

```

Last login: Wed Jan  5 02:26:07 on ttys001
shankarjp@Shankars-MacBook-Pro ~ % echo "Problem 2"
Problem 2
shankarjp@Shankars-MacBook-Pro ~ % nano geo.txt
shankarjp@Shankars-MacBook-Pro ~ % awk '$2 == Asia {print $1}' geo.txt
shankarjp@Shankars-MacBook-Pro ~ % awk '$1 == Asia {print $0}' geo.txt
shankarjp@Shankars-MacBook-Pro ~ % awk '$1 == "Asia" {print $0}' geo.txt
shankarjp@Shankars-MacBook-Pro ~ % cat geo.txt
India Asia
UAE Asia
China Asia
Russia Asia
USA North-America
Mexico North-America
Nepal Asia
Brazil South-America
England Europe
Italy Europe
Chile South-America
Spain Europe
Australia Australia
NZ Australia
Egypt Africa
Zimbabwe Africa
shankarjp@Shankars-MacBook-Pro ~ % grep Asia
^C
shankarjp@Shankars-MacBook-Pro ~ % grep Asia geo.txt
India Asia
UAE Asia
China Asia
Russia Asia
Nepal Asia
shankarjp@Shankars-MacBook-Pro ~ % grep Asia geo.txt | sort
China Asia
India Asia
Nepal Asia
Russia Asia
UAE Asia
shankarjp@Shankars-MacBook-Pro ~ % grep Asia geo.txt | awk 'print $0'
awk: syntax error at source line 1
context is
    >>> print <<< $0
awk: bailing out at source line 1
shankarjp@Shankars-MacBook-Pro ~ % grep Asia geo.txt | awk '{print $0}'
India Asia
UAE Asia
China Asia
Russia Asia
Nepal Asia
shankarjp@Shankars-MacBook-Pro ~ % awk '($1 == "Asia") {print}'
^C
shankarjp@Shankars-MacBook-Pro ~ % awk '($1 == "Asia") {print}' geo.txt
shankarjp@Shankars-MacBook-Pro ~ % awk '($2 == "Asia") {print}' geo.txt
India Asia
UAE Asia

```

```

China Asia
Russia Asia
Nepal Asia
shankarjp@Shankars-MacBook-Pro ~ % awk '($2 == "Asia") {print}' geo.txt | sort
China Asia
India Asia
Nepal Asia
Russia Asia
UAE Asia
shankarjp@Shankars-MacBook-Pro ~ % awk '($2 == "Asia") {print $1}' geo.txt | sort
China
India
Nepal
Russia
UAE
shankarjp@Shankars-MacBook-Pro ~ % awk '($2 == "Asia") {print $1}' geo.txt | sort | tr '[:upper:]' '[:lower:]'
china
india
nepal
russia
uae
shankarjp@Shankars-MacBook-Pro ~ % echo "Problem 3"
Problem 3
shankarjp@Shankars-MacBook-Pro ~ % touch oldstu.txt newstu.txt oldlab.txt newlab.pdf
shankarjp@Shankars-MacBook-Pro ~ % ls
Applications      Downloads      Pictures      go      oldstu.txt
Desktop          Library      Public      newlab.pdf
Developer        Movies      VirtualBox VMs  newstu.txt
Documents        Music      geo.txt      oldlab.txt
shankarjp@Shankars-MacBook-Pro ~ % cd Desktop/Academics/4th\ Semester\ OS\ Lab\ Exercise1
shankarjp@Shankars-MacBook-Pro Exercise1 % ls
CSE      Log1.pdf
shankarjp@Shankars-MacBook-Pro Exercise1 % touch oldstu.txt newstu.txt oldlab.txt newlab.pdf
shankarjp@Shankars-MacBook-Pro Exercise1 % ls
CSE      newlab.pdf      oldlab.txt
Log1.pdf newstu.txt      oldstu.txt
shankarjp@Shankars-MacBook-Pro Exercise1 % touch .stu .oldfiles
shankarjp@Shankars-MacBook-Pro Exercise1 % ls
CSE      newlab.pdf      oldlab.txt
Log1.pdf newstu.txt      oldstu.txt
shankarjp@Shankars-MacBook-Pro Exercise1 % ls -la
total 80
drwxr-xr-x@ 10 shankarjp  staff   320 Jan  6 12:44 .
drwxr-xr-x@  3 shankarjp  staff    96 Jan  6 12:44 ..
-rw-r--r--  1 shankarjp  staff     0 Jan  6 12:44 .oldfiles
-rw-r--r--  1 shankarjp  staff     0 Jan  6 12:44 .stu
drwxr-xr-x@  4 shankarjp  staff   128 Jan  6 12:10 CSE
-rw-r--r--@  1 shankarjp  staff 38297 Jan  6 12:11 Log1.pdf
-rw-r--r--  1 shankarjp  staff     0 Jan  6 12:44 newlab.pdf
-rw-r--r--  1 shankarjp  staff     0 Jan  6 12:44 newstu.txt

