

Date- 01.08.2025

1)

```
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ grep Meningioma BrainCancer.csv
1,Female,Meningioma,Infratentorial,90,6.11,SRS,0,57.64
3,Female,Meningioma,Infratentorial,70,7.95,SRS,0,26.46
6,Female,Meningioma,Supratentorial,80,4.82,SRS,0,52.75
7,Male,Meningioma,Supratentorial,80,3.19,SRT,0,55.8
9,Female,Meningioma,Supratentorial,70,12.16,SRT,0,34.66
12,Female,Meningioma,Infratentorial,90,6.54,SRS,0,34.26
13,Female,Meningioma,Infratentorial,90,0.63,SRS,0,32.98
15,Female,Meningioma,Supratentorial,60,9.18,SRT,0,41.44
19,Male,Meningioma,Supratentorial,80,13.49,SRS,1,6.92
20,Female,Meningioma,Supratentorial,90,2.5,SRT,0,30.16
21,Female,Meningioma,Supratentorial,80,2.82,SRS,0,24.39
24,Female,Meningioma,Infratentorial,100,2.13,SRS,1,51.02
25,Female,Meningioma,Supratentorial,70,6.48,SRT,1,33.41
29,Male,Meningioma,Supratentorial,60,3.81,SRT,0,36.1
30,Female,Meningioma,Supratentorial,90,4.72,SRS,0,65.02
32,Male,Meningioma,Supratentorial,90,2.56,SRS,0,44.39
35,Female,Meningioma,Supratentorial,90,7.3,SRT,0,5.51
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```
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ grep Meningioma BrainCancer.csv > LinesWithMeningoma.out
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ cat LinesWithMeningoma.out
1,Female,Meningioma,Infratentorial,90,6.11,SRS,0,57.64
3,Female,Meningioma,Infratentorial,70,7.95,SRS,0,26.46
6,Female,Meningioma,Supratentorial,80,4.82,SRS,0,52.75
7,Male,Meningioma,Supratentorial,80,3.19,SRT,0,55.8
9,Female,Meningioma,Supratentorial,70,12.16,SRT,0,34.66
12,Female,Meningioma,Infratentorial,90,6.54,SRS,0,34.26
13,Female,Meningioma,Infratentorial,90,0.63,SRS,0,32.98
15,Female,Meningioma,Supratentorial,60,9.18,SRT,0,41.44
19,Male,Meningioma,Supratentorial,80,13.49,SRS,1,6.92
```

2)

```
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ grep -c Male BrainCancer.csv
43
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ grep -c Female BrainCancer.csv
45
```

3)

```
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ grep Supratentorial BrainCancer.csv > supratentorialsorted.out
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ grep -c Male supratentorialsorted.out
34
```

```
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ grep -i infratentorial BrainCancer.csv > infratentorialsorted.out
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ grep -ci female infratentorialsorted.out
10
```

4) 4 people have the lowest ki value which is equal to 60

```
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ sort -t ',' -k5 -n BrainCancer.csv
,sex,diagnosis,loc,ki,gtv,stereo,status,time
29,Male,Meningioma,Supratentorial,60,3.81,SRT,0,36.1
46,Male,Meningioma,Supratentorial,60,7.09,SRS,1,31.25
15,Female,Meningioma,Supratentorial,60,9.18,SRT,0,41.44
```

5)

```
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ grep SRS BrainCancer.csv > SRSorted.out
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ grep -e Infratentorial SRSorted.out
1,Female,Meningioma,Infratentorial,90,6.11,SRS,0,57.64
3,Female,Meningioma,Infratentorial,70,7.95,SRS,0,26.46
12,Female,Meningioma,Infratentorial,90,6.54,SRS,0,34.26
13,Female,Meningioma,Infratentorial,90,0.63,SRS,0,32.98
23,Female,Other,Infratentorial,80,2.11,SRS,0,10.49
24,Female,Meningioma,Infratentorial,100,2.13,SRS,1,51.02
34,Male,Other,Infratentorial,80,6.81,SRS,0,57.11
56,Male,Other,Infratentorial,90,0.48,SRS,0,54.43
57,Male,HG glioma,Infratentorial,80,0.22,SRS,0,33.67
68,Male,Other,Infratentorial,70,0.01,SRS,0,23.67
80,Female,Meningioma,Infratentorial,70,2.94,SRS,0,1.54
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ grep -e Infratentorial -c SRSorted.out
11
```

