

# ASSIGNMENT - 1

Write shell script for searching for various patterns using grep, pr, head, tail, cut, paste, sort, uniq, and tr.

## GREP

The image shows a terminal window titled "Activities Terminal" with a dark background. The user is logged in as "student@sp-OptiPlex-7070" and is in the directory "~/Desktop/4221133". The terminal shows the following commands and their outputs:  
  
1. Command: `student@sp-OptiPlex-7070:~/Desktop$ cd Desktop`  
2. Command: `student@sp-OptiPlex-7070:~/Desktop$ cd 4221133`  
3. Command: `student@sp-OptiPlex-7070:~/Desktop/4221133$ grep -l "Indian" wk31.txt`  
Output: A large block of text in light blue font, which is a paragraph from the file wk31.txt. The text discusses the geological processes of the Indian subcontinent, including the Indo-Australian Plate, the Tethyan oceanic crust, and the Himalayas. It mentions the convergence of the Indian and Eurasian plates, the formation of the Indian Ocean, and the uplift of the Himalayas. The text also mentions the Thar Desert and the Aravalli range.  
4. Command: `student@sp-OptiPlex-7070:~/Desktop/4221133$ grep -c "Indian" wk31.txt`  
Output: `1`  
5. Command: `student@sp-OptiPlex-7070:~/Desktop/4221133$ grep -l "Indian" *wk31.txt`  
Output: `student@sp-OptiPlex-7070:~/Desktop/4221133$ grep -w "Indian" wk31.txt`  
6. Command: `student@sp-OptiPlex-7070:~/Desktop/4221133$ grep -w "Indian" wk31.txt`  
Output: A large block of text in light blue font, which is a paragraph from the file wk31.txt. The text is identical to the one in the first output.  
7. Command: `student@sp-OptiPlex-7070:~/Desktop/4221133$ grep -w "India" wk31.txt`  
Output: A large block of text in light blue font, which is a paragraph from the file wk31.txt. The text is identical to the one in the first output.  
8. Command: `student@sp-OptiPlex-7070:~/Desktop/4221133$ grep -o "Indian Ocean" wk31.txt`  
Output: `Indian Ocean`  
9. Command: `student@sp-OptiPlex-7070:~/Desktop/4221133$ grep -n "Indian" wk31.txt`  
Output: A large block of text in light blue font, which is a paragraph from the file wk31.txt. The text is identical to the one in the first output.  
10. Command: `student@sp-OptiPlex-7070:~/Desktop/4221133$ grep -v "Indian" wk31.txt`  
Output: `student@sp-OptiPlex-7070:~/Desktop/4221133$ grep -v "Immediately" wk31.txt`  
  