```

```

-rw-r--r--  1 shankarjp  staff      0 Jan  6 12:44 oldlab.txt
-rw-r--r--  1 shankarjp  staff      0 Jan  6 12:44 oldstu.txt
shankarjp@Shankars-MacBook-Pro Exercise1 % grep stu .
grep: .: Is a directory
shankarjp@Shankars-MacBook-Pro Exercise1 % grep stu ./
grep: ./: Is a directory
shankarjp@Shankars-MacBook-Pro Exercise1 % ls | grep stu
newstu.txt
oldstu.txt
shankarjp@Shankars-MacBook-Pro Exercise1 % ls | grep old
oldlab.txt
oldstu.txt
shankarjp@Shankars-MacBook-Pro Exercise1 % echo "Problem 4"
Problem 4
shankarjp@Shankars-MacBook-Pro Exercise1 % nano marks.txt
shankarjp@Shankars-MacBook-Pro Exercise1 % cat marks.txt
1:89 92 85
2:98 47 67
3:67 82 76
4:78 97 60
5:67 68 69
shankarjp@Shankars-MacBook-Pro Exercise1 % cp marks.txt maks_numbered.txt
shankarjp@Shankars-MacBook-Pro Exercise1 % ls
CSE                      marks.txt                oldlab.txt
Log1.pdf                 newlab.pdf               oldstu.txt
maks_numbered.txt        newstu.txt
shankarjp@Shankars-MacBook-Pro Exercise1 % cat maks_numbered.txt
1:89 92 85
2:98 47 67
3:67 82 76
4:78 97 60
5:67 68 69
shankarjp@Shankars-MacBook-Pro Exercise1 % echo "Problem 5"
Problem 5
shankarjp@Shankars-MacBook-Pro Exercise1 % man sort
shankarjp@Shankars-MacBook-Pro Exercise1 % sort -k3 marks.txt
4:78 97 60
2:98 47 67
5:67 68 69
3:67 82 76
1:89 92 85
shankarjp@Shankars-MacBook-Pro Exercise1 % echo "Problem 6"
Problem 6
shankarjp@Shankars-MacBook-Pro Exercise1 % nano NameList
shankarjp@Shankars-MacBook-Pro Exercise1 % nano MarkList
shankarjp@Shankars-MacBook-Pro Exercise1 % cat NameList >> student && cat MarkLi
st >> student
shankarjp@Shankars-MacBook-Pro Exercise1 % cat student
NameList
MarkList
shankarjp@Shankars-MacBook-Pro Exercise1 % echo "Problem 7"
Problem 7
shankarjp@Shankars-MacBook-Pro Exercise1 % ls *
Log1.pdf                 marks.txt                oldstu.txt
MarkList                 newlab.pdf               student

```

```
NameList          newstu.txt
maks_numbered.txt oldlab.txt
```

CSE:

```
date    user
```

```
shankarjp@Shankars-MacBook-Pro Exercise1 % tree .
```

```
.
├── CSE
│   ├── date
│   └── user
├── Log1.pdf
├── MarkList
├── NameList
├── maks_numbered.txt
├── marks.txt
├── newlab.pdf
├── newstu.txt
├── oldlab.txt
├── oldstu.txt
└── student
```

1 directory, 12 files

```
shankarjp@Shankars-MacBook-Pro Exercise1 % ls -R .
```

```
CSE          maks_numbered.txt      oldlab.txt
Log1.pdf     marks.txt                          oldstu.txt
MarkList     newlab.pdf                         student
NameList     newstu.txt
```

./CSE:

```
date    user
```

```
shankarjp@Shankars-MacBook-Pro Exercise1 % echo "Problem 8"
```