6)

```
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ sort -t "," -k 9 -n -r BrainCancer.csv
18,Male,HG glioma,Supratentorial,90,10.8,SRT,0,82.56
65,Male,LG glioma,Supratentorial,80,9.58,SRT,0,78.75
77,Female,Meningioma,Supratentorial,80,2.39,SRS,0,73.74
64,Male,Meningioma,Supratentorial,80,4.77,SRT,0,67.38
30,Female,Meningioma,Supratentorial,90,4.72,SRS,0,65.02
1,Female,Meningioma,Infratentorial,90,6.11,SRS,0,57.64
76,Female,Meningioma,Supratentorial,80,31.74,SRT,0,57.25
34,Male,Other,Infratentorial,80,6.81,SRS,0,57.11
7,Male,Meningioma,Supratentorial,80,3.19,SRT,0,55.8
56,Male,Other,Infratentorial,90,0.48,SRS,0,54.43
6,Female,Meningioma,Supratentorial,80,4.82,SRS,0,52.75
66,Female,Meningioma,Supratentorial,100,4,SRT,0,52.23
24,Female,Meningioma,Infratentorial,100,2.13,SRS,1,51.02
14,Male,NA,Supratentorial,90,6.38,SRT,0,50.85
```

```
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ sort -t "," -k 9 -n -r BrainCancer.csv -o months.out
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ head -n14 months.out
18,Male,HG glioma,Supratentorial,90,10.8,SRT,0,82.56
65,Male,LG glioma,Supratentorial,80,9.58,SRT,0,78.75
77,Female,Meningioma,Supratentorial,80,2.39,SRS,0,73.74
64,Male,Meningioma,Supratentorial,80,4.77,SRT,0,67.38
30,Female,Meningioma,Supratentorial,90,4.72,SRS,0,65.02
1,Female,Meningioma,Infratentorial,90,6.11,SRS,0,57.64
76,Female,Meningioma,Supratentorial,80,31.74,SRT,0,57.25
34,Male,Other,Infratentorial,80,6.81,SRS,0,57.11
7,Male,Meningioma,Supratentorial,80,3.19,SRT,0,55.8
56,Male,Other,Infratentorial,90,0.48,SRS,0,54.43
6,Female,Meningioma,Supratentorial,80,4.82,SRS,0,52.75
66,Female,Meningioma,Supratentorial,100,4,SRT,0,52.23
24,Female,Meningioma,Infratentorial,100,2.13,SRS,1,51.02
14,Male,NA,Supratentorial,90,6.38,SRT,0,50.85
```



7) only 1 person has HG glioma who has survival times more than 50 months.

```
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ grep "HG glioma" months.out
18,Male,HG glioma,Supratentorial,90,10.8,SRT,0,82.56
81,Female,HG glioma,Supratentorial,80,15.45,SRT,1,46.16
57,Male,HG glioma,Infratentorial,80,0.22,SRS,0,33.67
51,Female,HG glioma,Supratentorial,90,0.04,SRT,0,31.67
```

