



**IIITDM**  
KANCHEEPURAM



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## OS LAB-8

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Jitin



OCTOBER 11, 2022

Q1.

a. `awk '/CSE/{print}' students_lab8.txt`

```
jitin@Jitin-laptop:/mnt/c/Users/Jitin/OneDrive/Documents/Programming lab submissions/VS Code/OS$ awk '/CSE/{print}' students_lab8.txt
100 mercy CSE 19
101 santosh CSE 16
102 mahendra CSE 16
103 prateek CSE 17
104 kiruthika CSE 17
105 mohanapriya CSE 18
108 mercy CSE 19
```

b. `awk '$4>18 {print NR,$0}' students_lab8.txt`

```
jitin@Jitin-laptop:/mnt/c/Users/Jitin/OneDrive/Documents/Programming lab submissions/VS Code/OS$ awk '$4>18 {print NR,$0}' students_lab8.txt
7 107 snigdha MAT 19
8 108 mercy CSE 19
9 109 murali ECE 19
10 110 pavan Mech 20
11 111 vijay ECE 20
```

c. `awk 'min==" " || length($0)<min {min=length($0)} END {print min}' students_lab8.txt`

```
jitin@Jitin-laptop:/mnt/c/Users/Jitin/OneDrive/Documents/Programming lab submissions/VS Code/OS$ awk 'min==" " || length($0)<min {min=length($0)} END {print min}' students_lab8.txt
16
```

d. `awk 'BEGIN {print "Student Details"} {print $0} END {print "End of the file"}' students_lab8.txt`

```
jitin@Jitin-laptop:/mnt/c/Users/Jitin/OneDrive/Documents/Programming lab submissions/VS Code/OS$ awk 'BEGIN {print "Student Details"} {print $0} END {print "End of the file"}' students_lab8.txt
Student Details
101 santosh CSE 16
102 mahendra CSE 16
103 prateek CSE 17
104 kiruthika CSE 17
105 mohanapriya CSE 18
106 joyashree MAT 18
107 snigdha MAT 19
108 mercy CSE 19
109 murali ECE 19
110 pavan Mech 20
111 vijay ECE 20
112 pradeep civil 18
113 aruna EEE 18
End of the file
```

e. `awk '$4>17 {print $1,$2,$NF}' students_lab8.txt`

```
jitin@Jitin-laptop:/mnt/c/Users/Jitin/OneDrive/Documents/Programming lab submissions/VS Code/OS$ awk '$4>17 {print $1,$2,$NF}' students_lab8.txt
105 mohanapriya 18
106 joyashree 18
107 snigdha 19
108 mercy 19
109 murali 19
110 pavan 20
111 vijay 20
112 pradeep 18
113 aruna 18
```

f. `awk 'NR>1 {sum+=$4} END {print sum/(NR-1)}'`  
 students\_lab8.txt

```
jitin@jitin-laptop: /mnt/c/Users/Jitin/OneDrive/Documents/Programming lab submissions/VS Code/OS$ awk 'NR>1 {sum+=$4} END {print sum/(NR-1)}' students_lab8.txt
18.25
jitin@jitin-laptop: /mnt/c/Users/Jitin/OneDrive/Documents/Programming lab submissions/VS Code/OS$
```

Q2.

a. `awk 'BEGIN {srand(); for(i=1;i<=10;i++) print int(rand()*100)}'`

```
jitin@jitin-laptop: /mnt/c/Users/Jitin/OneDrive/Documents/Programming lab submissions/VS Code/OS$ # Print "n" random numbers and print log(n) using the in-built func
jitin@jitin-laptop: /mnt/c/Users/Jitin/OneDrive/Documents/Programming lab submissions/VS Code/OS$ awk 'BEGIN {srand(); for(i=1;i<=10;i++) print int(rand()*100)}'
3
95
11
88
41
23
75
18
44
85
```

`awk 'BEGIN{print log(10)}'` students\_lab8.txt

```
awk: cmd. line 1: syntax error
jitin@jitin-laptop: /mnt/c/Users/Jitin/OneDrive/Documents/Programming lab submissions/VS Code/OS$ awk 'BEGIN{print log(10)}' students_lab8.txt
2.30259
```

b. `awk 'BEGIN {for(i=1;i<=10;i+=2) sum+=i*i; print sum}'`

```
jitin@jitin-laptop: /mnt/c/Users/Jitin/OneDrive/Documents/Programming lab submissions/VS Code/OS$ awk 'BEGIN {for(i=1;i<=10;i+=2) sum+=i*i; print sum}' students_lab8.txt
165
```

