

This is my input file

```
root@devserver: /bin/samplefolder
John,Engineering,5000
Alice,Sales,7000
Bob,Engineering,6000
Diana,HR,5500
Charlie,Sales,6500
Eva,Engineering,6200
Frank,HR,5800
Grace,Marketing,7200

```

grep operation

find engineering in file1.txt?

```
root@devserver:/ebin/samplefolder# grep 'Engineering' file1.txt
John,Engineering,5000
Bob,Engineering,6000
Eva,Engineering,6200
root@devserver:/ebin/samplefolder#
```

Find lines starting with "A"

```
Eva,Engineering,6200
root@devserver:/ebin/samplefolder# grep '^A' file1.txt
Alice,Sales,7000
root@devserver:/ebin/samplefolder# |
```

Find lines ending with salary 6500?

```
Alice,Sales,7000
root@devserver:/ebin/samplefolder# grep '6500$' file.txt
grep: file.txt: No such file or directory
root@devserver:/ebin/samplefolder# grep '6500$' file1.txt
Charlie,Sales,6500
root@devserver:/ebin/samplefolder#
```

Find lines **not** containing "Sales"

```
root@devserver:/ebin/samplefolder# grep -v 'Sales' file1.txt
John,Engineering,5000
Bob,Engineering,6000
Diana,HR,5500
Eva,Engineering,6200
Frank,HR,5800
Grace,Marketing,7200
root@devserver:/ebin/samplefolder#
```

Show line numbers containing "Sales"

```
root@devserver:/ebin/samplefolder# grep -n 'Sales' file1.txt
2:Alice,Sales,7000
5:Charlie,Sales,6500
root@devserver:/ebin/samplefolder# |
```

Count lines containing "Engineering"

```
root@devserver:/ebin/samplefolder# grep -c 'Engineering' file1.txt
3
root@devserver:/ebin/samplefolder#
```

Ignore case when searching for "marketing"

```
root@devserver:/ebin/samplefolder# grep -i 'marketing' file1.txt
Grace,Marketing,7200
root@devserver:/ebin/samplefolder#
```

Highlight the matching word in color (if your terminal supports)

```
root@devserver:/ebin/samplefolder# grep --color=always 'Engineering' file1.txt
John,Engineering,5000
Bob,Engineering,6000
Eva,Engineering,6200
```

Find lines containing **either** "Sales" or "HR" using -E

```
root@devserver:/ebin/samplefolder# grep -E 'Sales|HR' file1.txt
Alice,Sales,7000
Diana,HR,5500
Charlie,Sales,6500
Frank,HR,5800
root@devserver:/ebin/samplefolder# |
```

Replace "Engineering" with "Tech"

```
dev_server@devserver:/ebin/samplefolder$ sed 's/Engineering/Tech/' file1.txt
sed: can't read file1.txt: No such file or directory
dev_server@devserver:/ebin/samplefolder$ ls
file1.txt
dev_server@devserver:/ebin/samplefolder$ sed 's/Engineering/Tech/' file1.txt
John,Tech,5000
Alice,Sales,7000
Bob,Tech,6000
Diana,HR,5500
Charlie,Sales,6500
Eva,Tech,6200
Frank,HR,5800
Grace,Marketing,7200
dev_server@devserver:/ebin/samplefolder$ |
```

Replace "Sales" with "Business" globally (all occurrences per line)

```
dev_server@devserver:/ebin/samplefolder$ sed 's/Sales/Buisness/g' file1.txt
John,Engineering,5000
Alice,Buisness,7000
Bob,Engineering,6000
Diana,HR,5500
Charlie,Buisness,6500
Eva,Engineering,6200
Frank,HR,5800
Grace,Marketing,7200

dev_server@devserver:/ebin/samplefolder$
```

Delete lines containing "HR"

```
dev_server@devserver:/ebin/samplefolder$ sed '/HR/d' file1.txt
John,Engineering,5000
Alice,Sales,7000
Bob,Engineering,6000
Charlie,Sales,6500
Eva,Engineering,6200
Grace,Marketing,7200
```

Print only lines containing "Engineering" (like grep)

```
dev_server@devserver:/ebin/samplefolder$ grep -n 'Engineering' file1.txt
1:John,Engineering,5000
3:Bob,Engineering,6000
6:Eva,Engineering,6200
dev_server@devserver:/ebin/samplefolder$ sed -n '/Engineering/p' file1.txt
John,Engineering,5000
Bob,Engineering,6000
Eva,Engineering,6200
```

Insert a line before each "HR" line

```
dev_server@devserver:/ebin/samplefolder$ sed '/HR/i -----HR Department Starts-----' file1.txt
John,Engineering,5000
Alice,Sales,7000
Bob,Engineering,6000
-----HR Department Starts-----
Diana,HR,5500
Charlie,Sales,6500
Eva,Engineering,6200
-----HR Department Starts-----
Frank,HR,5800
Grace,Marketing,7200

dev_server@devserver:/ebin/samplefolder$
```