8)

```
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ sort -t "," -k 9 -n BrainCancer.csv -o lessthan30months.out
```

```
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ head -50 lessthan30months.out
,sex,diagnosis,loc,ki,gtv,stereo,status,time
28,Male,HG glioma,Supratentorial,70,33.69,SRT,1,0.07
83,Male,LG glioma,Infratentorial,90,30.41,SRT,0,1.18
49,Male,Meningioma,Supratentorial,70,0.97,SRT,1,1.41
80,Female,Meningioma,Infratentorial,70,2.94,SRS,0,1.54
41,Female,Meningioma,Supratentorial,80,1.57,SRT,0,2.03
63,Female,HG glioma,Supratentorial,40,22.87,SRT,1,3.38
44,Male,Meningioma,Supratentorial,80,12.63,SRT,1,4.16
67,Female,HG glioma,Supratentorial,80,7.59,SRT,1,4.56
47,Male,HG glioma,Supratentorial,80,29.27,SRT,0,5.15
35,Female,Meningioma,Supratentorial,90,7.3,SRT,0,5.51
31,Female,LG glioma,Supratentorial,80,0.85,SRS,1,6.1
38,Male,HG glioma,Supratentorial,90,9.95,SRT,1,6.23
5,Male,HG glioma,Supratentorial,90,5.06,SRT,1,6.3
85,Male,HG glioma,Supratentorial,80,19.81,SRT,1,6.39
17,Female,Other,Infratentorial,60,24,SRT,1,6.82
19,Male,Meningioma,Supratentorial,80,13.49,SRS,1,6.92
16,Female,HG glioma,Supratentorial,70,11.38,SRS,1,7.05
36,Female,Other,Supratentorial,70,14.26,SRT,0,7.18
61,Female,HG glioma,Supratentorial,80,12.08,SRT,1,7.25
2,Male,HG glioma,Supratentorial,90,19.35,SRT,1,8.98
53,Male,HG glioma,Supratentorial,90,2.5,SRT,1,9.77
69,Female,Meningioma,Supratentorial,80,6.93,SRS,0,10.1
23,Female,Other,Infratentorial,80,2.11,SRS,0,10.49
33,Female,Other,Infratentorial,70,13.45,SRT,1,10.82
74,Female,HG glioma,Supratentorial,80,0.19,SRT,1,11.02
10,Male,HG glioma,Supratentorial,100,2.53,SRT,0,11.48
50,Female,LG glioma,Supratentorial,80,0.19,SRS,0,11.51
27,Male,Other,Supratentorial,60,34.64,SRT,1,11.57
88,Male,Other,Infratentorial,80,0.11,SRT,0,13.9
22,Male,HG glioma,Supratentorial,70,14.44,SRT,1,14
43,Female,Meningioma,Supratentorial,70,6.7,SRT,0,14.56
62,Male,Meningioma,Supratentorial,80,11.51,SRT,1,14.62
37,Female,Meningioma,Supratentorial,80,6.6,SRT,0,14.75
42,Male,HG glioma,Supratentorial,90,0.28,SRT,1,16.43
55,Female,HG glioma,Supratentorial,80,0.63,SRT,1,16.92
60,Female,Meningioma,Supratentorial,90,2.47,SRT,0,17.57
45,Male,Other,Infratentorial,90,3.12,SRT,0,18.95
71,Male,Meningioma,Supratentorial,70,8.45,SRT,0,19.41
75,Male,Other,Supratentorial,100,24.91,SRT,0,19.74
58,Male,HG glioma,Supratentorial,80,3.75,SRT,1,19.9
73,Male,LG glioma,Supratentorial,90,2.64,SRT,0,20.13
84,Male,HG glioma,Supratentorial,80,0.16,SRT,1,20.69
59,Female,Other,Supratentorial,80,11.83,SRT,1,22.03
68,Male,Other,Infratentorial,70,0.01,SRS,0,23.67
21,Female,Meningioma,Supratentorial,80,2.82,SRS,0,24.39
26,Male,LG glioma,Supratentorial,90,4.23,SRT,1,25.02
3,Female,Meningioma,Infratentorial,70,7.95,SRS,0,26.46
52,Female,Meningioma,Infratentorial,90,9.24,SRT,0,26.85
39,Male,Other,Infratentorial,80,12.51,SRT,1,29.7
```

```
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ head -50 lessthan30months.out > 30months.out
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ grep -i Supratentorial 30months.out
28, Male, HG glioma, Supratentorial, 70, 33.69, SRT, 1, 0.07
49, Male, Meningioma, Supratentorial, 70, 0.97, SRT, 1, 1.41
41, Female, Meningioma, Supratentorial, 80, 1.57, SRT, 0, 2.03
63, Female, HG glioma, Supratentorial, 40, 22.87, SRT, 1, 3.38
44, Male, Meningioma, Supratentorial, 80, 12.63, SRT, 1, 4.16
67, Female, HG glioma, Supratentorial, 80, 7.59, SRT, 1, 4.56
47, Male, HG glioma, Supratentorial, 80, 29.27, SRT, 0, 5.15
35, Female, Meningioma, Supratentorial, 90, 7.3, SRT, 0, 5.51
31, Female, LG glioma, Supratentorial, 80, 0.85, SRS, 1, 6.1
38, Male, HG glioma, Supratentorial, 90, 9.95, SRT, 1, 6.23
5, Male, HG glioma, Supratentorial, 90, 5.06, SRT, 1, 6.3
85, Male, HG glioma, Supratentorial, 80, 19.81, SRT, 1, 6.39
19, Male, Meningioma, Supratentorial, 80, 13.49, SRS, 1, 6.92
```

```
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ grep -i Supratentorial 30months.out > supratentorial30months.out
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ grep -i "LG glioma" supratentorial30months.out
31, Female, LG glioma, Supratentorial, 80, 0.85, SRS, 1, 6.1
50, Female, LG glioma, Supratentorial, 80, 0.19, SRS, 0, 11.51
73, Male, LG glioma, Supratentorial, 90, 2.64, SRT, 0, 20.13
26, Male, LG glioma, Supratentorial, 90, 4.23, SRT, 1, 25.02
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ grep -ci "LG glioma" supratentorial30months.out
4
```

