

Get a GREP!

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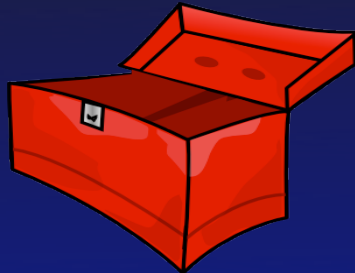
What is GREP?



Conducts searches for keywords

You supply GREP with a keyword and it prints the line that matches your criteria

your GREP tool box



Syntax



Usage with other
unix commands



Conducting
Searches

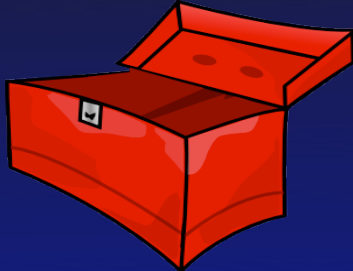


Output to
other files



Useful Websites

your **GREP** tool box



Syntax



Usage with other
unix commands



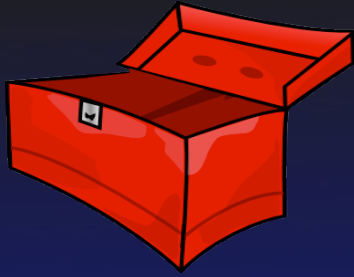
Conducting
Searches



Output to
other files



Useful Websites



SYNTAX

```
% GREP -i 'bob' names.txt
```

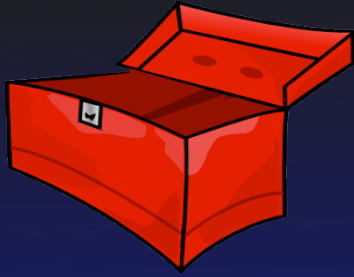
prompt

Unix
Command

options

Keyword you are
searching for

Place where
you are
searching



SYNTAX

```
% GREP -i 'bob' names.txt
```

options

-i : ignore case

-w : search for full words
(default is substrings)

-r : search recursively

-h : print without file name
(default is with file names)

-l : lists file with a match
(-L without a match)

-c : counts how many occurrences
you have

-v : invert search

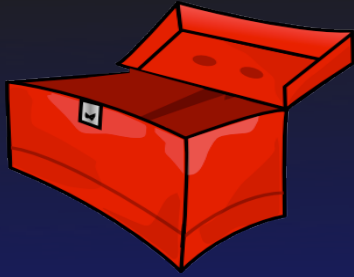
(look for everything EXCEPT the word I
supply)

-n : tells which line number

-A # : supplies # of lines after
your keyword

-B # : supplies # of lines before
your keyword

-m # : stop after max matches



SYNTAX

```
% GREP -i 'bob' names.txt
```

keyword



GREP = Global Regular Expression Print

Looks for a sequence of characters

^ (Caret) : match expression at the **start** of a line

\$ (Dollar Sign) : match expression at the **end** of a line

\ (Back Slash) : **turn off** the special meaning of the next character

. (Period)=match a single character of any value, except end of line.

* (Asterisk)=match zero or more of the preceding character or expression.

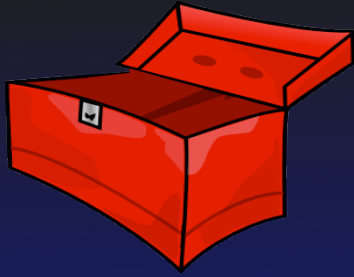
[] (Brackets) : match any **one** of the enclosed characters

[aeiou].

Use Hyphen "-" for a range, as in [0-9].

[^]

match any one character **except** those enclosed in [], as in [^0-9].



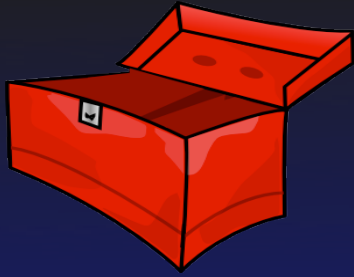
SYNTAX

% GREP -i 'bob' names.txt

keyword



- % grep 'bob' names.txt = returns **bob** in the file names.txt
- % grep '^bob' names.txt = returns bob at the **start** of the line
- % grep 'bob\$' names.txt = returns lines with bob at the **end** of the line
- % grep '^bob\$' names.txt = returns lines that contain **only** bob
- % grep '^\$' names.txt = returns **empty** lines
- % grep 'b.b' names.txt = returns a 3 letter word that starts and ends with b (could return bob, bib, bab, bub, btb,...)
- % grep '9\0' numbers.txt = take next character **seriously**
- % grep '[0-9][0-9]' numbers.txt = returns **pair** of numerical digits



SYNTAX

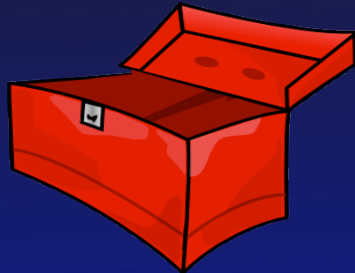
```
% GREP -i "bob" names.txt
```

search location



- can search *single* files
 - % GREP 'bob' names.txt
- can search *multiple* files at once
 - % GREP 'bob' names.txt names2.txt
- can search *entire* directories
 - % GREP 'bob' ~/home/documents/
- can search an entire directory *recursively*
 - % GREP -r 'bob' ~/home/

your GREP tool box



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CONDUCTING SEARCHES

Places you could use GREP

- Generally looking through a file for a particular line
- Looking for data
- Looking for files in a directory
- Looking through code

