

```
basicsys@mars~/lec3>seq 70 >| F1
```

```
basicsys@mars~/lec3>more F1
```

```
1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23
```

```
--More-- (74%)
```

```
basicsys@mars~/lec3>cat F1 | more
```

```
1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23
```

```
--More--
```

```
basicsys@mars~/lec3>set | more
```

```
BASH=/bin/bash  
BASH_ARGC=()  
BASH_ARGV=()  
BASH_ENV=/home/cs/segel/basicsys/.bashrc  
BASH_LINENO=()  
BASH_SOURCE=()  
BASH_VERSINFO=([0]="3" [1]="2" [2]="25" [3]="1"  
[4]="release"  
[5]="i386-redhat-1  
inux-gnu")  
BASH_VERSION='3.2.25(1)-release'  
COLORS=/etc/DIR_COLORS.xterm  
COLUMNS=80  
CVS_RSH=ssh  
DIRSTACK=()  
DISPLAY=87.68.33.135.cable.012.net.il:0.0  
ENV_BASH=
```

```
EUID=10065
GROUPS=()
G_BROKEN_FILENAMES=1
HISTFILE=/home/cs/segel/basicsys/.bash_history
HISTFILESIZE=3600
HISTSIZ=3600
HOME=/home/cs/segel/basicsys
HOSTNAME=mars.netanya.ac.il
--More--
```

```
basicsys@mars~/lec3>HOME=/home/cs/segel/basicsys/
lec2
```

```
basicsys@mars/home/cs/segel/basicsys/lec3>cd ~/
```

```
basicsys@mars~>pwd
/home/cs/segel/basicsys/lec2
```

```
basicsys@mars~>HOME=/home/cs/segel/basicsys
```

```
basicsys@mars~/lec2>cd ~/
```

```
basicsys@mars~>pwd
/home/cs/segel/basicsys
```

```
basicsys@mars~/lec3>set -o | more
allexport      off
braceexpand    on
emacs          on
errexit        off
errtrace       off
functrace      off
hashall        on
histexpand     on
history        on
ignoreeof      off
interactive-comments  on
keyword        off
monitor        on
noclobber      on
noexec         off
noglob         off
nolog          off
notify         off
```

```
nounset          off
onecmd           off
physical         off
pipefail         off
posix            off
--More--
```

```
basicsys@mars~/lec3>echo abc >| F1
```

```
basicsys@mars~/lec3>cat F1
abc
```

```
basicsys@mars~/lec3>echo def > F1
-bash: F1: cannot overwrite existing file
```

```
basicsys@mars~/lec3>set +o noclobber
```

```
basicsys@mars~/lec3>set -o | more
```

```
...
noclobber      off
....
```

```
basicsys@mars~/lec3>echo def > F1
```

```
basicsys@mars~/lec3>cat F1
def
```

```
basicsys@mars~/lec3>set -o noclobber
```

```
basicsys@mars~/lec3>set -o | more
```

```
...
noclobber      on
....
```

```
basicsys@mars~/lec3>echo def > F1
-bash: F1: cannot overwrite existing file
```

```
basicsys@mars~/lec3>set +C
```

```
basicsys@mars~/lec3>set -o | more
```

```
...
noclobber      off
....
```

```
basicsys@mars~/lec3>set -C

basicsys@mars~/lec3>set -o | more
...
noclobber      on
....

basicsys@mars~/lec3>ls
F1 lec3-2014.txt P1

basicsys@mars~/lec3>ls > F1
-bash: F1: cannot overwrite existing file

basicsys@mars~/lec3>ls 1> F1
-bash: F1: cannot overwrite existing file

basicsys@mars~/lec3>ls >| F1
basicsys@mars~/lec3>cat F1
F1
lec3-2014.txt
P1

basicsys@mars~/lec3>echo abc 1>|F1
basicsys@mars~/lec3>cat F1
abc

basicsys@mars~/lec3>echo1 ddd
-bash: echo1: command not found

basicsys@mars~/lec3>echo1 ddd 2>|F1

basicsys@mars~/lec3>cat F1
-bash: echo1: command not found

basicsys@mars~/lec3>echo hi >| F1
basicsys@mars~/lec3>cat F1
hi

basicsys@mars~/lec3>echo1 abc 1>|F1
-bash: echo1: command not found

