

UNIX

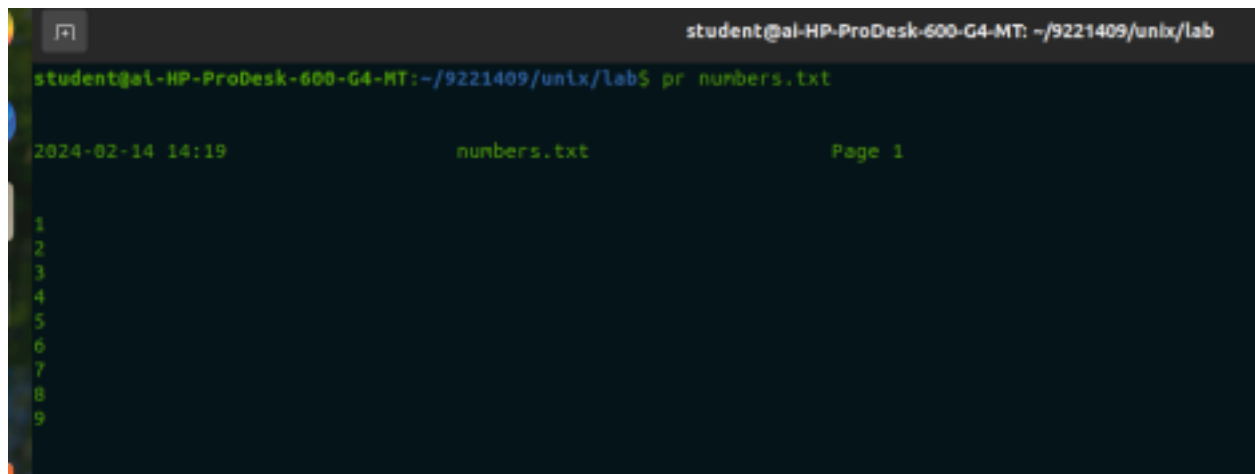
Assignment-01

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Q) Write Shell Script For Searching For various patterns using
grep,pr,head,tail,cut,paste,sort,uniq,tr..

pr-command:

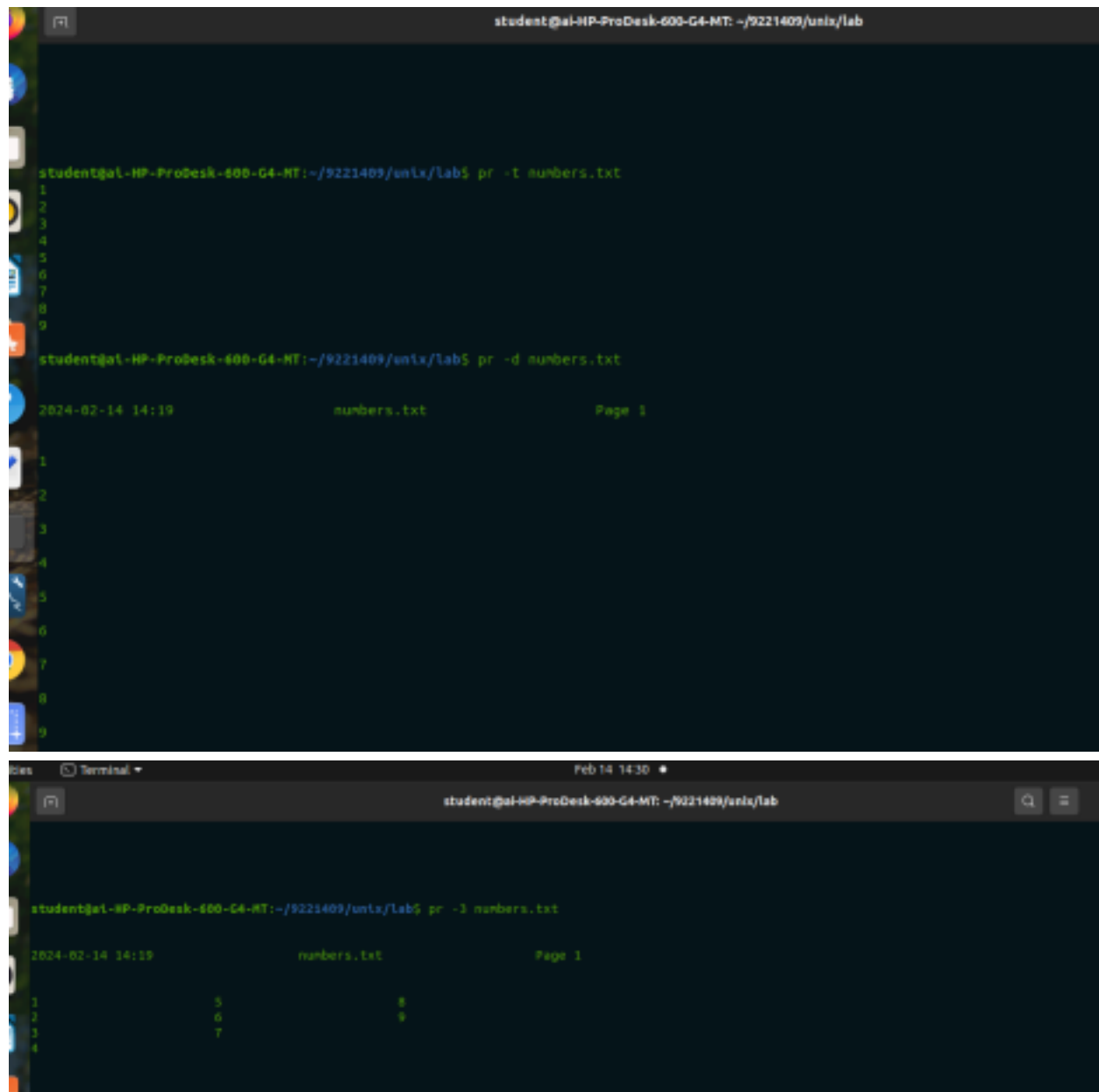
A terminal window screenshot showing the execution of the 'pr' command on a file named 'numbers.txt'. The terminal title bar indicates the user is 'student' on a machine named 'ai-HP-ProDesk-600-G4-MT' in the directory '~/9221409/unix/lab'. The command prompt shows 'student@ai-HP-ProDesk-600-G4-MT:~/9221409/unix/lab\$ pr numbers.txt'. The output of the command is displayed in a table-like format with three columns: a timestamp '2024-02-14 14:19', the filename 'numbers.txt', and 'Page 1'. Below this header, there is a list of numbers from 1 to 9, each on a new line, with a line number (1-9) in the left margin.

```
student@ai-HP-ProDesk-600-G4-MT: ~/9221409/unix/lab
student@ai-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ pr numbers.txt

2024-02-14 14:19          numbers.txt          Page 1

1
2
3
4
5
6
7
8
9
```

