Write a shell script that takes a valid directory name as an argument and recursively descend all the subdirectories, finds the maximum length of any file in that hierarchy and writes this maximum value to the standard output.

```
if [ $# -ne 1 ]
then
echo "no argument"
exit
fi
for i in $*
do
if [ -d $i ]
then
echo " large file size is "
else
echo " not a directory "
fi
done
echo `ls -Rl $1 | grep "^-" | tr -s ' ' | cut -d ' ' -f 5,9 | sort -n | tail -1`
```

Do as directed:

1. **Display all the lines of a file that is 7characters long and starts with T and ends with "?".**

```
Admin@DESKTOP-TRR2ACF ~/program/journal
$ grep -i 't.....?' emp.txt
Tdcssd?

Admin@DESKTOP-TRR2ACF ~/program/journal
$ cat emp.txt
mslamdlsed;leskf;welfwe
cscsdcsedcsedse
Tdcsdcs
Tdcssd?
cv bn hjmhujm
yufjmy?
cSEFwea
```

2. **Display the names of files (only ordinary files) of the current directory.**

```
Admin@DESKTOP-TRR2ACF ~/program/journal
$ ls -al | grep '^-'
-rw-r--r-- 1 Admin None   238 Aug 15 18:11 1.sh
-rw-r--r-- 1 Admin None   311 Aug  8 22:08 2.sh
-rw-r--r-- 1 Admin None   118 Aug 15 18:24 3.sh
-rw-r--r-- 1 Admin None   392 Aug 15 21:34 4.sh
```

```
-rw-r--r-- 1 Admin None   270 Aug 15 21:17 4_1.sh
-rw-r--r-- 1 Admin None   445 Aug  8 22:12 5.sh
-rw-r--r-- 1 Admin None   150 Aug 10 10:56 6.sh
-rwxr--r-- 1 Admin None   542 Aug  8 22:18 8.sh
-rwxr-xr-x 1 Admin None 65712 Jun 27 21:34 UNIX journal 2022-23.pdf
-rw-r--r-- 1 Admin None   119 Aug 15 18:22 awk.txt
-rwxr-xr-x 1 Admin None    91 Aug 16 15:00 emp.txt
-rw-r--r-- 1 Admin None    42 Aug 15 21:01 wc1.sh


Admin@DESKTOP-TRR2ACF ~/program/journal
$ ls -l
total 83
-rw-r--r-- 1 Admin None   238 Aug 15 18:11  1.sh
-rw-r--r-- 1 Admin None   311 Aug  8 22:08  2.sh
-rw-r--r-- 1 Admin None   118 Aug 15 18:24  3.sh
-rw-r--r-- 1 Admin None   392 Aug 15 21:34  4.sh
-rw-r--r-- 1 Admin None   270 Aug 15 21:17  4_1.sh
-rw-r--r-- 1 Admin None   445 Aug  8 22:12  5.sh
-rw-r--r-- 1 Admin None   150 Aug 10 10:56  6.sh
-rwxr--r-- 1 Admin None   542 Aug  8 22:18  8.sh
-rwxr-xr-x 1 Admin None 65712 Jun 27 21:34 'UNIX journal 2022-23.pdf'
-rw-r--r-- 1 Admin None   119 Aug 15 18:22  awk.txt
-rwxr-xr-x 1 Admin None    95 Aug 16 15:27  emp.txt
drwxr-xr-x 1 Admin None     0 Aug 15 18:05  file
drwxr-xr-x 1 Admin None     0 Aug 16 15:26  sub5
-rw-r--r-- 1 Admin None    42 Aug 15 21:01  wc1.sh
```

3. **Display only blank lines with their line numbers.**

```
Admin@DESKTOP-TRR2ACF ~/program/journal
$ cat > emp
hello
how are you 123 jojo

nklokpl[pl[l[l[l[];[][]p[]fvdfvfgbfg


sdvdfvd
cvd
vdfgvtsgrthtyhythtyjyujyujuy
fdrgrgrtghrththtyhjyujyuyuuykukuk

Admin@DESKTOP-TRR2ACF ~/program/journal
$ sed -n '/^$/=' emp
3
5
6
```

4. Write a sed command to append a blank line after each line of the file.

Ans:

```
khyati patel@DESKTOP-K9S7FLK ~/journal

$ cat > 4.sh
unix programming
unix shell programming
unix


khyati patel@DESKTOP-K9S7FLK ~/journal
$ sed 'a\ ' 4.sh
unix programming

unix shell programming

unix
```

5. Display 5th to 10th character of a file.

Ans: cut -c5-10 file

```
khyati patel@DESKTOP-K9S7FLK ~/journal
$ cat > file
khyati patel
unix programming
udhana college
unix shellprogramming

khyati patel@DESKTOP-K9S7FLK ~/journal
$ cut -c5-10 file
ti pat
 progr
na col
 shell
```

Write an awk script to find the length of the longest line present in the file

```
awk '{if (length($0)>max)max = length($0)}END{print max}' Filename.txt

Admin@DESKTOP-TRR2ACF ~/program/journal
$ awk '{if (length($0)>max)max = length($0)}END{print max}' 8.sh
49
```