9) grep is case sensitive, -i can be used to ignore case sensitivity

```
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ grep -i female BrainCancer.csv
1, Female, Meningioma, Infratentorial, 90, 6.11, SRS, 0, 57.64
3, Female, Meningioma, Infratentorial, 70, 7.95, SRS, 0, 26.46
4, Female, LG glioma, Supratentorial, 80, 7.61, SRT, 1, 47.8
6, Female, Meningioma, Supratentorial, 80, 4.82, SRS, 0, 52.75
9, Female, Meningioma, Supratentorial, 70, 12.16, SRT, 0, 34.66
```

10)

```
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ grep ",1," BrainCancer.csv
2, Male, HG glioma, Supratentorial, 90, 19.35, SRT, 1, 8.98
4, Female, LG glioma, Supratentorial, 80, 7.61, SRT, 1, 47.8
5, Male, HG glioma, Supratentorial, 90, 5.06, SRT, 1, 6.3
11, Male, LG glioma, Supratentorial, 80, 0.14, SRT, 1, 35.93
16, Female, HG glioma, Supratentorial, 70, 11.38, SRS, 1, 7.05
17, Female, Other, Infratentorial, 60, 24, SRT, 1, 6.82
19, Male, Meningioma, Supratentorial, 80, 13.49, SRS, 1, 6.92
22, Male, HG glioma, Supratentorial, 70, 14.44, SRT, 1, 14
24, Female, Meningioma, Infratentorial, 100, 2.13, SRS, 1, 51.02
25, Female, Meningioma, Supratentorial, 70, 6.48, SRT, 1, 33.41
26, Male, LG glioma, Supratentorial, 90, 4.23, SRT, 1, 25.02
27, Male, Other, Supratentorial, 60, 34.64, SRT, 1, 11.57
28, Male, HG glioma, Supratentorial, 70, 33.69, SRT, 1, 0.07
31, Female, LG glioma, Supratentorial, 80, 0.85, SRS, 1, 6.1
33, Female, Other, Infratentorial, 70, 13.45, SRT, 1, 10.82
38, Male, HG glioma, Supratentorial, 90, 9.95, SRT, 1, 6.23
39, Male, Other, Infratentorial, 80, 12.51, SRT, 1, 29.7
42, Male, HG glioma, Supratentorial, 90, 0.28, SRT, 1, 16.43
44, Male, Meningioma, Supratentorial, 80, 12.63, SRT, 1, 4.16
46, Male, Meningioma, Supratentorial, 60, 7.09, SRS, 1, 31.25
48, Female, Meningioma, Supratentorial, 80, 26.31, SRT, 1, 39.54
49, Male, Meningioma, Supratentorial, 70, 0.97, SRT, 1, 1.41
53, Male, HG glioma, Supratentorial, 90, 2.5, SRT, 1, 9.77
55, Female, HG glioma, Supratentorial, 80, 0.63, SRT, 1, 16.92
58, Male, HG glioma, Supratentorial, 80, 3.75, SRT, 1, 19.9
59, Female, Other, Supratentorial, 80, 11.83, SRT, 1, 22.03
61, Female, HG glioma, Supratentorial, 80, 12.08, SRT, 1, 7.25
62, Male, Meningioma, Supratentorial, 80, 11.51, SRT, 1, 14.62
63, Female, HG glioma, Supratentorial, 40, 22.87, SRT, 1, 3.38
67, Female, HG glioma, Supratentorial, 80, 7.59, SRT, 1, 4.56
72, Male, Meningioma, Supratentorial, 80, 20.93, SRT, 1, 31.15
74, Female, HG glioma, Supratentorial, 80, 0.19, SRT, 1, 11.02
