

Assignment 2

a)

```
~$ head -3 teachers.txt
```

```
T001|P.C.|D.S      |Kolkata  
T002|K.M.|O.S      |Howrah  
T003|J.S.|Graphics  |Jadavpur
```

b)

```
~$ ls -l -t | tail -1
```

```
-rw-r--r-- 1 user user 0 Sep 24 10:00 2021-09-24-125350.term
```

The ls -l command shows the current files, directories present in the system. The -t command sort the display first according to date and then sorts the time respectively. The tail -1 shows the last line of the display.

c)

```
~$ head -c 100 teachers.txt
```

```
T001|P.C.|D.S      |Kolkata  
T002|K.M.|O.S      |Howrah  
T003|J.S.|Graphics  |Jadavpu
```

d)

```
~$ tail -3 teachers.txt
```

```
T018|S.K.|C.Arch    |Sonarpur  
T019|K.R.|Biology   |Baruipur  
T020|A.P.|Automata   |Behala
```

e)

```
~$ tail +5 teachers.txt
```

```
T005|T.R.|Management |Kolkata  
T006|A.H.|Compiler design|Howrah  
T007|G.Y.|OOPS        |Kolkata  
T008|D.K.|D.E         |Belgharia  
T009|S.C.|Chemistry    |Serampore  
T010|G.G.|D.A.A       |Kolkata  
T011|A.M.|A.I         |Barasat  
T012|J.A.|C.O         |Baruipur  
T013|D.B.|C.S         |Ballygunge  
T014|S.B.|D.M         |Kolkata  
T015|A.B.|P.R         |Hooghly  
T016|S.G.|I.T Work    |Kolkata  
T017|R.D.|Physics     |Belegghata  
T018|S.K.|C.Arch      |Sonarpur
```

T019|K.R.|Biology |Baruipur
T020|A.P.|Automata |Behala

f)

~\$ head -5 teachers.txt

T001|P.C.|D.S |Kolkata

T002|K.M.|O.S |Howrah

T003|J.S.|Graphics |Jadavpur

T004|D.C.|Image compress |Garia

T005|T.R.|Management |Kolkata

~\$ head -5 teachers.txt | cat>shortlist

g)

~\$ cut -d "|" -f 2,4 shortlist

P.C.|Kolkata

K.M.|Howrah

J.S.|Jadavpur

D.C.|Garia

T.R.|Kolkata

h)

~\$ cut -d "|" -f 3 shortlist | cat>cutlist1

~\$ cat cutlist1

D.S

O.S

Graphics

Image compress

Management

i)

~\$ cut -d "|" -f 1,2,4 shortlist | cat>cutlist2

j)

~\$ cat cutlist1 cutlist2 > cutlist3

k)

~\$ sort -k 2 teachers.txt

T015 |A.B. |P.R |Hooghly

T006 |A.H. |Compiler design|Howrah

T011 |A.M. |A.I |Barasat

T020 |A.P. |Automata |Behala

T013 |D.B. |C.S |Ballygunge

T004 |D.C. |Image compress |Garia

T008 |D.K. |D.E |Belgharia

T010	G.G.	D.A.A	Kolkata
T007	G.Y.	OOPS	Kolkata
T012	J.A.	C.O	Baruipur
T003	J.S.	Graphics	Jadavpur
T002	K.M.	O.S	Howrah
T019	K.R.	Biology	Baruipur
T001	P.C.	D.S	Kolkata
T017	R.D.	Physics	Beleghata
T014	S.B.	D.M	Kolkata
T009	S.C.	Chemistry	Serampore
T016	S.G.	I.T Work	Kolkata
T018	S.K.	C.Arch	Sonarpur
T005	T.R.	Management	Kolkata

l)

~\$ sort -r teachers.txt

T020	A.P.	Automata	Behala
T019	K.R.	Biology	Baruipur
T018	S.K.	C.Arch	Sonarpur
T017	R.D.	Physics	Beleghata
T016	S.G.	I.T Work	Kolkata
T015	A.B.	P.R	Hooghly
T014	S.B.	D.M	Kolkata
T013	D.B.	C.S	Ballygunge
T012	J.A.	C.O	Baruipur
T011	A.M.	A.I	Barasat
T010	G.G.	D.A.A	Kolkata
T009	S.C.	Chemistry	Serampore
T008	D.K.	D.E	Belgharia
T007	G.Y.	OOPS	Kolkata
T006	A.H.	Compiler design	Howrah
T005	T.R.	Management	Kolkata
T004	D.C.	Image compress	Garia
T003	J.S.	Graphics	Jadavpur
T002	K.M.	O.S	Howrah
T001	P.C.	D.S	Kolkata

m)

~\$ sort numfile

10
2
27
4
5

This is the result because the CUI takes it as string and sorts the file in lexicographic order as we have not mentioned it is integer.

To overcome it we have to specify it is integer by giving “-n”

```
~$ sort -n numfile
```

```
2
4
5
10
27
```

n)

```
~$ cat teachers.txt | tr [:lower:] [:upper:] | tr ["|"] ["~"]
```

```
T001 ~P.C. ~D.S      ~KOLKATA
T002 ~K.M. ~O.S      ~HOWRAH
T003 ~J.S. ~GRAPHICS  ~JADAVPUR
T004 ~D.C. ~IMAGE COMPRESS ~GARIA
T005 ~T.R. ~MANAGEMENT ~KOLKATA
T006 ~A.H. ~COMPILER DESIGN~HOWRAH
T007 ~G.Y. ~OOPS      ~KOLKATA
T008 ~D.K. ~D.E       ~BELGHARIA
T009 ~S.C. ~CHEMISTRY ~SERAMPORE
T010 ~G.G. ~D.A.A     ~KOLKATA
T011 ~A.M. ~A.I       ~BARASAT
T012 ~J.A. ~C.O       ~BARUIPUR
T013 ~D.B. ~C.S       ~BALLYGUNGE
T014 ~S.B. ~D.M       ~KOLKATA
T015 ~A.B. ~P.R       ~HOOGHLY
T016 ~S.G. ~I.T WORK  ~KOLKATA
T017 ~R.D. ~PHYSICS   ~BELEGHATA
T018 ~S.K. ~C.ARCH    ~SONARPUR
T019 ~K.R. ~BIOLOGY   ~BARUIPUR
T020 ~A.P. ~AUTOMATA  ~BEHALA
```

o)

```
~$ grep Kolkata teachers.txt
```

```
T001 |P.C. |D.S      |Kolkata
T005 |T.R. |Management |Kolkata
T007 |G.Y. |OOPS      |Kolkata
T010 |G.G. |D.A.A     |Kolkata
T014 |S.B. |D.M       |Kolkata
T016 |S.G. |I.T Work  |Kolkata
```

p)

```
~$ grep -c Howrah teachers.txt  
2
```

q)

```
~$ grep -n Jadavpur teachers.txt  
3:T003 |J.S. |Graphics      |Jadavpur
```