Problem 8

```
shankarjp@Shankars-MacBook-Pro Exercise1 % ls
```

```
CSE          maks_numbered.txt      oldlab.txt
Log1.pdf     marks.txt                          oldstu.txt
MarkList     newlab.pdf                         student
NameList     newstu.txt
```

```
shankarjp@Shankars-MacBook-Pro Exercise1 % ls
```

```
CSE          geo.txt                newstu.txt
Log1.pdf     maks_numbered.txt      oldlab.txt
MarkList     marks.txt              oldstu.txt
NameList     newlab.pdf             student
```

```
shankarjp@Shankars-MacBook-Pro Exercise1 % head -10 geo.txt
```

India Asia

UAE Asia

China Asia

Russia Asia

USA North-America

Mexico North-America

Nepal Asia

Brazil South-America

England Europe

Italy Europe

```
shankarjp@Shankars-MacBook-Pro Exercise1 % awk 'NR==10' geo.txt
```

Italy Europe

```

shankarjp@Shankars-MacBook-Pro Exercise1 % sed -n10 geo.txt
sed: illegal option -- 1
usage: sed script [-Ealnru] [-i extension] [file ...]
        sed [-Ealnu] [-i extension] [-e script] ... [-f script_file] ... [file .
..]
shankarjp@Shankars-MacBook-Pro Exercise1 % sed -n10p geo.txt
sed: illegal option -- 1
usage: sed script [-Ealnru] [-i extension] [file ...]
        sed [-Ealnu] [-i extension] [-e script] ... [-f script_file] ... [file .
..]
shankarjp@Shankars-MacBook-Pro Exercise1 % sed -n 10p geo.txt
Italy Europe
shankarjp@Shankars-MacBook-Pro Exercise1 % echo "Problem 9"
Problem 9
shankarjp@Shankars-MacBook-Pro Exercise1 % wc geo.txt
    16     32    238 geo.txt
shankarjp@Shankars-MacBook-Pro Exercise1 % echo "Problem 10"
Problem 10
shankarjp@Shankars-MacBook-Pro Exercise1 % nano Python.txt
shankarjp@Shankars-MacBook-Pro Exercise1 % cat Python.txt
Programming Languages
Linux
Unix
Programming Pradigm
Prog
shankarjp@Shankars-MacBook-Pro Exercise1 % cat Python.txt | grep -c Programming
2
shankarjp@Shankars-MacBook-Pro Exercise1 % echo "Problem 11"
Problem 11
shankarjp@Shankars-MacBook-Pro Exercise1 % cat Python.txt | grep -cv Programming
3
shankarjp@Shankars-MacBook-Pro Exercise1 % echo "Problem 12"
Problem 12
shankarjp@Shankars-MacBook-Pro Exercise1 % ls
CSE                geo.txt            oldlab.txt
Log1.pdf           maks_numbered.txt  oldstu.txt
MarkList           marks.txt          student
NameList           newlab.pdf
Python.txt         newstu.txt
shankarjp@Shankars-MacBook-Pro Exercise1 % mv NameList NameList.txt
shankarjp@Shankars-MacBook-Pro Exercise1 % ls
CSE                geo.txt            oldlab.txt
Log1.pdf           maks_numbered.txt  oldstu.txt
MarkList           marks.txt          student
NameList.txt       newlab.pdf
Python.txt         newstu.txt
shankarjp@Shankars-MacBook-Pro Exercise1 % cat NameList.txt
NameList
shankarjp@Shankars-MacBook-Pro Exercise1 % ls -la
total 136
drwxr-xr-x@ 17 shankarjp  staff   544 Jan  6 12:59 .
drwxr-xr-x@  3 shankarjp  staff   96 Jan  6 12:44 ..
-rw-r--r--   1 shankarjp  staff    0 Jan  6 12:44 .oldfiles
-rw-r--r--   1 shankarjp  staff    0 Jan  6 12:44 .stu
drwxr-xr-x@  4 shankarjp  staff  128 Jan  6 12:10 CSE