basicsys@mars~/lec3>cat F1

basicsys@mars~/lec3>echo1 abc 2>F1
```

```
-bash: F1: cannot overwrite existing file
```

```
basicsys@mars~/lec3>cat P1
```

```
echo hi  
echo1 abab  
echo bye
```

```
basicsys@mars~/lec3>chmod u+x P1
```

```
basicsys@mars~/lec3>P1
```

```
hi  
./P1: line 2: echo1: command not found  
bye
```

```
basicsys@mars~/lec3>P1 >| F1
```

```
./P1: line 2: echo1: command not found
```

```
basicsys@mars~/lec3>cat F1
```

```
hi  
bye
```

```
basicsys@mars~/lec3>P1 2>| F1
```

```
hi  
bye
```

```
basicsys@mars~/lec3>cat F1
```

```
./P1: line 2: echo1: command not found
```

```
basicsys@mars~/lec3>echo hi >| F1
```

```
basicsys@mars~/lec3>echo bye >| F2
```

```
basicsys@mars~/lec3>cat F1
```

```
hi
```

```
basicsys@mars~/lec3>cat F2
```

```
bye
```

```
basicsys@mars~/lec3>P1 1>|F1 2>|F2
```

```
basicsys@mars~/lec3>cat F1
```

```
hi  
bye
```

```
basicsys@mars~/lec3>cat F2
```

```
./P1: line 2: echo1: command not found
```

```
basicsys@mars~/lec3>P1 1>|F1 2>&1

basicsys@mars~/lec3>cat F1
hi
./P1: line 2: echo1: command not found
bye

basicsys@mars~/lec3>echo abc >| F1

basicsys@mars~/lec3>cat F1
abc

basicsys@mars~/lec3>echo def >> F1

basicsys@mars~/lec3>cat F1
abc
def

basicsys@mars~/lec3>x=$(wc -l F1)

basicsys@mars~/lec3>echo "$x"
2 F1

basicsys@mars~/lec3>x=$(wc -l F1)

basicsys@mars~/lec3>echo "$x"
2 F1

basicsys@mars~/lec3>y=$(wc -l < F1)

basicsys@mars~/lec3>echo $y
2

basicsys@mars~/lec3>cat F1
abc
def

basicsys@mars~/lec3>cat F2
66
```

```
basicsys@mars~/lec3>cat P1
read x
read y
z=$(wc -l < $x)
t=$(wc -l < $y)
echo ${z+$t}
```

```
basicsys@mars~/lec3>P1
F1
F2
3
```

```
basicsys@mars~/lec3>cat P1
read x
if [ $x -gt 5 ]
then
  echo "the number you entered is greater than 5"
else
  echo "the number you entered is less than or
equal 5"
fi
```

```
basicsys@mars~/lec3>P1
8
the number you entered is greater than 5
```

```
basicsys@mars~/lec3>P1
3
the number you entered is less than or equal 5
```

```
basicsys@mars~/lec3>cat P1
read x
while [ $x -gt 2 ]
do
  echo $x
  x=$((x-1))
done
```



```
basicsys@mars~/lec3>P1
```

```
1
```

```
basicsys@mars~/lec3>P1
```

```
6
```

```
6
```

```
5
```

```
4
```

```
3
```

```
basicsys@mars~/lec4>cat P1
```

```
while read x
```

```
do
```

```
  if [ $x -gt 4 ]
```

```
    then
```

```
      echo $x
```

```
    fi
```

```
done
```

```
basicsys@mars~/lec3>P1
```

```
70
```

```
70
```

```
2
```

```
4
```

```
7
```

```
7
```

```
basicsys@mars~/lec3>seq 8 >| F1
```

```
basicsys@mars~/lec3>cat F1
```

```
1
```

```
2
```

```
3
```

```
4
```

```
5
```

```
6
```

```
7
```

```
8
```

```
basicsys@mars~/lec3>P1<F1
```

```
5
```

```
6
```

```
7
```

```
8
```

Rules for conditons (used in if/while statements
and in the
test command):

comparing numbers:

- gt (greater than)
- ge (greater than or equals)
- lt (less than)
- le (less than or equals)
- ne (not equals)
- eq (equals)

comparing strings:

- = (equals)
- != (not equals)
- > (greater than) use it as follows: ">"
- < (less than) use it as follows: "<"

file types:

- f (regular file)
- d (directory)
- e (file or directory)