pr-command:



The image consists of two terminal window screenshots. The top screenshot shows the command `pr -t numbers.txt` being executed, which formats the file with line numbers 1 through 9. The bottom screenshot shows the command `pr -d numbers.txt` being executed, which formats the file with a header line containing the date, filename, and page number, followed by line numbers 1 through 9.

```
student@ai-HP-ProDesk-600-G4-MT: ~/9221409/unix/lab

student@ai-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ pr -t numbers.txt
1
2
3
4
5
6
7
8
9

student@ai-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ pr -d numbers.txt
2024-02-14 14:19          numbers.txt          Page 1
1
2
3
4
5
6
7
8
9

student@ai-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ pr -3 numbers.txt
2024-02-14 14:19          numbers.txt          Page 1
1          5          8
2          6          9
3          7
4
```

head-command:

```
ties Terminal Feb 14 14:59
S: command not found
student@a1-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ head list.txt
Virginia
connecticut
delaware
georgia
maryland
massachusetts
new hampshire
new jersey
north carolina
pennsylvania
student@a1-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ head -n 2 list.txt
Virginia
connecticut
student@a1-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ head -c 20 list.txt
Virginia
connecticutstudent@a1-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ head -v list.txt
==> list.txt <==
Virginia
connecticut
delaware
georgia
maryland
massachusetts
new hampshire
new jersey
north carolina
pennsylvania
student@a1-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ head list.txt numbers.txt
north carolina
pennsylvania
student@a1-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ head list.txt numbers.txt
==> list.txt ==>
Virginia
connecticut
delaware
georgia
maryland
massachusetts
new hampshire
new jersey
north carolina
pennsylvania
==> numbers.txt <==
1
2
3
4
5
6
7
8
9
```

head, tail-command:

```

student@al-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ head numbers.txt>out_numbers.txt
student@al-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ cat out_numbers.txt
1
2
3
4
5
6
7
8
9

student@al-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ tail -n5 out_numbers.txt
5
6
7
8
9

```

cut-command:

```

student@al-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ ls
list.txt  numbers.txt  out_numbers.txt
student@al-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ cut -b 4 list.txt
n
e
e
r
y
s

t
e
d
t
student@al-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ cut -b -4 list.txt
Vlrg
conn
dela
geor
mary
mass
new
new
serT
pern
rhod
scot
student@al-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ cut -c 2-4 list.txt
lrg
een
ela
eer
ary
ass
ew
ew
ort
een
hod
out