```

```

-rw-r--r--@ 1 shankarjp staff 38297 Jan 6 12:11 Log1.pdf
-rw-r--r-- 1 shankarjp staff 9 Jan 6 12:50 MarkList
-rw-r--r-- 1 shankarjp staff 9 Jan 6 12:50 NameList.txt
-rw-r--r-- 1 shankarjp staff 58 Jan 6 12:57 Python.txt
-rw-r--r-- 1 shankarjp staff 238 Jan 6 12:19 geo.txt
-rw-r--r-- 1 shankarjp staff 55 Jan 6 12:46 maks_numbered.txt
-rw-r--r-- 1 shankarjp staff 55 Jan 6 12:46 marks.txt
-rw-r--r-- 1 shankarjp staff 0 Jan 6 12:44 newlab.pdf
-rw-r--r-- 1 shankarjp staff 0 Jan 6 12:44 newstu.txt
-rw-r--r-- 1 shankarjp staff 0 Jan 6 12:44 oldlab.txt
-rw-r--r-- 1 shankarjp staff 0 Jan 6 12:44 oldstu.txt
-rw-r--r-- 1 shankarjp staff 18 Jan 6 12:50 student
shankarjp@Shankars-MacBook-Pro Exercise1 % chmod +rw NameList.txt
shankarjp@Shankars-MacBook-Pro Exercise1 % ls -la NameList.txt
-rw-r--r-- 1 shankarjp staff 9 Jan 6 12:50 NameList.txt
shankarjp@Shankars-MacBook-Pro Exercise1 % chmod 666 NameList.txt
shankarjp@Shankars-MacBook-Pro Exercise1 % ls -la NameList.txt
-rw-rw-rw- 1 shankarjp staff 9 Jan 6 12:50 NameList.txt
shankarjp@Shankars-MacBook-Pro Exercise1 % echo "Problem 13"
Problem 13
shankarjp@Shankars-MacBook-Pro Exercise1 % cd CSE
shankarjp@Shankars-MacBook-Pro CSE % cd ..
shankarjp@Shankars-MacBook-Pro Exercise1 % ls -S ./CSE
date user
shankarjp@Shankars-MacBook-Pro Exercise1 % ls -laS ./CSE
total 16
drwxr-xr-x@ 17 shankarjp staff 544 Jan 6 12:59 ..
-rw-r--r-- 1 shankarjp staff 217 Jan 6 12:03 date
drwxr-xr-x@ 4 shankarjp staff 128 Jan 6 12:10 .
-rw-r--r-- 1 shankarjp staff 10 Jan 6 12:10 user
shankarjp@Shankars-MacBook-Pro Exercise1 % la -lS ./CSE
zsh: command not found: la
shankarjp@Shankars-MacBook-Pro Exercise1 % ls -lS ./CSE
total 16
-rw-r--r-- 1 shankarjp staff 217 Jan 6 12:03 date
-rw-r--r-- 1 shankarjp staff 10 Jan 6 12:10 user
shankarjp@Shankars-MacBook-Pro Exercise1 % echo "Problem 14"
Problem 14
shankarjp@Shankars-MacBook-Pro Exercise1 % touch 1.txt 2.txt 1b.txt a.txt
shankarjp@Shankars-MacBook-Pro Exercise1 % ls
1.txt NameList.txt newlab.pdf
1b.txt Python.txt newstu.txt
2.txt a.txt oldlab.txt
CSE geo.txt oldstu.txt
Log1.pdf maks_numbered.txt student
MarkList marks.txt
shankarjp@Shankars-MacBook-Pro Exercise1 % nano file1.txt
shankarjp@Shankars-MacBook-Pro Exercise1 % nano file2.txt
shankarjp@Shankars-MacBook-Pro Exercise1 % cat file1.txt
line1
line2
dline3
line4
shankarjp@Shankars-MacBook-Pro Exercise1 % cat file2.txt
line1

```

```
line2
line3
line4
shankarjp@Shankars-MacBook-Pro Exercise1 % echo "Problem 14 discontinued"
Problem 14 discontinued
shankarjp@Shankars-MacBook-Pro Exercise1 % echo "Problem 15"
Problem 15
shankarjp@Shankars-MacBook-Pro Exercise1 % diff file1.txt file2.txt
3c3
< dline3
---
> line3
shankarjp@Shankars-MacBook-Pro Exercise1 % cmp file1.txt file2.txt
file1.txt file2.txt differ: char 13, line 3
shankarjp@Shankars-MacBook-Pro Exercise1 % echo "It tells us which lines in one
file have is to be changed to make the two files identical"
It tells us which lines in one file have is to be changed to make the two files
identical
shankarjp@Shankars-MacBook-Pro Exercise1 % echo "bye"
bye
shankarjp@Shankars-MacBook-Pro Exercise1 %
```