

```
localhost:~/new# cat sample.txt
101 : Pune :Maharashtra : 5200
100 : Chennai : Tamil Nadu : 4800
103 : Delhi : Delhi : 7000
104 : Kolkata : West Bengal : 1200
102 : Mumbai : Maharashtra : 5200
localhost:~/new# cut -d ':' -f2 sample.txt
Pune
Chennai
Delhi
Kolkata
Mumbai
localhost:~/new# cut -d ':' -f2,3 sample.txt
Pune :Maharashtra
Chennai : Tamil Nadu
Delhi : Delhi
Kolkata : West Bengal
Mumbai : Maharashtra
localhost:~/new#
```

```
horizontally with tab as a separator
this is a second file  we are learning filter and pattern matching commands    this is day 3 of the training
localhost:~/new# cat sample.txt
01 : Pune :Maharashtra : 5200
00 : Chennai : Tamil Nadu : 4800
03 : Delhi : Delhi : 7000
04 : Kolkata : West Bengal : 1200
02 : Mumbai : Maharashtra : 5200
localhost:~/new# cut -c 1-3 sample.txt
01
00
03
04
02
localhost:~/new# cut -c 4-10 sample.txt
: Pune
: Chen
: Delh
: Kolk
: Mumb
localhost:~/new# sort sample.txt
100 : Chennai : Tamil Nadu : 4800
101 : Pune :Maharashtra : 5200
102 : Mumbai : Maharashtra : 5200
103 : Delhi : Delhi : 7000
104 : Kolkata : West Bengal : 1200
localhost:~/new# sort sample.txt -r
104 : Kolkata : West Bengal : 1200
103 : Delhi : Delhi : 7000
102 : Mumbai : Maharashtra : 5200
```

```
localhost:~/new# cat sed_test
```

```
Hi World!
```

```
This is sed simple example
```

```
Hi everyone!
```

```
localhost:~/new# sed 's/!/$/g' sed_test
```

```
Hi World$
```

```
This is sed simple example
```

```
Hi everyone$
```

```
localhost:~/new# cat sed_test
```

```
Hi World!
```

```
This is sed simple example
```

```
Hi everyone!
```

```
localhost:~/new# sed '/simple/d' sed_test
```

```
Hi World!
```

```
Hi everyone!
```

```
localhost:~/new# sed '/Hi/a Welcome to sed' sed_test
```

```
Hi World!
```

```
Welcome to sed
```

```
This is sed simple example
```

```
Hi everyone!
```

```
Welcome to sed
```

```
localhost:~/new# sed -n '/Hi/p' sed_test
```

```
Hi World!
```

```
Hi everyone!
```

```
localhost:~/new# █
```

```
localhost:~/new# cat emplo.txt
```

```
John 28 50000  
Alice 32 60000  
Bob 25 45000  
Eve 29 52000  
Charlie 35 62000
```

```
localhost:~/new# awk '{print $0}' emplo.txt
```

```
John 28 50000  
Alice 32 60000  
Bob 25 45000  
Eve 29 52000  
Charlie 35 62000
```

```
localhost:~/new# awk '{print $1 , $3}' emplo.txt
```

```
John 50000  
Alice 60000  
Bob 45000  
Eve 52000  
Charlie 62000
```

```
localhost:~/new# awk $3>50000 '{print "Name Salary"} {print $1 $3}' emplo.txt
```

```
localhost:~/new# awk '$3>50000 {print "Name Salary"} {print $1 $3}' emplo.txt
```

```
John50000  
Name Salary  
Alice60000  
Bob45000
```

```
localhost:~/new# cat test.c
#include<stdio.h>
int main()
{
    printf("Wellcome to Linux\n");
    int a=5, b=4, c;
    c=a+b;
    printf("Sum = %d\n", c);
    return 0;
}
localhost:~/new# grep ^int test.c
int main()
int a=5, b=4, c;
localhost:~/new#
```

```
localhost:~/new# cat f1
This is a test file for demonstrating paste command
paste is a useful filter command
we can merge two or more file horizontally with tab as a separator
localhost:~/new# cat f2
This is a second file
we are learning filter and pattern matching commands
this is day 3 of the training
localhost:~/new# paste f1 f2
This is a test file for demonstrating paste command      This is a second file
paste is a useful filter command      we are learning filter and pattern match
ing commands
we can merge two or more file horizontally with tab as a separator      this is
day 3 of the training
localhost:~/new# paste f1 f2
This is a test file for demonstrating paste command      This is a second file
paste is a useful filter command      we are learning filter and pattern matching commands
we can merge two or more file horizontally with tab as a separator      this is day 3 of the training
localhost:~/new# paste -d ':' f1 f2
This is a test file for demonstrating paste command:This is a second file
paste is a useful filter command:we are learning filter and pattern matching commands
we can merge two or more file horizontally with tab as a separator:this is day 3 of the training
localhost:~/new# paste -s f1 f2
This is a test file for demonstrating paste command      paste is a useful filter command      we can merge two or more file ho
rizontally with tab as a separator
This is a second file      we are learning filter and pattern matching commands      this is day 3 of the training
localhost:~/new#
```

