

Lab 9

1.

```
trantuanthinh@ScorpioKid:~/CSE306$ awk 'NR > 2 && NR < 4' StudentList.txt  
Huy nh 10 8  
trantuanthinh@ScorpioKid:~/CSE306$
```

2.

```
trantuanthinh@ScorpioKid:~/CSE306$ awk -F: '{print $1}' /etc/passwd  
root  
daemon  
bin  
sys  
sync  
games  
man  
lp  
mail  
news  
uucp  
proxy  
www-data  
backup  
list  
irc  
_apt  
nobody  
systemd-network  
systemd-timesync  
dhcpcd  
messagebus  
syslog  
systemd-resolve  
uudd  
landscape  
polkitd  
trantuanthinh
```

```

trantuanthinh@ScorpioKid:~/CSE306$ awk -F: '{print $1, $6}' /etc/passwd
root /root
daemon /usr/sbin
bin /bin
sys /dev
sync /bin
games /usr/games
man /var/cache/man
lp /var/spool/lpd
mail /var/mail
news /var/spool/news
uucp /var/spool/uucp
proxy /bin
www-data /var/www
backup /var/backups
list /var/list
irc /run/ircd
_apt /nonexistent
nobody /nonexistent
systemd-network /
systemd-timesync /
dhcpcd /usr/lib/dhcpcd
messagebus /nonexistent
syslog /nonexistent
systemd-resolve /
uidd /run/uidd
landscape /var/lib/landscape
polkitd /
3. trantuanthinh /home/trantuanthinh

```

```

trantuanthinh@ScorpioKid:~/CSE306$ echo "Hello World" | awk '{gsub("World","Thinh");print}'
Hello Thinh

```

4. trantuanthinh@ScorpioKid:~/CSE306\$ |

```

trantuanthinh@ScorpioKid:~/CSE306$ cat StudentList.txt
Hai 6 5
Minh 7 9
Huynh 10 8
Ngoc 7 9
Ngan 4 8
Thinh 8 8
Thao 10 10
trantuanthinh@ScorpioKid:~/CSE306$ awk '{gsub("Thinh","Ngoc");print}' StudentList.txt
Hai 6 5
Minh 7 9
Huynh 10 8
Ngoc 7 9
Ngan 4 8
Ngoc 8 8
Thao 10 10
3. trantuanthinh /home/trantuanthinh

```

5. trantuanthinh@ScorpioKid:~/CSE306\$ |

```

trantuanthinh@ScorpioKid:~/CSE306$ echo "Hello World"
Hello Thinh

```

6.

```
trantuanthinh@ScorpioKid:~/CSE306$ awk -F ':' 'BEGIN {print "Header."} {print $0} END {print "Footer."}' StudentList.txt
Header.
Hai 6 5
Minh 7 9
Huynh 10 8
Ngoc 7 9
Ngan 4 8
Thinh 8 8
Thao 10 10
Footer.
trantuanthinh@ScorpioKid:~/CSE306$
```
7.

```
trantuanthinh@ScorpioKid:~/CSE306$ awk '{printf "%s\t", $0} END {print ""}' StudentList.txt
Hai 6 5
Minh 7 9
Huynh 10 8
Ngoc 7 9
Ngan 4 8
Thinh 8 8
Thao 10 10
trantuanthinh@ScorpioKid:~/CSE306$
```
8.

```
trantuanthinh@ScorpioKid:~/CSE306$ awk '{sum=($2+$3)/2;print $1, sum}' StudentList.txt
Hai 5.5
Minh 8
Huynh 9
Ngoc 8
Ngan 6
Thinh 8
Thao 10
trantuanthinh@ScorpioKid:~/CSE306$ awk '{sum=($2+$3)/2;print $1, sum}' StudentList.txt >grade.txt
trantuanthinh@ScorpioKid:~/CSE306$ cat grade.txt
Hai 5.5
Minh 8
Huynh 9
Ngoc 8
Ngan 6
Thinh 8
Thao 10
trantuanthinh@ScorpioKid:~/CSE306$ ls
StudentList.txt grade.txt listing.log scripts tasks.sh zipScripts.tar.gz
trantuanthinh@ScorpioKid:~/CSE306$
```
9.

```
trantuanthinh@ScorpioKid:~/CSE306$ sort grade.txt -k2nr | head -3
Thao 10
Huynh 9
Minh 8
trantuanthinh@ScorpioKid:~/CSE306$ sort grade.txt -k2nr | awk 'NR <= 3'
Thao 10
Huynh 9
Minh 8
trantuanthinh@ScorpioKid:~/CSE306$ sort grade.txt -k2nr | awk 'NR < 4'
Thao 10
Huynh 9
Minh 8
trantuanthinh@ScorpioKid:~/CSE306$
```
10.

```
trantuanthinh@ScorpioKid:~/CSE306$ awk '{print NR, $0}' StudentList.txt
1 Hai 6 5
2 Minh 7 9
3 Huynh 10 8
4 Ngoc 7 9
5 Ngan 4 8
6 Thinh 8 8
7 Thao 10 10
trantuanthinh@ScorpioKid:~/CSE306$
```

11. `trantuanthinh@ScorpioKid:~/CSE306$ awk 'NR==FNR{grades[$1]=$2;next}{print $1, grades[$1], $2}' course.txt grade.txt`

```
Hai CSE101 5.5
Minh CSE102 8
Huynh CSE103 9
Ngoc CSE104 8
Ngan CSE105 6
Thinh 8
Thao 10
```

12. `trantuanthinh@ScorpioKid:~/CSE306$ awk '$2 > 8' grade.txt`

```
Huynh 9
Thao 10
```

13. `trantuanthinh@ScorpioKid:~/CSE306$ awk '{if ($2 < min || min == "") {min = $2; min_name = $1} if ($2 > max || max == "") {max = $2; max_name = $1}} END {print min_name, min; print max_name, max}' grade.txt`

```
Hai 5.5
Thao 10
```

14. `trantuanthinh@ScorpioKid:~/CSE306$ awk '{if ($2 >= 8) {print $0, "Excellent"} else if ($2 >= 6.5) {print $0, "Good"} else if ($2 >= 5) {print $0, "Average"} else {print $0, "Poor"}}' grade.txt`

```
Hai 5.5 Average
Minh 8 Excellent
Huynh 9 Excellent
Ngoc 8 Excellent
Ngan 6 Average
Thinh 8 Excellent
Thao 10 Excellent
```

15. `trantuanthinh@ScorpioKid:~/CSE306$ awk '{if ($2 >= 8) {print $0, "Excellent"} else if ($2 >= 6.5) {print $0, "Good"} else if ($2 >= 5) {print $0, "Average"} else {print $0, "Poor"}}' grade.txt | awk '{if ($NF == "Excellent") {excellent++} else if ($NF == "Good") {good++} else if ($NF == "Average") {average++} else if ($NF == "Poor") {poor++}} END {{print "Excellent:", excellent} {print "Good:", good} {print "Average:", average} {print "Poor:", poor}}'`

```
Excellent: 5
Good:
Average: 2
Poor:
```