

# Manipulating Data on Linux

- Viewing and Manipulating the data
  - The grep family

```
$ cat demo_file  
THIS LINE IS THE 1ST UPPER CASE LINE IN THIS FILE.  
this line is the 1st lower case line in this file.  
This Line Has All Its First Character Of The Word With Upper Case.  
  
Two lines above this line is empty.  
And this is the last line.
```

```
$ grep "this" demo_file  
this line is the 1st lower case line in this file.  
Two lines above this line is empty.  
And this is the last line.
```

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```
$ cp demo_file demo_file1

$ grep "this" demo_*
demo_file:this line is the 1st lower case line in this file.
demo_file:Two lines above this line is empty.
demo_file:And this is the last line.
demo_file1:this line is the 1st lower case line in this file.
demo_file1:Two lines above this line is empty.
demo_file1:And this is the last line.
```

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```
$ grep -l this demo_*  
demo_file  
demo_file1
```

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```
$ grep -c "go" demo_text  
6
```

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```
$ grep "lines.*empty" demo_file  
Two lines above this line is empty.
```

- `?` The preceding item is optional and matched at most once.
- `*` The preceding item will be matched zero or more times.
- `+` The preceding item will be matched one or more times.
- `{n}` The preceding item is matched exactly `n` times.
- `{n,}` The preceding item is matched `n` or more times.
- `{,m}` The preceding item is matched at most `m` times.
- `{n,m}` The preceding item is matched at least `n` times, but not more than `m` times.

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```
$ grep "^Nov 10" messages.1
Nov 10 01:12:55 gs123 ntpd[2241]: time reset +0.177479 s
Nov 10 01:17:17 gs123 ntpd[2241]: synchronized to LOCAL(0), stratum 10
Nov 10 01:18:49 gs123 ntpd[2241]: synchronized to 15.1.13.13, stratum 3
Nov 10 13:21:26 gs123 ntpd[2241]: time reset +0.146664 s
Nov 10 13:25:46 gs123 ntpd[2241]: synchronized to LOCAL(0), stratum 10
Nov 10 13:26:27 gs123 ntpd[2241]: synchronized to 15.1.13.13, stratum 3
```

```
$ grep -c "^$" messages anaconda.log
messages:0
anaconda.log:3
```

```
$ grep "terminating.$" messages
Jul 12 17:01:09 cloneme kernel: Kernel log daemon terminating.
Oct 28 06:29:54 cloneme kernel: Kernel log daemon terminating.
```

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```
$ grep -i "^[^aeiou]" /usr/share/dict/linux.words
1080
10-point
10th
11-point
12-point
16-point
18-point
1st
2
```

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```
$ grep -o "is.*line" demo_file  
is line is the 1st lower case line  
is line  
is is the last line
```



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```
$ grep -v "go" demo_text  
4. Vim Word Navigation
```

```
$ cat test-file.txt  
a  
b  
c  
d  
  
$ grep -v -e "a" -e "b" -e "c" test-file.txt  
d
```