CS256 ASSIGNMENT-2

UNIX AND SHELL SCRIPTING LAB

ROLL NO -422151

SEC-A

Write shell script for pattern matching using awk, sed utilities, tar , cpio.

file1.txt
s01 em1 10000 25
s02 em2 12000 24
s03 em3 11020 22
s04 em4 13000 23
s05 em5 19000 26
s06 em6 20000 25
s07 em7 25000 27
s08 em8 32000 28

sed command

sedEg.sh

```
sed 's/s01/01/' file1.txt
echo "*-*-*-*-*-*"
cat file1.txt
echo "*-*-*-*-*-*-*-*-*-*-*-*"
sed 's/25/21/g' file1.txt
echo "*-*-*-*-*-*"
cat file1.txt
echo "*-*-*-*-*-*-*-*-*-*-*-*"
sed '2d' file1.txt
echo "*-*-*-*-*-*-*-*-*-*-*-*"
sed '$d' file1.txt
echo "*-*-*-*-*-*-*-*-*-*-*-*"
sed '1,4d' file1.txt
echo "*-*-*-*-*-*-*-*-*-*-*-*"
sed '4,$d' file1.txt
echo "*-*-*-*-*-*"
cat file1.txt
echo "*-*-*-*-*-*-*-*-*-*-*-*"
sed '/22/d' file1.txt
```

output:

```
(base) student@24:~/Desktop/422151/scriptlab/week_4,5$ chmod +x sedEg.sh
(base) student@24:~/Desktop/422151/scriptlab/week_4,5$ ./sedEg.sh
01 em1 10000 25
s02 em2 12000 24
s03 em3 11020 22
s04 em4 13000 23
s05 em5 19000 26
s06 em6 20000 25
s07 em7 25000 27
s08 em8 32000 28
*-*-*-*-*-*-*
s01 em1 10000 25
s02 em2 12000 24
s03 em3 11020 22
s04 em4 13000 23
s05 em5 19000 26
s06 em6 20000 25
s07 em7 25000 27
s08 em8 32000 28
*-*-*-*-*-*-*-*-*-*-*-*
s01 em1 10000 21
s02 em2 12000 24
s03 em3 11020 22
s04 em4 13000 23
s05 em5 19000 26
s06 em6 20000 21
s07 em7 21000 27
s08 em8 32000 28
*-*-*-*-*-*
s01 em1 10000 25
s02 em2 12000 24
s03 em3 11020 22
s04 em4 13000 23
s05 em5 19000 26
s06 em6 20000 25
s07 em7 25000 27
s08 em8 32000 28
* * * * * * * * * * * *
```

```
*-*-*-*-*-*-*-*-*-*-*-*-*
s01 em1 10000 25
s03 em3 11020 22
s04 em4 13000 23
s05 em5 19000 26
s06 em6 20000 25
s07 em7 25000 27
s08 em8 32000 28
*-*-*-*-*-*-*-*-*-*-*-*-*
s01 em1 10000 25
s02 em2 12000 24
s03 em3 11020 22
s04 em4 13000 23
s05 em5 19000 26
s06 em6 20000 25
s07 em7 25000 27
*-*-*-*-*-*-*-*-*-*-*-*-*
s05 em5 19000 26
s06 em6 20000 25
s07 em7 25000 27
s08 em8 32000 28
*-*-*-*-*-*-*-*-*-*-*-*-*
s01 em1 10000 25
s02 em2 12000 24
s03 em3 11020 22
*-*-*-*-*-*
s01 em1 10000 25
s02 em2 12000 24
s03 em3 11020 22
s04 em4 13000 23
s05 em5 19000 26
s06 em6 20000 25
s07 em7 25000 27
s08 em8 32000 28
*-*-*-*-*-*-*-*-*-*-*-*-*
```

```
*-*-*-*-*-*-*-*-*-*-*-*
s01 em1 10000 25
s02 em2 12000 24
s04 em4 13000 23
s05 em5 19000 26
s06 em6 20000 25
s07 em7 25000 27
s08 em8 32000 28
(base) student@24:~/Desktop/422151/scriptlab/week_4,5$
```
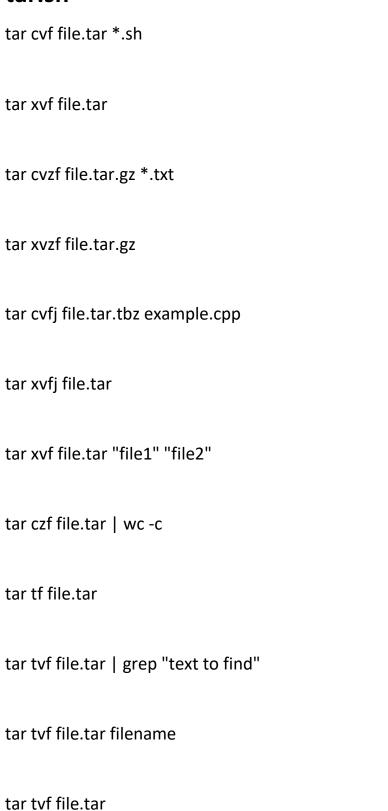
awk command

