//S Harshini - 185001058
/*
Task 1
 Create a file named program.txt with the following contents.
/* The greeting program. This program demonstrates */
/* some of the components of C program */
/* written by your name here */
/* Date program written */
#include <stdio.h>
{
/* statements */
printf("Hello World: \n");
return 0;
}/* main */

Write sed script pgmscript.sed and a sed command to delete the comments from the file program.txt.
*/

cs1058@spl25:~$ cd Desktop
cs1058@spl25:~/Desktop$ cat>program.txt
/*the greeting program. this program demonstrates*/
/*some of the components of C program*/
/*date program written*/
#include<stdio.h>
{
/*statements*/
printf("hello world: \n");
return 0;
}/*main*/
^C
cs1058@spl25:~/Desktop$ sed -f pgmscript.sed program.txt

#include<stdio.h>
{

printf("hello world:
\n");
return 0;
}

/*contents of pgmscript.sed
 s/\/*.**\///
*/

/*Task 2
Create a file named courses.txt with the following contents
Dept. Course Sessions Enrollment
CIS   15   1   45
CIS   54   1   20
BUS   34   2   20
ENG   11   2   89
CIS   45   1   38
MTH   35   1   56
MTH   35   2   41
PE   17   2   25
CTS   54   2   67
a. Use one command to sort the file on department, course, and session. The resulting file should be first ordered by department, within equal departments, it should be ordered by the course, and within equal courses, it should be ordered by session. (Hint: Use three field separators)
*/

[Harsharshars@webminal.org ~]$cat courses.txt
cis 15 1 45
cis 54 1 20
bus 34 2 20
eng 11 2 89
cis 45 1 38
mth 35 1 56
mth 35 2 41
pe 17 2 25
cts 54 2 67

[Harsharshars@webminal.org ~]$sort +0 -4 courses.txt
bus 34 2 20
cis 15 1 45
cis 45 1 38
cis 54 1 20
cts 54 2 67
eng 11 2 89
mth 35 1 56

mth 35 2 41
pe 17 2 25

/*Task 3
b) For the question in Task 2, write AWK scripts to
find the total number of sessions
find the average students enrolled
How many courses are there in the given department?*/

[Harsharshars@webminal.org ~]$cat>command
BEGIN{total=0}
{total=total+$3}
END{print total
}
^C
[Harsharshars@webminal.org ~]$awk -f command courses.txt
14

[Harsharshars@webminal.org ~]$cat>command
BEGIN{total=0;avg=0;count=0}
{total+=$4;count=count+1}
END{avg=total/count;print avg}
^C
[Harsharshars@webminal.org ~]$awk -f command courses.txt
44.5556

[Harsharshars@webminal.org ~]$cat>command
BEGIN{count=0
print "enter dept"
getline dept <"-"
}
{
if($1==dept){count++}
}
END{
print dept"   " count}

```
^C
[Harsharshars@webminal.org ~]$awk -f command courses.txt
enter dept
bus
bus   1
```