At the bottom of the terminal window, there are icons for the desktop environment, including a file manager, a web browser, and a terminal icon. The window also shows the system clock in the top right corner, indicating the time is 15:00 on February 16, 2020.

```
Activities Terminal Feb 16 15:02 student@sp-OptiPlex-7070: ~/Desktop/422133

In the Earth's mantle, both created the Indian Ocean and caused the Indian continental crust eventually to under-thrust Eurasia and to uplift the Himalayas. Immediately south of the emerging Himalayas, plate movement created a vast crescent-shaped trough that rapidly filled with river-borne sediment[174] and now constitutes the Indo-Gangetic Plain. The original Indian plate makes its first appearance above the sediment in the ancient Aravalli range, which extends from the Delhi Ridge in a southwesterly direction. To the west lies the Thar Desert, the eastern spread of which is checked by the Aravallis.

student@sp-OptiPlex-7070: ~/Desktop/422133$ grep -w "India" wk31.txt
India accounts for the bulk of the Indian subcontinent, lying atop the Indian tectonic plate, a part of the Indo-Australian Plate. India's defining geological processes began 75 million years ago when the Indian Plate, then part of the southern supercontinent Gondwana, began a north-eastward drift caused by seafloor spreading to its south-west, and later, south and south-east. Simultaneously, the vast Tethyan oceanic crust, to its northeast, began to subduct under the Eurasian Plate. These dual processes, driven by convection in the Earth's mantle, both created the Indian Ocean and caused the Indian continental crust eventually to under-thrust Eurasia and to uplift the Himalayas. Immediately south of the emerging Himalayas, plate movement created a vast crescent-shaped trough that rapidly filled with river-borne sediment[174] and now constitutes the Indo-Gangetic Plain. The original Indian plate makes its first appearance above the sediment in the ancient Aravalli range, which extends from the Delhi Ridge in a southwesterly direction. To the west lies the Thar Desert, the eastern spread of which is checked by the Aravallis.

student@sp-OptiPlex-7070: ~/Desktop/422133$ grep -o "Indian Ocean" wk31.txt
Indian Ocean

student@sp-OptiPlex-7070: ~/Desktop/422133$ grep -n "Indian" wk31.txt
1:India accounts for the bulk of the Indian subcontinent, lying atop the Indian tectonic plate, a part of the Indo-Australian Plate. India's defining geological processes began 75 million years ago when the Indian Plate, then part of the southern supercontinent Gondwana, began a north-eastward drift caused by seafloor spreading to its south-west, and later, south and south-east. Simultaneously, the vast Tethyan oceanic crust, to its northeast, began to subduct under the Eurasian Plate. These dual processes, driven by convection in the Earth's mantle, both created the Indian Ocean and caused the Indian continental crust eventually to under-thrust Eurasia and to uplift the Himalayas. Immediately south of the emerging Himalayas, plate movement created a vast crescent-shaped trough that rapidly filled with river-borne sediment[174] and now constitutes the Indo-Gangetic Plain. The original Indian plate makes its first appearance above the sediment in the ancient Aravalli range, which extends from the Delhi Ridge in a southwesterly direction. To the west lies the Thar Desert, the eastern spread of which is checked by the Aravallis.

student@sp-OptiPlex-7070: ~/Desktop/422133$ grep -v "Indian" wk31.txt
student@sp-OptiPlex-7070: ~/Desktop/422133$ grep "Immediately" wk31.txt
student@sp-OptiPlex-7070: ~/Desktop/422133$ grep "India" wk31.txt
India accounts for the bulk of the Indian subcontinent, lying atop the Indian tectonic plate, a part of the Indo-Australian Plate. India's defining geological processes began 75 million years ago when the Indian Plate, then part of the southern supercontinent Gondwana, began a north-eastward drift caused by seafloor spreading to its south-west, and later, south and south-east. Simultaneously, the vast Tethyan oceanic crust, to its northeast, began to subduct under the Eurasian Plate. These dual processes, driven by convection in the Earth's mantle, both created the Indian Ocean and caused the Indian continental crust eventually to under-thrust Eurasia and to uplift the Himalayas. Immediately south of the emerging Himalayas, plate movement created a vast crescent-shaped trough that rapidly filled with river-borne sediment[174] and now constitutes the Indo-Gangetic Plain. The original Indian plate makes its first appearance above the sediment in the ancient Aravalli range, which extends from the Delhi Ridge in a southwesterly direction. To the west lies the Thar Desert, the eastern spread of which is checked by the Aravallis.

student@sp-OptiPlex-7070: ~/Desktop/422133$ grep "Aravallis" wk31.txt
student@sp-OptiPlex-7070: ~/Desktop/422133$ cat wk31.txt
India accounts for the bulk of the Indian subcontinent, lying atop the Indian tectonic plate, a part of the Indo-Australian Plate. India's defining geological processes began 75 million years ago when the Indian Plate, then part of the southern supercontinent Gondwana, began a north-eastward drift caused by seafloor spreading to its south-west, and later, south and south-east. Simultaneously, the vast Tethyan oceanic crust, to its northeast, began to subduct under the Eurasian Plate. These dual processes, driven by convection in the Earth's mantle, both created the Indian Ocean and caused the Indian continental crust eventually to under-thrust Eurasia and to uplift the Himalayas. Immediately south of the emerging Himalayas, plate movement created a vast crescent-shaped trough that rapidly filled with river-borne sediment[174] and now constitutes the Indo-Gangetic Plain. The original Indian plate makes its first appearance above the sediment in the ancient Aravalli range, which extends from the Delhi Ridge in a southwesterly direction. To the west lies the Thar Desert, the eastern spread of which is checked by the Aravallis.

student@sp-OptiPlex-7070: ~/Desktop/422133$
```

