# ASSIGNMENT-4 : FILTER COMMANDS AND REGULAR EXPRESSIONS

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## FILTER COMMANDS

**vishakan@vishakan-legion:~$ cat>filter.txt**

```
1234    Juan    14.25
4321    George  21.11
6781    Anna    16.77
1451    Ben     21.77
2277    Tuan    18.77
```

**vishakan@vishakan-legion:~$ sort filter.txt**

```
1234    Juan    14.25
1451    Ben     21.77
2277    Tuan    18.77
4321    George  21.11
6781    Anna    16.77
```

**vishakan@vishakan-legion:~$ awk '{print($1,$3,$2)}' filter.txt|tee filter2.txt**

```
1234 14.25 Juan
4321 21.11 George
6781 16.77 Anna
1451 21.77 Ben
2277 18.77 Tuan
```

**vishakan@vishakan-legion:~$ tac filter2.txt|tee filter3.txt**

```
2277 18.77 Tuan
1451 21.77 Ben
6781 16.77 Anna
4321 21.11 George
1234 14.25 Juan
```

**vishakan@vishakan-legion:~$ tail -1 filter3.txt|tee filter4.txt**

```
1234 14.25 Juan
```

**vishakan@vishakan-legion:~$ cat>rate**

1420   12.56   45
3456   14.56   22
2341   45.12   34
1122   23.56   28
1443   23.23   19
2351   67.90   56
8001   7.00    14


**vishakan@vishakan-legion:~$ wc -l rate**

7 rate


**vishakan@vishakan-legion:~$ sort -k 2 -n rate|tail -1**

2351   67.90   56


**vishakan@vishakan-legion:~$ sort rate**

1122   23.56   28
1420   12.56   45
1443   23.23   19
2341   45.12   34
2351   67.90   56
3456   14.56   22
8001   7.00    14


**vishakan@vishakan-legion:~$ cat>lcase**

this is all in lowercase


**vishakan@vishakan-legion:~$ cat lcase|tr '[a-z]' '[A-Z]'**

THIS IS ALL IN LOWERCASE

# REGULAR EXPRESSIONS

### vishakan@vishakan-legion:~$ cat doc
Apple
Balloon
Cat
Dog
Elephant
Fowl
1
2
2wenty 4our
3irty 5ive


### vishakan@vishakan-legion:~$ grep "[aeiou]" doc
Apple
Balloon
Cat
Dog
Elephant
Fowl
2wenty 4our
3irty 5ive


### vishakan@vishakan-legion:~$ grep "[^aeiou]" doc
Apple
Balloon
Cat
Dog
Elephant
Fowl
1
2
2wenty 4our
3irty 5ive


### vishakan@vishakan-legion:~$ grep "[a-z,A-Z]*$" doc
Apple
Balloon
Cat
Dog
Elephant
Fowl
1

2
2wenty 4our
3irty 5ive

**vishakan@vishakan-legion:~$ ls -l ~| grep -P ".-rw.*"**
-rw-r--rw-  1 vishakan vishakan   63 Aug  5 22:45 doc


**vishakan@vishakan-legion:~$ cat>email**
abcd@gmail.com
sample@domain.edu
vish@domain.edu
percy@yahoo.com


**vishakan@vishakan-legion:~$ grep "\<[a-z,A-Z]*@*.edu" email**
sample@domain.edu
vish@domain.edu



**vishakan@vishakan-legion:~$ grep "\<[a-z,A-Z]*@*.com" email**
abcd@gmail.com
percy@yahoo.com


**vishakan@vishakan-legion:~$ grep "^.\{3\}$" doc**
Cat
Dog


**vishakan@vishakan-legion:~$ grep "^.\{4,\}$" doc**
Apple
Balloon
Elephant
Fowl
2wenty 4our
3irty 5ive


**vishakan@vishakan-legion:~$ grep "^.\{,3\}$" doc**
Cat
Dog
1
2

**vishakan@vishakan-legion:~$ grep -c ^$ doc**
0


**vishakan@vishakan-legion:~$ cat sample**
CAPITAL
Capcase
smallcase


**vishakan@vishakan-legion:~$ grep "[A-Z]" sample**
CAPITAL
Capcase


**vishakan@vishakan-legion:~$ grep "\<[A-Z]" sample**
CAPITAL
Capcase


**vishakan@vishakan-legion:~$ cat unix**
This is UNIX lab.
Be like UNIX
UNIX takes time to learn.
UNIX is very useful


**vishakan@vishakan-legion:~$ grep "\.$" unix**
This is UNIX lab.
UNIX takes time to learn.


**vishakan@vishakan-legion:~$ cat cal**
This July of 2019 I turn 19.
This Jan of 2019 is the new month.
There are 6 months between Jan and July.


**vishakan@vishakan-legion:~$ grep July ***
cal:This July of 2019 I turn 19.
cal:There are 6 months between Jan and July.

**vishakan@vishakan-legion:~$ grep -i July ***
cal:This July of 2019 I turn 19.
cal:There are 6 months between Jan and July.


**vishakan@vishakan-legion:~$ grep -i [^July] ***
cal:This July of 2019 I turn 19.
cal:This Jan of 2019 is the new month.
cal:There are 6 months between Jan and July.
doc:Apple
doc:Balloon
doc:Cat
doc:Dog
doc:Elephant
doc:Fowl
doc:1
doc:2
doc:2wenty 4our
doc:3irty 5ive
email:abcd@gmail.com
email:sample@domain.edu
email:vish@domain.edu
email:percy@yahoo.com
sample:CAPITAL
sample:Capcase
sample:smallcase
unix:This is UNIX lab.
unix:Be like UNIX
unix:UNIX takes time to learn.
unix:UNIX is very useful


**vishakan@vishakan-legion:~$ cat foo**
abcde
ABCDE
12345
123re543
wrw302


**vishakan@vishakan-legion:~$ grep "^[^a-z]" foo**
ABCDE
12345
123re543

**vishakan@vishakan-legion:~$ grep -v "^[a-z]" foo**
ABCDE
12345
123re543


*//Therefore, the above 2 commands are similar. ^[^a-z] matches patterns with lines not starting with a lowercase alphabet. Grep -v is an inverted grep (i.e. it returns the non-matching lines of the pattern*
*^[a-z] i.e starting with a lowercase alphabet.*


**vishakan@vishakan-legion:~$ cat foo**
abcde
ABCDE
12345.
123re543.
Wrw302;



**vishakan@vishakan-legion:~$ grep "\>[.;]" foo**
12345.
123re543.
wrw302;