81, Female, HG glioma, Supratentorial, 80, 15.45, SRT, 1, 46.16
84, Male, HG glioma, Supratentorial, 80, 0.16, SRT, 1, 20.69
85, Male, HG glioma, Supratentorial, 80, 19.81, SRT, 1, 6.39
```



```
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ grep -c ",1," BrainCancer.csv
35
```

We can use -v to list non matching lines, However the header is included while counting and hence the count comes out as 35+header = 36.

```
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ grep -v ",0," BrainCancer.csv
,sex,diagnosis,loc,ki,gtv,stereo,status,time
2,Male,HG glioma,Supratentorial,90,19.35,SRT,1,8.98
4,Female,LG glioma,Supratentorial,80,7.61,SRT,1,47.8
5,Male,HG glioma,Supratentorial,90,5.06,SRT,1,6.3
11,Male,LG glioma,Supratentorial,80,0.14,SRT,1,35.93
16,Female,HG glioma,Supratentorial,70,11.38,SRS,1,7.05
17,Female,Other,Infratentorial,60,24,SRT,1,6.82
19,Male,Meningioma,Supratentorial,80,13.49,SRS,1,6.92
22,Male,HG glioma,Supratentorial,70,14.44,SRT,1,14
24,Female,Meningioma,Infratentorial,100,2.13,SRS,1,51.02
25,Female,Meningioma,Supratentorial,70,6.48,SRT,1,33.41
26,Male,LG glioma,Supratentorial,90,4.23,SRT,1,25.02
27,Male,Other,Supratentorial,60,34.64,SRT,1,11.57
28,Male,HG glioma,Supratentorial,70,33.69,SRT,1,0.07
31,Female,LG glioma,Supratentorial,80,0.85,SRS,1,6.1
33,Female,Other,Infratentorial,70,13.45,SRT,1,10.82
38,Male,HG glioma,Supratentorial,90,9.95,SRT,1,6.23
39,Male,Other,Infratentorial,80,12.51,SRT,1,29.7
42,Male,HG glioma,Supratentorial,90,0.28,SRT,1,16.43
44,Male,Meningioma,Supratentorial,80,12.63,SRT,1,4.16
46,Male,Meningioma,Supratentorial,60,7.09,SRS,1,31.25
48,Female,Meningioma,Supratentorial,80,26.31,SRT,1,39.54
49,Male,Meningioma,Supratentorial,70,0.97,SRT,1,1.41
53,Male,HG glioma,Supratentorial,90,2.5,SRT,1,9.77
55,Female,HG glioma,Supratentorial,80,0.63,SRT,1,16.92
58,Male,HG glioma,Supratentorial,80,3.75,SRT,1,19.9
59,Female,Other,Supratentorial,80,11.83,SRT,1,22.03
61,Female,HG glioma,Supratentorial,80,12.08,SRT,1,7.25
62,Male,Meningioma,Supratentorial,80,11.51,SRT,1,14.62
63,Female,HG glioma,Supratentorial,40,22.87,SRT,1,3.38
67,Female,HG glioma,Supratentorial,80,7.59,SRT,1,4.56
72,Male,Meningioma,Supratentorial,80,20.93,SRT,1,31.15
74,Female,HG glioma,Supratentorial,80,0.19,SRT,1,11.02
81,Female,HG glioma,Supratentorial,80,15.45,SRT,1,46.16
84,Male,HG glioma,Supratentorial,80,0.16,SRT,1,20.69
85,Male,HG glioma,Supratentorial,80,19.81,SRT,1,6.39
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ grep -cv ",0," BrainCancer.csv
36
```