File permission commands:

```
chmod  
chown  
umask  
localhost:~/new# tail +5 filecmd  
clear  
exit  
uname  
echo  
seq  
history
```

Filter and pattern matching commands:

```
more  
less  
head  
tail  
cut  
paste  
tr  
sort  
uniq  
cmp  
diff  
grep  
sed  
awk
```

uname
echo
seq
history

Filter and pattern matching commands:

more
less
head
tail
cut
paste
tr
sort
uniq
cmp
diff
grep
sed
awk

File permission commands:

chmod
chown
umask

~
(END)

diff
grep
sed

localhost:~/new# more filecmd
Basic linux commands are

date
cal
clear
exit
uname
echo
seq
history

Filter and pattern matching commands:

more
less
head
tail
cut
paste
tr
sort
uniq
cmp
diff

Basic linux commands are

date
cal
clear
exit
name nano 4.9.3 filecmd Modified
echo
seq
history

Filter and pattern matching commands:

more
less
head
tail
cut
paste
tr
sort
uniq
cmp
diff
grep
sed

localhost:~/new# more filecmd

```
(END)[1]+ Stopped less filecmd
```

```
localhost:~/new# head filecmd
```

```
Basic linux commands are
```

```
date
```

```
cal
```

```
clear
```

```
exit
```

```
uname
```

```
echo
```

```
seq
```

```
history
```

```
localhost:~/new# head -n 5 filecmd
```

```
Basic linux commands are
```

```
date
```

```
cal
```

```
clear
```

```
localhost:~/new# tail filecmd
```

```
diff
```

```
grep
```

```
sed
```

```
awk
```

```
File permission commands:
```

```
chmod
```

```
chown
```

```
umask
```

```
localhost:~/new# tail +5 filecmd
```

```
103 : Delhi : Delhi : 7000
104 : Kolkata : West Bengal : 1200
localhost:~/new# sort sample.txt -r
104 : Kolkata : West Bengal : 1200
103 : Delhi : Delhi : 7000
102 : Mumbai : Maharashtra : 5200
101 : Pune :Maharashtra : 5200
100 : Chennai : Tamil Nadu : 4800
localhost:~/new# sort -t ':' -k2 sample.txt
100 : Chennai : Tamil Nadu : 4800
103 : Delhi : Delhi : 7000
104 : Kolkata : West Bengal : 1200
102 : Mumbai : Maharashtra : 5200
101 : Pune :Maharashtra : 5200
localhost:~/new# sort -t ':' -k3 sample.txt
103 : Delhi : Delhi : 7000
102 : Mumbai : Maharashtra : 5200
100 : Chennai : Tamil Nadu : 4800
104 : Kolkata : West Bengal : 1200
101 : Pune :Maharashtra : 5200
localhost:~/new# sort -t ':' -k4 sample.txt
104 : Kolkata : West Bengal : 1200
100 : Chennai : Tamil Nadu : 4800
101 : Pune :Maharashtra : 5200
102 : Mumbai : Maharashtra : 5200
103 : Delhi : Delhi : 7000
localhost:~/new# sort -t ':' -k3 sample.txt -r
101 : Pune :Maharashtra : 5200
104 : Kolkata : West Bengal : 1200
100 : Chennai : Tamil Nadu : 4800
```

```

04 | Kolkata | West Bengal | 1200
02 | Mumbai | Maharashtra | 5200
localhost:~/new# tr ':' '|' < sample.txt > s1.txt
localhost:~/new# ls
f1          f2          filecmd      s1.txt      sample.txt
localhost:~/new# cat s1.txt
01 | Pune |Maharashtra | 5200
00 | Chennai | Tamil Nadu | 4800
03 | Delhi | Delhi | 7000
04 | Kolkata | West Bengal | 1200
02 | Mumbai | Maharashtra | 5200
localhost:~/new# tr ':0' '|' < sample.txt
$1 | Pune |Maharashtra | 52$$
$$ | Chennai | Tamil Nadu | 48$$
$3 | Delhi | Delhi | 7$$$
$4 | Kolkata | West Bengal | 12$$
$2 | Mumbai | Maharashtra | 52$$
localhost:~/new# tr -s '0' < sample.txt
01 : Pune :Maharashtra : 520
0 : Chennai : Tamil Nadu : 480
03 : Delhi : Delhi : 70
04 : Kolkata : West Bengal : 120
02 : Mumbai : Maharashtra : 520
localhost:~/new# tr -d '0' < sample.txt
1 : Pune :Maharashtra : 52
: Chennai : Tamil Nadu : 48
3 : Delhi : Delhi : 7
4 : Kolkata : West Bengal : 12
2 : Mumbai : Maharashtra : 52
localhost:~/new#