c. `awk 'BEGIN{print ENVIRON["PATH"]}'`

```
jitin@jitin-laptop: /mnt/c/Users/Jitin/OneDrive/Documents/Programming lab submissions/VS Code/OS$ awk 'BEGIN{print ENVIRON["PATH"]}'
/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games:/usr/lib/ssl/lib:/mnt/c/Program Files/Common Files/Oracle/Java/javapath:/mnt/c/Pr
ogram Files (x86)/Common Files/Oracle/Java/javapath:/mnt/c/windows/system32:/mnt/c/windows/System32/Wbem:/mnt/c/windows/System32/WindowsPowerShell/v1.0:/m
nt/c/windows/System32/OpenSSH:/mnt/c/Program Files (x86)/NVIDIA Corporation/PhysX/Common:/mnt/c/Program Files/dotnet:/mnt/c/Program Files/Java/jdk1.8.0_202/bin:/mnt/c/U
sers/Jitin/AppData/Local/Packages/PythonSoftwareFoundation.Python.3.9.qbz5n2kfra8p0/LocalCache/local-packages/Python39/Scripts:/mnt/c/Program Files/Git/cmd:/mnt/c/Program
Files/nodejs:/mnt/c/WINDOWS/system32:/mnt/c/WINDOWS:/mnt/c/WINDOWS/System32/Wbem:/mnt/c/WINDOWS/System32/WindowsPowerShell/v1.0:/mnt/c/WINDOWS/System32/OpenSSH:/mnt/c
/Program Files/Cloudflare/WARP:/mnt/c/Program Files/MySQL/MySQL Shell 8.0/bin:/mnt/c/Program Files/NVIDIA Corporation/NVIDIA NvDLISR:/mnt/c/Users/Jitin/AppDa
ta/Local/Microsoft/WindowsApps:/mnt/c/Program Files/mingw-w64/x86_64-8.1.0-posix-seh-rt_v6-rev0/mingw64/bin:/mnt/c/Users/Jitin/AppData/Local/Programs/Microsoft VS Code/bi
n:/mnt/c/Users/Jitin/OneDrive/Documents/Programming lab submissions/VS Code/Selenium/chromedriver.exe:/mnt/c/Program Files/Java/jdk-17.0.1/bin:/mnt/c/Users/Jitin/AppData/
Local/GitHubDesktop/bin:/mnt/c/Program Files/Git/bin:/mnt/c/Users/Jitin/AppData/Roaming/npm:/mnt/c/Src/Flutter/flutter/bin:/mnt/c/Users/Jitin/AppData/Local/Microsoft/Win
```

d. `awk 'BEGIN {print ENVIRON["HOME"]}'`

```
jitin@jitin-laptop: /mnt/c/Users/Jitin/OneDrive/Documents/Programming lab submissions/VS Code/OS$ awk 'BEGIN {print ENVIRON["HOME"]}'
/home/jitin
jitin@jitin-laptop: /mnt/c/Users/Jitin/OneDrive/Documents/Programming lab submissions/VS Code/OS$
```

Q3.

a. `grep -i "computer" lab8_q3_1.txt lab8_q3_2.txt`  
 lab8\_q3\_3.txt

```
jitin@jitin-laptop: /mnt/c/Users/Jitin/OneDrive/Documents/Programming lab submissions/VS Code/OS$ grep -i "computer" lab8_q3_1.txt lab8_q3_2.txt lab8_q3_3.txt
lab8_q3_1.txt: Operating systems syllabus computer science
lab8_q3_2.txt: department of Computer science and engineering iiitdm kancheepuram
lab8_q3_3.txt: iiitdm kancheepuram computer lab melakottaiyur 600127
```

b. `grep -C 2 "computer" lab8_q3_1.txt lab8_q3_2.txt`  
 lab8\_q3\_3.txt

```
jitin@Jitin-laptop:/mnt/c/Users/Jitin/OneDrive/Documents/Programming lab submissions/VS Code/OS$ grep -C 2 "computer" lab8_q3_1.txt lab8_q3_2.txt lab8_q3_3.txt
lab8_q3_1.txt-aaa
lab8_q3_1.txt-bbbbb
lab8_q3_1.txt:Operating systems syllabus computer science
lab8_q3_1.txt-lorem
lab8_q3_1.txt-ipsu
--
lab8_q3_3.txt-prime
lab8_q3_3.txt-minister
lab8_q3_3.txt:iiitdm kancheepuram computer lab melakottaiyur 600127
lab8_q3_3.txt-union of india
lab8_q3_3.txt-republic
```

c. `grep -v "aa" lab8_q3_1.txt`

```
jitin@Jitin-laptop:/mnt/c/Users/Jitin/OneDrive/Documents/Programming lab submissions/VS Code/OS$ grep -v "aa" lab8_q3_1.txt
bbbbbb
Operating systems syllabus computer science
lorem
ipsu
```

d. `grep -color "com" lab8_q3_1.txt`

```
jitin@Jitin-laptop:/mnt/c/Users/Jitin/OneDrive/Documents/Programming lab submissions/VS Code/OS$ grep --color "com" lab8_q3_1.txt
Operating systems syllabus computer science
```

e. `grep "[A-Z0-9]" lab8_q3_3.txt`

```
jitin@Jitin-laptop:/mnt/c/Users/Jitin/OneDrive/Documents/Programming lab submissions/VS Code/OS$ grep "[A-Z0-9]" lab8_q3_3.txt
iiitdm kancheepuram computer lab melakottaiyur 600127
jitin@Jitin-laptop:/mnt/c/Users/Jitin/OneDrive/Documents/Programming lab submissions/VS Code/OS$
```

File 3,2,1 for reference

```
jitin@Jitin-laptop:/mnt/c/Users/Jitin/OneDrive/Documents/Programming lab submissions/VS Code/OS$ cat lab8_q3_3.txt
prime
minister
iiitdm kancheepuram computer lab melakottaiyur 600127
union of india
republic
democraticjitin@Jitin-laptop:/mnt/c/Users/Jitin/OneDrive/Documents/Programming lab submissions/VS Code/OS$ cat lab8_q3_2.txt
youtube
lectures
department of Computer science and engineering iiitdm kancheepuram
tutorialsjitin@Jitin-laptop:/mnt/c/Users/Jitin/OneDrive/Documents/Programming lab submissions/VS Code/OS$ cat lab8_q3_1.txt
aaa
bbbbbb
Operating systems syllabus computer science
lorem
ipsu
jitin@Jitin-laptop:/mnt/c/Users/Jitin/OneDrive/Documents/Programming lab submissions/VS Code/OS$
```