11)

```
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab$ grep -i infratentorial BrainCancer.csv
1,Female,Meningioma,Infratentorial,90,6.11,SRS,0,57.64
3,Female,Meningioma,Infratentorial,70,7.95,SRS,0,26.46
12,Female,Meningioma,Infratentorial,90,6.54,SRS,0,34.26
13,Female,Meningioma,Infratentorial,90,0.63,SRS,0,32.98
17,Female,Other,Infratentorial,60,24,SRT,1,6.82
23,Female,Other,Infratentorial,80,2.11,SRS,0,10.49
24,Female,Meningioma,Infratentorial,100,2.13,SRS,1,51.02
33,Female,Other,Infratentorial,70,13.45,SRT,1,10.82
34,Male,Other,Infratentorial,80,6.81,SRS,0,57.11
39,Male,Other,Infratentorial,80,12.51,SRT,1,29.7
45,Male,Other,Infratentorial,90,3.12,SRT,0,18.95
52,Female,Meningioma,Infratentorial,90,9.24,SRT,0,26.85
54,Male,Meningioma,Infratentorial,80,24.41,SRT,0,39.54
56,Male,Other,Infratentorial,90,0.48,SRS,0,54.43
57,Male,HG glioma,Infratentorial,80,0.22,SRS,0,33.67
68,Male,Other,Infratentorial,70,0.01,SRS,0,23.67
80,Female,Meningioma,Infratentorial,70,2.94,SRS,0,1.54
83,Male,LG glioma,Infratentorial,90,30.41,SRT,0,1.18
88,Male,Other,Infratentorial,80,0.11,SRT,0,13.9
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab$ grep -ci infratentorial BrainCancer.csv
19
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab$ grep -i infratentorial BrainCancer.csv > infratentorialsorted.out
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab$ head -10 infratentorialsorted.out
1,Female,Meningioma,Infratentorial,90,6.11,SRS,0,57.64
3,Female,Meningioma,Infratentorial,70,7.95,SRS,0,26.46
12,Female,Meningioma,Infratentorial,90,6.54,SRS,0,34.26
13,Female,Meningioma,Infratentorial,90,0.63,SRS,0,32.98
17,Female,Other,Infratentorial,60,24,SRT,1,6.82
23,Female,Other,Infratentorial,80,2.11,SRS,0,10.49
24,Female,Meningioma,Infratentorial,100,2.13,SRS,1,51.02
33,Female,Other,Infratentorial,70,13.45,SRT,1,10.82
34,Male,Other,Infratentorial,80,6.81,SRS,0,57.11
39,Male,Other,Infratentorial,80,12.51,SRT,1,29.7
```