Looking for keywords in a directory

ENTIRE directories

can search an entire directory
recursively

```
% GREP -c 'bob' ~/home/documents/
```

```
% GREP -r 'bob' ~/home/
```

Output

```
/documents/file.txt: 0  
/documents/file2.txt: 5  
/documents/file3.txt : 7
```

```
/documents/file.txt: bob  
/folder/file3.txt: bob has friends
```

Generally looking through files

data.txt

star 2484	9.16	+0.16	+0.15	2	0520222484
star 3034	11.76	+0.46	+0.09	3	0520223034
planet 3241	13.78	+0.57	+0.06	3	0520223241
STAR 1491	16.42	+0.60	+0.25	1	0520221491
star 1593	11.12	+0.75	+0.30	3	0520221593
galaxy 3122	11.92	+0.73	+0.19	1	0520223122
starburst 778	8.90	+0.99	+0.22	4	0520223128

GREP -iw 'star' data.txt

Output

star 2484	9.16	+0.16	+0.15	2	0520222484
star 3034	11.76	+0.46	+0.09	3	0520223034
STAR 1491	16.42	+0.60	+0.25	1	0520221491
star 1593	11.12	+0.75	+0.30	3	0520221593

Looking for data

data.txt

star 2484	9.16	+0.16	+0.15	2	0520222484
star 3034	11.76	+0.46	+0.09	3	0520223034
planet 3241	13.78	+0.57	+0.06	3	0520223241
STAR 1491	16.42	+0.60	+0.25	1	0520221491
star 1593	11.12	+0.75	+0.30	3	0520221593
galaxy 3122	11.92	+0.73	+0.19	1	0520223122

GREP '11\.' data.txt

Output

star 3034	11.76	+0.46	+0.09	3	0520223034
star 1593	11.12	+0.75	+0.30	3	0520221593
galaxy 3122	11.92	+0.73	+0.19	1	0520223122

Looking through code

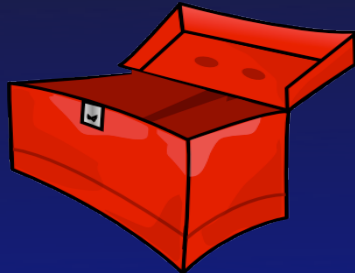
```
readcol,'ple.stauffer.with.bi',stname,stname2, stv, stbmV, stvmr, strmi,  
  
usersym, cos(findgen(32.)*!PI*2./32.),sin(findgen(32.)*!PI*2./32.),/fill  
----  
plot,BKbmV,BKv2, yrange = [18,8],xrange = [0,2.],/ystyle,/xstyle,$  
  xtitle = 'B-V', ytitle = 'V',charsize = 2.0,$  
  color = black, background = white,/nodata  
oplot, jmBMV,jmV, color = black, psym = 1, symsize = 0.75  
device, /close
```

GREP -n -B3 -A2 'oplot' code.txt

Output

```
5 - plot,BKbmV,BKv2, yrange = [18,8],xrange = [0,2.],/ystyle,/xstyle,$  
6 - xtitle = 'B-V', ytitle = 'V',charsize = 2.0,$  
7- color = black, background = white,/nodata  
8 : oplot, jmBMV,jmV, color = black, psym = 1, symsize = 0.75  
9 - device, /close
```

your GREP tool box



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USAGE WITH OTHER UNIX COMMANDS

```
ps aux | GREP firefox
```

unix command

pipe

search

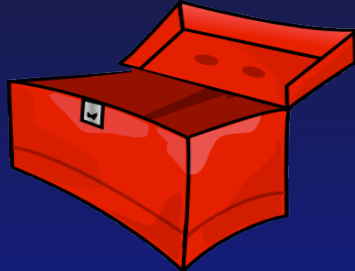
```
ps aux | GREP firefox
```

supplies current
snapshot of all the
processes
running

reports all the
firefox processes

```
*Bonus* : % kill -9 7872
```

your GREP tool box



Syntax



Usage with other
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Conducting
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Useful Websites



OUTPUT TO A FILE

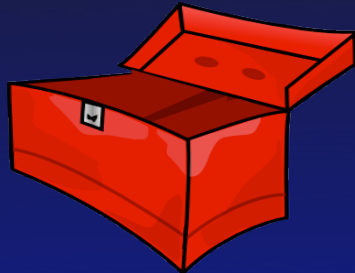
Default for GREP is to output to the terminal window

```
GREP '+45' data.txt > declination_45.txt
```

Output to a new file

A white arrow originates from the text 'Output to a new file' and points diagonally upwards towards the file name 'declination_45.txt' in the command line above.

your GREP tool box



Syntax



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Useful Websites



WEBSITES

- **1. <http://www.thegeekstuff.com/2009/03/15-practical-unix-grep-command-examples/> **
- 2. <http://www.cyberciti.biz/faq/howto-use-grep-command-in-linux-unix/>
- 3. computerhope.com/unix.ugrep.htm
- 4. <http://www.robelle.com/smugbook/regexpr.html>
- 5. en.wikipedia.org/wiki/Grep
- 6. <http://www.uccs.edu/~ahitchco/grep/>