

```
basicsys@mars~/lec4>cat F1
a:b:c:d:e:f:g:h:i
1234:5678:3:44:55:66:77
A : B : C
xyz::ab::cd::rqw
abc def
gg 1234 567 89

basicsys@mars~/lec4>cut -d":" -f3 F1
c
3
    C

abc def
gg 1234 567 89

basicsys@mars~/lec4>cut -d" " -f3 F1
a:b:c:d:e:f:g:h:i
1234:5678:3:44:55:66:77

xyz::ab::cd::rqw

567

basicsys@mars~/lec4>cut -d":" -f1,3-5 F1
a:c:d:e
1234:3:44:55
A : C
xyz::ab:
abc def
gg 1234 567 89

basicsys@mars~/lec4>cut -d" " -f1,3-5
F1
a:b:c:d:e:f:g:h:i
1234:5678:3:44:55:66:77
A :
xyz::ab::cd::rqw
abc
gg 567 89
```

```
basicsys@mars~/lec4>cut -d":" -f1,3,5- F1
a:c:e:f:g:h:i
1234:3:55:66:77
A : C
xyz::cd::rqw
abc def
gg 1234 567 89

basicsys@mars~/lec4>cut -s -d":" -f3-5 F1
c:d:e
3:44:55
    C
:ab:
basicsys@mars~/lec4>cut -s -d" " -f3-5 F1
:

567 89

basicsys@mars~/lec4>cut -s -d":" -f3-5 --output-
delimiter=xyz F1
cxyzdxyze
3xyz44xyz55
    C
xyzabxyz

basicsys@mars~/lec4>cat P1
read x
y=$(wc -l $x)
echo $y >|F2
cut -d" " -f1 F2

basicsys@mars~/lec4>chmod u+x P1

basicsys@mars~/lec4>P1
F1
6
```

```
basicssys@mars~/lec4>cat P1
read x
wc -l $x >|F2
y=$(cut -d" " -f1 F2)
sum=0
while [ $y -ge 1 ]
do
  head -$y $x >| F2
  z=$(tail -1 F2)
  sum=$((sum+z))
  y=$((y-1))
done
echo $sum
```

```
basicssys@mars~/lec4>cat F1
10
100
3
20
basicssys@mars~/lec4>P1
F1
133
```

```
basicssys@mars~/lec4>cat P1
read x
sum=0
while read z
do
  sum=$((sum+z))
done< $x
echo $sum
```

```
basicssys@mars~/lec4>P1
F1
133
```

```
basicssys@mars~/lec4>cat P1
sum=0
while read x
do
  if [ $x -eq 30 ]
  then
    continue
  fi
  sum=$((sum+x))
done
echo $sum
```

```
basicssys@mars~/lec4>P1
10
30
20
30
5
35
```

```
basicssys@mars~/lec4>cat P1
sum=0
while read x
do
  if [ $x -eq 30 ]
  then
    break
  fi
  sum=$((sum+x))
done
echo $sum
```

```
basicssys@mars~/lec4>P1
10
15
30
25
```

```
basicsys@mars~/lec4>cat P1
while read x
do
  m=0
  while read y
  do
    if [ $x -eq $y ]
    then
      m=$((m+1))
    fi
  done<F2
  echo "$x $m"
done<F1
```

```
basicsys@mars~/lec4>cat F1
10
20
15
```

```
basicsys@mars~/lec4>cat F2
15
10
15
10
10
```

```
basicsys@mars~/lec4>P1
10 3
20 0
15 2
```

```
basicsys@mars~/lec4>cat P1
for x in aa bb cc
do
  echo $x $x
done
```

```
basicsys@mars~/lec4>P1
aa aa
bb bb
cc cc
```

```
basicsys@mars~/lec4>cat P1
for x in aa bb cc
do
  echo $x $x
done
```

```
basicsys@mars~/lec4>P1
aa aa
bb bb
cc cc
```

```
basicsys@mars~/lec4>cat P1
for x in "aa bb cc"
do
  echo $x $x
done
```

```
basicsys@mars~/lec4>P1
aa bb cc aa bb cc
```

```
basicsys@mars~/lec4>cat P1
for x in "aa bb cc"
do
  echo "$x" "$x"
done
```

```
basicsys@mars~/lec4>P1
aa bb cc aa bb cc
```

```
basicsys@mars~/lec4>cat P1
for x in "aa bb cc"
do
  echo "$x" "$x"
done
```

```
basicsys@mars~/lec4>P1
aa bb cc aa bb cc
```

```

basicsys@mars~/lec4>cat P1
for x in "aa bb cc"
do
  echo "$x" "$x"
done

basicsys@mars~/lec4>P1
aa bb cc aa bb cc

basicsys@mars~/lec4>x="abcd ef"

basicsys@mars~/lec4>y="12ab g"

basicsys@mars~/lec4>z="$x$y"

basicsys@mars~/lec4>echo "$z"
abcd ef12ab g

basicsys@mars~/lec4>cat P1
for x in $(cat F1)
do
  m=0
  for y in $(cat F2)
  do
    if [ $x -eq $y ]
    then
      m=$((m+1))
    fi
  done
  echo "$x $m"
done
basicsys@mars~/lec4>cat F1

10
20
15

basicsys@mars~/lec4>cat F2
15
10
15
10
10