12)

```
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab$ ls
30months.out BrainCancer.csv HGsorted.out infratentorialsorted.out lessthan30months.out malecount.out SRSsorted.out supratentorialsorted.out
50 femalecount.out infraSRS.out ki.out LinesWithMeningoma.out months.out supratentorial30months.out
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab$ tar -cvf outputs.tar LinesWithMeningoma.out malecount.out femalecount.out supratentorialsorted.out infratentorialsorted.out
ki.out infraSRS.out
LinesWithMeningoma.out
malecount.out
femalecount.out
supratentorialsorted.out
infratentorialsorted.out
ki.out
infraSRS.out
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab$ cat outputs.tar
LinesWithMeningoma.out00000664000175200017520000000446315043110065013734 0ustar ibabibab1,Female,Meningioma,Infratentorial,90,6.11,SRS,0,57.64
3,Female,Meningioma,Infratentorial,70,7.95,SRS,0,26.46
6,Female,Meningioma,Supratentorial,80,4.82,SRS,0,52.75
```

13)

```
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab$ tar -cvzf outputs2.tar 50months.out hgglioma50months.out lggliomasupten30.out icommand.out dead.out first10infra.out
50months.out
hgglioma50months.out
lggliomasupten30.out
icommand.out
dead.out
first10infra.out
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab$ cat outputs2.tar
```

14)

```
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ tar -xvf outputs.tar
LinesWithMeningoma.out
malecount.out
femalecount.out
supratentorialsorted.out
infratentorialsorted.out
ki.out
infraSRS.out
```

```
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ mkdir out1extract
```

```
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ mv outputs.tar out1extract
```

```
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ cd out1extract
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5/out1extract$ cat outputs.tar
LinesWithMeningoma.out0000664000175200017520000000446315043110065013734 0ustar  ibabibab1,Female,Meningioma,Infratentorial,90,6.11,SRS,0,57.64
3,Female,Meningioma,Infratentorial,70,7.95,SRS,0,26.46
6,Female,Meningioma,Supratentorial,80,4.82,SRS,0,52.75
7,Male,Meningioma,Supratentorial,80,3.19,SRT,0,55.8
9,Female,Meningioma,Supratentorial,70,12.16,SRT,0,34.66
12,Female,Meningioma,Infratentorial,90,6.54,SRS,0,34.26
13,Female,Meningioma,Infratentorial,90,0.63,SRS,0,32.98
15,Female,Meningioma,Supratentorial,60,9.18,SRT,0,41.44
19,Male,Meningioma,Supratentorial,80,13.49,SRS,1,6.92
20,Female,Meningioma,Supratentorial,90,2.5,SRT,0,30.16
21,Female,Meningioma,Supratentorial,80,2.82,SRS,0,24.39
24,Female,Meningioma,Infratentorial,100,2.13,SRS,1,51.02
25,Female,Meningioma,Supratentorial,70,6.48,SRT,1,33.41
29,Male,Meningioma,Supratentorial,60,3.81,SRT,0,36.1
30,Female,Meningioma,Supratentorial,90,4.72,SRS,0,65.02
32,Male,Meningioma,Supratentorial,90,2.56,SRS,0,44.39
35,Female,Meningioma,Supratentorial,90,7.3,SRT,0,5.51
37,Female,Meningioma,Supratentorial,80,6.6,SRT,0,14.75
40,Female,Meningioma,Supratentorial,80,2.54,SRT,0,45.74
```

15)

```
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ tar -xvf outputs2.tar
50months.out
hgglioma50months.out
lggliomasupten30.out
icommand.out
dead.out
first10infra.out
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ mkdir out2extract
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ mv outputs2.tar out2extract
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5$ cd out2extract
ibab@IBAB-Workshop-Comp005:~/Downloads/Lab5/out2extract$ ls
outputs2.tar
```