Append a line after each "Marketing" line

```
dev_server@devserver:/ebin/samplefolder$ sed '/Marketing/a -----Marketing Ends-----' file1.txt
John,Engineering,5000
Alice,Sales,7000
Bob,Engineering,6000
Diana,HR,5500
Charlie,Sales,6500
Eva,Engineering,6200
Frank,HR,5800
Grace,Marketing,7200
-----Marketing Ends-----
```

Change whole line containing "Charlie"

```
dev_server@devserver:/ebin/samplefolder$ sed '/Charlie/c Charlie,Support,6600' file1.txt
```

```
John,Engineering,5000
Alice,Sales,7000
Bob,Engineering,6000
Diana,HR,5500
Charlie,Support,6600
Eva,Engineering,6200
Frank,HR,5800
Grace,Marketing,7200
```

```
dev_server@devserver:/ebin/samplefolder$ |
```

Replace "Engineering" with "Tech" directly in the file (in-place)

```
dev_server@devserver:/ebin/samplefolder$ sed -i 's/Engineering/Tech/g' file1.txt
sed: couldn't open temporary file ./seduvFC15: Permission denied
dev_server@devserver:/ebin/samplefolder$ sudo sed -i 's/Engineering/Tech/g' file1.txt
dev_server@devserver:/ebin/samplefolder$ cat file1.txt
John,Tech,5000
Alice,Sales,7000
Bob,Tech,6000
Diana,HR,5500
Charlie,Sales,6500
Eva,Tech,6200
Frank,HR,5800
Grace,Marketing,7200
dev_server@devserver:/ebin/samplefolder$
```

Print all employee names

```
dev_server@devserver:/ebin/samplefolder$ awk -F',' '{print $1}' file1.txt
John
Alice
Bob
Diana
Charlie
Eva
Frank
Grace
dev_server@devserver:/ebin/samplefolder$ |
```

Print names and departments

```
dev_server@devserver:/ebin/samplefolder$ awk -F',' '{print $1,$2}' file1.txt
John Tech
Alice Sales
Bob Tech
Diana HR
Charlie Sales
Eva Tech
Frank HR
Grace Marketing
dev_server@devserver:/ebin/samplefolder$ |
```

Print employees with salary > 6000

```
dev_server@devserver:/ebin/samplefolder$ awk -F',' ' '$3>6000 {print $0}' file1.txt
Alice,Sales,7000
Charlie,Sales,6500
Eva,Tech,6200
Grace,Marketing,7200
dev_server@devserver:/ebin/samplefolder$
```

Print names of employees in HR department

```
dev_server@devserver:/ebin/samplefolder$ awk -F',' ' '$2 == "HR" { print $1}' file1.txt
Diana
Frank
dev_server@devserver:/ebin/samplefolder$ |
```

Calculate and print total salary

```
dev_server@devserver:/ebin/samplefolder$ awk -F',' ' '{sum+=$3} END {print "Sum=",sum}' file1.txt
Sum= 49200
dev_server@devserver:/ebin/samplefolder$
```

Print line number and entire line

```
dev_server@devserver:/ebin/samplefolder$ awk -F',' ' '{print NR $0}' file1.txt
1John,Tech,5000
2Alice,Sales,7000
3Bob,Tech,6000
4Diana,HR,5500
5Charlie,Sales,6500
6Eva,Tech,6200
7Frank,HR,5800
8Grace,Marketing,7200
9
dev_server@devserver:/ebin/samplefolder$
```

Print only department names (unique)

```
dev_server@devserver:/ebin/samplefolder$ awk -F',' ' '{print $2}' file1.txt |sort | uniq
HR
Marketing
Sales
Tech
dev_server@devserver:/ebin/samplefolder$ |
```

Add "Employee:" prefix to each name

```

dev_server@devserver:/ebin/samplefolder$ awk -F',' '{print "Employee:",$1}' file1.txt
Employee: John
Employee: Alice
Employee: Bob
Employee: Diana
Employee: Charlie
Employee: Eva
Employee: Frank
Employee: Grace
Employee:
dev_server@devserver:/ebin/samplefolder$ |

```

Print highest salary and sum of salary

```

dev_server@devserver:/ebin/samplefolder$ awk -F',' 'BEGIN {max=0} {if ( $3 > max ) max=$3} END {print "Max Salary:" , max}' file1.txt
Max Salary: 7200
dev_server@devserver:/ebin/samplefolder$ cat file1.txt
John,Tech,5000
Alice,Sales,7000
Bob,Tech,6000
Diana,HR,5500
Charlie,Sales,6500
Eva,Tech,6200
Frank,HR,5800
Grace,Marketing,7200

dev_server@devserver:/ebin/samplefolder$ awk -F',' 'BEGIN {sum=0} {if ( $3 > 0 ) sum+=$3 } END {print "Sum is :", sum}' file1.txt
Sum is : 49200
dev_server@devserver:/ebin/samplefolder$ |

```

Print names and add "High Salary" tag if salary > 6500

```

dev_server@devserver:/ebin/samplefolder$ awk -F',' '{if($3 > 6500) print "High Salary" $1; else print $1}' file1.txt
John
High SalaryAlice
Bob
Diana
Charlie
Eva
Frank
High SalaryGrace

```