```

Paste command:

```

root
student@at-HP-ProDesk-600-G4-HT:~/9221409/unitx/lab$ paste numbers.txt list.txt
1      Virginia
2      Connecticut
3      Delaware
4      Georgia
5      Maryland
6      Massachusetts
7      New Hampshire
8      New Jersey
9      North Carolina
      Pennsylvania
      Rhode Island
      South Carolina
student@at-HP-ProDesk-600-G4-HT:~/9221409/unitx/lab$ paste -d "}" list.txt numbers.txt
Virginia}1
Connecticut}2
Delaware}3
Georgia}4
Maryland}5
Massachusetts}6
New Hampshire}7
New Jersey}8
North Carolina}9
Pennsylvania}
Rhode Island}
South Carolina}
student@at-HP-ProDesk-600-G4-HT:~/9221409/unitx/lab$ paste -s -d ":" list.txt numbers.txt
Virginia:Connecticut:Delaware:Georgia:Maryland:Massachusetts:New Hampshire:New Jersey:North Carolina:Pennsylvania:Rhode Island:South Carolina
1:2:3:4:5:6:7:8:9:

```

Sort command:

```

student@at-HP-ProDesk-600-G4-HT:~/9221409/unitx/lab$ sort list.txt
Connecticut
Delaware
Georgia
Maryland
Massachusetts
New Hampshire
New Jersey
North Carolina
Pennsylvania
Rhode Island
South Carolina
Virginia
student@at-HP-ProDesk-600-G4-HT:~/9221409/unitx/lab$ cat list.txt
Virginia
Connecticut
Delaware
Georgia
Maryland
Massachusetts
New Hampshire
New Jersey
North Carolina
Pennsylvania
Rhode Island
South Carolina
student@at-HP-ProDesk-600-G4-HT:~/9221409/unitx/lab$ sort -r list.txt
Virginia
South Carolina
Rhode Island
Pennsylvania
North Carolina
New Jersey
New Hampshire
Massachusetts
Maryland
Georgia
Delaware
Connecticut

```

Uniq command:

```

student@ai-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ cat list1.txt
Virginia
connecticut
delaware
georgia
georgia
georgia
georgia
georgia
georgia
maryland
massachusetts
new hampshire
new jersey
north carolina
pennsylvania
rhode island
south carolina
student@ai-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ uniq list1.txt
Virginia
connecticut
delaware
georgia
maryland
massachusetts
new hampshire
new jersey
north carolina
pennsylvania
rhode island
south carolina
student@ai-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ 

```

```

student@ai-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ uniq -c list1.txt
1 Virginia
1 connecticut
1 delaware
7 georgia
1 maryland
1 massachusetts
1 new hampshire
1 new jersey
1 north carolina
1 pennsylvania
1 rhode island
1 south carolina
student@ai-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ uniq -d list1.txt
georgia
student@ai-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ uniq -u list1.txt
Virginia
connecticut
delaware
maryland
massachusetts
new hampshire
new jersey
north carolina
pennsylvania
rhode island
south carolina
student@ai-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ 

```

tr, grep command:

```

south carolina
student@el-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ cat list1.txt | tr [a-z] [A-Z]v
VIRGINIA
CONNECTICUT
DELAWARE
GEORGIA
MARYLAND
MASSACHUSETTS
NEW HAMPSHIRE
NEW JERSEY
NORTH CAROLINA
PENNSYLVANIA
RHODE ISLAND
SOUTH CAROLINA
student@el-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ grep -i 'georg' list1.txt
georgia
georgia
georgia
georgia
georgia
georgia
georgia
student@el-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ grep -c 'georgia' list1.txt
7
student@el-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ grep -w 'georg' list1.txt
student@el-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ grep -o 'georgia' list1.txt
georgia
georgia
georgia
georgia
georgia
georgia
georgia
student@el-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ grep -n 'georgia' list1.txt
4:georgia
5:georgia
6:georgia
7:georgia
8:georgia
9:georgia
10:georgia

```

echo command:

```

student@el-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ echo "welcome to GeeksforGeeks" | tr -d
tr: missing operand
Try 'tr --help' for more information.
student@el-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ echo "welcome to GeeksforGeeks" | tr -d welcome to GeeksforGeeks
tr: extra operand 'to'
Try 'tr --help' for more information.
student@el-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ echo "my ID is 422149" | tr -d [:digit:]
my ID is
student@el-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ echo "welcome to GeeksforGeeks" | tr -d w
elcome to GeeksforGeeks
student@el-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ 

```

grep command:

```

student@el-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ grep -o "georgia" list1.txt
georgia
georgia
georgia
georgia
georgia
georgia
georgia
student@el-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ grep -o "george" list1.txt
student@el-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ grep -o "georg" list1.txt
georg
georg
georg
georg
georg
georg
georg
student@el-HP-ProDesk-600-G4-MT:~/9221409/unix/lab$ 

```