```

```

basicsys@mars~/lec4>P1
10 3
20 0
15 2

basicsys@mars~/lec4>cat P1
c=0
for x in $(cat F1)
do
  echo "$x"
  c=$((c+1))
done
echo $c

basicsys@mars~/lec4>cat F1
10 20 30
10
40 50

basicsys@mars~/lec4>P1
10
20
30
10
40
50
6

basicsys@mars~/lec4>cat P1
c=0
for x in "$(cat F1)"
do
  echo "$x"
  c=$((c+1))
done
echo $c

basicsys@mars~/lec4>cat F1
10 20 30
10
40 50

```

```

basicssys@mars~/lec4>P1
10 20 30
10
40 50
1

basicssys@mars~/lec4>cat P1
c=0
for x in "$(cat F1)"
do
echo $x
c=${c+1}
done
echo $c

basicssys@mars~/lec4>cat F1
10 20 30
10
40 50

basicssys@mars~/lec4>P1
10 20 30 10 40 50
1
basicssys@mars~/lec4>cat P1
wc -l F1 >|F5
c=$(cut -d" " -f1 F5)
for i in $(seq $c)
do
head -$i F1 >| F6
x=$(tail -1 F6)
echo "$x"
done

basicssys@mars~/lec4>P1
10 20 30
10
40 50

```

```

basicssys@mars~/lec5>tr abc123 678xyz
ababab1112
676767xxxy
aaa
666

basicssys@mars~/lec4>cat F1
asfdsa asd
afd 123
dafd adsa

basicssys@mars~/lec4>tr a-z A-Z
ssasadas
SSASADAS
sasd
SASD

basicssys@mars~/lec4>tr a-z A-Z <F1
ASFDSA ASD
AFD 123
DAFD ADSA

basicssys@mars~/lec4>tr a-zA-Z0-9 "*"
assasa1234fsdkfa
*****
afsadas
*****

basicssys@mars~/lec4>tr "~" "*"
~~~~~
*****

basicssys@mars~/lec4>tr a-zA-Z0-9 "*"
afsadf sadsakfsa
***** *****

basicssys@mars~/lec4>cat F1
asfdsa asd
afd 123
dafd adsa

basicssys@mars~/lec4>tr a-z A-Z <F1 >|F2

```

```
basicsys@mars~/lec4>cat F2
```

```
ASFDSA ASD
```

```
AFD 123
```

```
DAFD ADSA
```

```
basicsys@mars~/lec4>tr -s ab 12
```

```
abaaabbb1112
```

```
121212
```

```
abaaabbb1112223333
```

```
1212123333
```

```
basicsys@mars~/lec4>tr -d 1234ab
```

```
asdaaabbbb123
```

```
sd
```

```
basicsys@mars~/lec4>cat F1
```

```
asfdsa asd
```

```
afd 123
```

```
dafd adsa
```

```
basicsys@mars~/lec4>tr " " "\n" <F1
```

```
asfdsa
```

```
asd
```

```
afd
```

```
123
```

```
dafd
```

```
adsa
```

```
basicsys@mars~/lec4>cat F1
```

```
asfdsa asd
```

```
afd 123
```

```
dafd adsa
```

```
basicsys@mars~/lec4>tr -s " " "\n" <F1
```

```
asfdsa
```

```
asd
```

```
afd
```

```
123
```

```
dafd
```

```
adsa
```