Two strings must be given when translating.
Try 'tr --help' for more information.
student@ai-HP-ProDesk-600-G4-MT:~/422154$ cat state.txt | tr[a-z][A-Z]
tr[a-z][A-Z]: command not found
student@ai-HP-ProDesk-600-G4-MT:~/422154$ cat state.txt | tr [a-z][A-Z]
tr: missing operand after ‘[a-z][A-Z]’
Two strings must be given when translating.
Try 'tr --help' for more information.
student@ai-HP-ProDesk-600-G4-MT:~/422154$ cat state.txt | tr [a-z] [A-Z]
ANDHRA PRADESH
ARUNACHAL PRADESH
BIHAR
HARIYANA
TELANAGANA
WEST BENGAL
TAMIL NADU
MAHARASTRA
GOA
KARNATAKA
ANDHRA PRADESH
ANDHRA PRADESH
KARNATAKA
GOA
WEST BENGAL
HARIYANA
BIHAR
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "hello world" | tr -d s
hello world
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d [:]
my id 422154
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d [: digit]
tr: extra operand ‘digit]’
Only one string may be given when deleting without squeezing repeats.
Try 'tr --help' for more information.
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d [:digit:]
my id
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d [:alnum:]

student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d [:alpha:]
  422154
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d [:blank:]
myid422154
student@ai-HP-ProDesk-600-G4-MT:~/422154$
```

```
tr[a-z][A-Z]: command not found
student@ai-HP-ProDesk-600-G4-MT:~/422154$ cat state.txt | tr [a-z][A-Z]
tr: missing operand after ‘[a-z][A-Z]’
Two strings must be given when translating.
Try 'tr --help' for more information.
student@ai-HP-ProDesk-600-G4-MT:~/422154$ cat state.txt | tr [a-z] [A-Z]
ANDHRA PRADESH
ARUNACHAL PRADESH
BIHAR
HARIYANA
TELANAGANA
WEST BENGAL
TAMIL NADU
MAHARASTRA
GOA
KARNATAKA
ANDHRA PRADESH
ANDHRA PRADESH
KARNATAKA
GOA
WEST BENGAL
HARIYANA
BIHAR
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "hello world" | tr -d s
hello world
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d [:]
my id 422154
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d [: digit]
tr: extra operand ‘digit]’
Only one string may be given when deleting without squeezing repeats.
Try 'tr --help' for more information.
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d [:digit:]
my id
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d [:alnum:]

student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d [:alpha:]
  422154
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d [:blank:]
myid422154
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d  [:cntrl:]
my id 422154student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d [:digit:]
my id
student@ai-HP-ProDesk-600-G4-MT:~/422154$
```

```
KARNATAKA
ANDHRA PRADESH
ANDHRA PRADESH
KARNATAKA
GOA
WEST BENGAL
HARIYANA
BIHAR
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "hello world" | tr -d s
hello world
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d [:]
my id 422154
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d [: digit]
tr: extra operand ‘digit]’
Only one string may be given when deleting without squeezing repeats.
Try 'tr --help' for more information.
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d [:digit:]
my id
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d [:alnum:]

student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d [:alpha:]
  422154
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d [:blank:]
myid422154
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d  [:cntrl:]
my id 422154student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d [:digit:]
my id
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d  [:graph:]

student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d  [:lower:]
  422154
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d  [:print:]

student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d [:punct:]
my id 422154
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d [:space:]
myid422154student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d  [:upper:]
my id 422154
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d [:xdigit:]
my i
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d  [=CHAR=]
tr: CHAR: equivalence class operand must be a single character
student@ai-HP-ProDesk-600-G4-MT:~/422154$
```

```
Activities  Terminal  Feb 14 16:13
student@ai-HP-ProDesk-600-G4-MT: ~/422154
student@ai-HP-ProDesk-600-G4-MT: ~/422154   student@ai-HP-ProDesk-600-G4-MT: ~/422154   student@ai-HP-ProDesk-600-G4-MT: ~/422154

student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d [:alpha:]
  422154
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d [:blank:]
myid422154
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d  [:cntrl:]
my id 422154student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d [:digit:]
my id
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d  [:graph:]

student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d  [:lower:]
  422154
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d  [:print:]

student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d [:punct:]
my id 422154
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d [:space:]
myid422154student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d  [:upper:]
my id 422154
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d [:xdigit:]
my i
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -d  [=CHAR=]
tr: CHAR: equivalence class operand must be a single character
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -s  [=CHAR=]
tr: CHAR: equivalence class operand must be a single character
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -s [:xdigit:]
my id 42154
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -s  [:upper:]
my id 422154
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -s [:space:]
my id 422154
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -s [:punct:]
my id 422154
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -s  [:print:]
my id 42154
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -s  [:lower:]
my id 422154
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "my id 422154" | tr -s  [:graph:]
my id 42154
student@ai-HP-ProDesk-600-G4-MT:~/422154$ echo "kkkkkkkkkkkkkkoooooooooooooooooovvvv
```