```

```
localhost:~/new# cat example.txt
This is Linux Training
This is Linux Training
This is Linux Training
Learn commands well
This is Linux Training
localhost:~/new# uniq example.txt
This is Linux Training
Learn commands well
This is Linux Training
localhost:~/new# cat sample.txt
101 : Pune :Maharashtra : 5200
100 : Chennai : Tamil Nadu : 4800
103 : Delhi : Delhi : 7000
104 : Kolkata : West Bengal : 1200
102 : Mumbai : Maharashtra : 5200
localhost:~/new# cat s1.txt
101 | Pune |Maharashtra | 5200
100 | Chennai | Tamil Nadu | 4800
103 | Delhi | Delhi | 7000
104 | Kolkata | West Bengal | 1200
102 | Mumbai | Maharashtra | 5200
localhost:~/new# cmp sample.txt s1.txt
sample.txt s1.txt differ: char 5, line 1
```

```
localhost:~/new# cat sed_test
Hello World!
This is sed simple example
Hello everyone!
```

```
localhost:~/new# sed 's/Hello/Hi/' sed_test
Hi World!
This is sed simple example
Hi everyone!
```

```
localhost:~/new# sed -i 's/Hello/Hi/' sed_test
localhost:~/new# cat sed_test
Hi World!
This is sed simple example
Hi everyone!
```

```
localhost:~/new# sed 's/!/$/g' sed_test
Hi World$
This is sed simple example
Hi everyone$
```

```
localhost:~/new# cat sed_test
Hi World!
This is sed simple example
Hi everyone!
```

```
localhost:~/new# sed '/simple/d' sed_test
Hi World!
```

```
Alice 32 60000
localhost:~/new# awk '{print NR , $0}' emplo.txt
1 John 28 50000
2 Alice 32 60000
3 Bob 25 45000
4 Eve 29 52000
5 Charlie 35 62000
6
localhost:~/new# ls -l
total 40
-rw-r--r-- 1 root root 125 Aug 1 19:58 50000
-rw-r--r-- 1 root root 73 Aug 1 19:56 emplo.txt
-rw-r--r-- 1 root root 112 Aug 1 19:43 example.txt
-rw-r--r-- 1 root root 151 Aug 1 19:33 f1
-rw-r--r-- 1 root root 106 Aug 1 19:34 f2
-rw-r--r-- 1 root root 222 Aug 1 19:24 filecmd
-rw-r--r-- 1 root root 163 Aug 1 19:39 s1.txt
-rw-r--r-- 1 root root 163 Aug 1 19:30 sample.txt
-rw-r--r-- 1 root root 51 Aug 1 19:53 sed_test
-rw-r--r-- 1 root root 123 Aug 1 19:50 test.c
localhost:~/new# ls -l s1.txt
-rw-r--r-- 1 root root 163 Aug 1 19:39 s1.txt
localhost:~/new# chmod u+x s1.txt
localhost:~/new# ls -l s1.txt
-rwxr--r-- 1 root root 163 Aug 1 19:39 s1.txt
localhost:~/new# chmod 462 s1.txt
localhost:~/new# ls -l s1.txt
-r--rw--w- 1 root root 163 Aug 1 19:39 s1.txt
localhost:~/new#
```



```
localhost:~/new# awk '{print $1 , $3}' emplo.txt
John 50000
Alice 60000
Bob 45000
Eve 52000
Charlie 62000