file1.sh

```
cat file1.txt

awk '{printf}' file1.txt

echo "----"

awk '{ print $1, $3 }' file1.txt

echo "----"

awk '{ sum += $3 } END { print sum }' file1.txt

echo "----"

awk '{ sum += $3 } END { print sum / NR }' file1.txt

echo "----"

awk '{ print substr($1, 2, 3) }' file1.txt

echo "----"

awk '{ print $NF }' file1.txt

echo "----"

awk '{ if ($3 > 15000) { print "senior" } else { print
"junior" } }' file1.txt

echo "----"

awk 'function square(x) { return x*x } { print square($4)
}' file1.txt
```

output:

```
(base) student@24:~/Desktop/422151/scriptlab/week_4,5$ chmod +x file1.sh
(base) student@24:~/Desktop/422151/scriptlab/week_4,5$ ./file1.sh
s01 em1 10000 25
s02 em2 12000 24
s03 em3 11020 22
s04 em4 13000 23
s05 em5 19000 26
s06 em6 20000 25
s07 em7 25000 27
s08 em8 32000 28
awk: line 1: no arguments in call to printf
----
s01 10000
s02 12000
s03 11020
s04 13000
s05 19000
s06 20000
s07 25000
s08 32000
----
142020
----
17752.5
----
01
02
03
04
05
06
07
08
----
25
24
22
23
26
25
27
28
----
junior
junior
junior
junior
senior
senior
senior
senior
----
625
576
484
529
676
625
729
784
(base) student@24:~/Desktop/422151/scriptlab/week_4,5$
```

tar command

tar.sh

tar cvf file.tar *.sh

tar xvf file.tar

tar cvzf file.tar.gz *.txt

tar xvzf file.tar.gz

tar cvfj file.tar.tbz example.cpp

tar xvfj file.tar

tar xvf file.tar "file1" "file2"

tar czf file.tar | wc -c

tar tf file.tar

tar tvf file.tar | grep "text to find"

tar tvf file.tar filename

tar tvf file.tar

output

awk.sh

sed.sh

tar.sh

awk.sh

sed.sh

tar.sh

awk_out.txt

file1.txt

file2.txt

sed_out.txt

cpio command

cpio.sh

```bash
#!/bin/bash

echo "#create a cpio file"
ls | cpio -ov > one.cpio

echo ""
echo ""

echo "#extract a cpio file"
ls | cpio -iv < one.cpio

echo ""
echo ""

echo "#creating tar using cpio"
ls | cpio -ov -H tar > one.tar

echo ""
echo ""
```

```
echo "#extract tar using cpio"
cpio -iv -F  one.tar


echo ""
echo ""


echo "#To create a *.tar archive with selected files"
find . -name "*.txt" | tar -cvf one.tar -T -


echo ""
echo ""


echo "#To only view *.tar archive file "
cpio -it < one.tar
```

output

```
#create a cpio file


#extract a cpio file


#creating tar using cpio
```

#extract tar using cpio

#To create a *.tar archive with selected files

./hello1.txt

./tar_out.txt

./cpio_out.txt

./hello2.txt

./hello3.txt

#To only view *.tar archive file

./hello1.txt

./tar_out.txt

./cpio_out.txt

./hello2.txt

./hello3.txt