localhost:~/new# awk $3>50000 '{print "Name Salary"} {print $1 $3}' emplo.txt
localhost:~/new# awk '$3>50000 {print "Name Salary"} {print $1 $3}' emplo.txt
John50000
Name Salary
Alice60000
Bob45000
Name Salary
Eve52000
Name Salary
Charlie62000

localhost:~/new# awk '{total+=$3} END {print "Total Salary=", total}' emplo.txt
Total Salary= 269000
localhost:~/new# awk '/Alice/' emplo.txt
Alice 32 60000
localhost:~/new# awk '{print NR , $0}' emplo.txt
1 John 28 50000
2 Alice 32 60000
3 Bob 25 45000
4 Eve 29 52000
5 Charlie 35 62000
6
localhost:~/new#
```

```
This is Linux Training
localhost:~/new# cat sample.txt
101 : Pune :Maharashtra : 5200
100 : Chennai : Tamil Nadu : 4800
103 : Delhi : Delhi : 7000
104 : Kolkata : West Bengal : 1200
102 : Mumbai : Maharashtra : 5200
localhost:~/new# cat s1.txt
101 | Pune |Maharashtra | 5200
100 | Chennai | Tamil Nadu | 4800
103 | Delhi | Delhi | 7000
104 | Kolkata | West Bengal | 1200
102 | Mumbai | Maharashtra | 5200
localhost:~/new# cmp sample.txt s1.txt
sample.txt s1.txt differ: char 5, line 1
localhost:~/new# diff sample.txt s1.txt
--- sample.txt
+++ s1.txt
@@ -1,5 +1,5 @@
-101 : Pune :Maharashtra : 5200
-100 : Chennai : Tamil Nadu : 4800
-103 : Delhi : Delhi : 7000
-104 : Kolkata : West Bengal : 1200
-102 : Mumbai : Maharashtra : 5200
+101 | Pune |Maharashtra | 5200
+100 | Chennai | Tamil Nadu | 4800
+103 | Delhi | Delhi | 7000
+104 | Kolkata | West Bengal | 1200
+102 | Mumbai | Maharashtra | 5200
localhost:~/new# nano
```

```
02 : Mumbai : Maharashtra : 5200
03 : Delhi : Delhi : 7000
localhost:~/new# sort -t ':' -k3 sample.txt -r
01 : Pune :Maharashtra : 5200
04 : Kolkata : West Bengal : 1200
00 : Chennai : Tamil Nadu : 4800
02 : Mumbai : Maharashtra : 5200
03 : Delhi : Delhi : 7000
localhost:~/new# cat sample.txt
01 : Pune :Maharashtra : 5200
00 : Chennai : Tamil Nadu : 4800
03 : Delhi : Delhi : 7000
04 : Kolkata : West Bengal : 1200
02 : Mumbai : Maharashtra : 5200
localhost:~/new# tr ':' '|' < sample.txt
01 | Pune |Maharashtra | 5200
00 | Chennai | Tamil Nadu | 4800
03 | Delhi | Delhi | 7000
04 | Kolkata | West Bengal | 1200
02 | Mumbai | Maharashtra | 5200
localhost:~/new# tr ':' '|' < sample.txt > s1.txt
localhost:~/new# ls
f1      f2      filecmd  s1.txt  sample.txt
localhost:~/new# cat s1.txt
01 | Pune |Maharashtra | 5200
00 | Chennai | Tamil Nadu | 4800
03 | Delhi | Delhi | 7000
04 | Kolkata | West Bengal | 1200
02 | Mumbai | Maharashtra | 5200
localhost:~/new#
```