# PR

```
student@sp-OptiPlex-7070:~$ cd Desktop
student@sp-OptiPlex-7070:~/Desktop$ cd 422133
student@sp-OptiPlex-7070:~/Desktop/422133$ pr -t wk32.txt
1
2
3
4
5
6
7
8
9
10
student@sp-OptiPlex-7070:~/Desktop/422133$ pr -d wk32.txt

2024-02-16 15:08                               wk32.txt                               Page 1

1
2
3
4
5
6
7
8
9
10
```

```
student@sp-OptiPlex-7070:~$ cd Desktop
student@sp-OptiPlex-7070:~/Desktop$ cd 422133
student@sp-OptiPlex-7070:~/Desktop/422133$ cat wk32.txt
1
2
3
4
5
6
7
8
9
10
student@sp-OptiPlex-7070:~/Desktop/422133$ pr -4 wk32.txt

2024-02-16 15:08                               wk32.txt                               Page 1

1           4           7           9
2           5           8           10
3           6
```

```
student@sp-OptiPlex-7070:~$ cd Desktop
student@sp-OptiPlex-7070:~/Desktop$ cd 422133
student@sp-OptiPlex-7070:~/Desktop/422133$ pr -n wk32.txt

2024-02-16 15:08                               wk32.txt                               Page 1

1 1
2 2
3 3
4 4
5 5
6 6
7 7
8 8
9 9
10 10
```

## HEAD

```
student@sp-OptiPlex-7070:~$ cd Desktop
student@sp-OptiPlex-7070:~/Desktop$ cd 422133
student@sp-OptiPlex-7070:~/Desktop/422133$ head -n 5 wk33.txt
Andhra Pradesh
Arunachal Pradesh
Assam
Bihar
Chattisgarh
student@sp-OptiPlex-7070:~/Desktop/422133$ head -c 6 wk33.txt
Andhrastudent@sp-OptiPlex-7070:~/Desktop/422133$ head wk33.txt wk34.txt
==> wk33.txt <==
Andhra Pradesh
Arunachal Pradesh
Assam
Bihar
Chattisgarh
Goa
Gujarat
Haryana
Himachal Pradesh
Jammu
==> wk34.txt <==
Amaravathi
Itanagar
Dispur
Patna
Raiput
Panaji
Gandhinagar
Chandigarh
Shimla
Srinagar
```

```
student@sp-OptiPlex-7070:~/Desktop/422133$ head -q wk33.txt wk34.txt
Andhra Pradesh
Arunachal Pradesh
Assam
Bihar
Chattisgarh
Goa
Gujarat
Haryana
Himachal Pradesh
Jammu
Amaravathi
Itanagar
Dispur
Patna
Raiput
Panaji
Gandhinagar
Chandigarh
Shimla
Srinagar
student@sp-OptiPlex-7070:~/Desktop/422133$ head -v wk33.txt
==> wk33.txt <==
Andhra Pradesh
Arunachal Pradesh
Assam
Bihar
Chattisgarh
Goa
Gujarat
Haryana
Himachal Pradesh
Jammu
student@sp-OptiPlex-7070:~/Desktop/422133$
```

```
student@sp-OptiPlex-7070:~/Desktop/422133$ head -n 20 wk33.txt | tail -10
Jharkhand
Karnataka
Kerala
Madhya Pradesh
Manipur
Meghalaya
Mizoram
Nagaland
Odisha
Punjab
student@sp-OptiPlex-7070:~/Desktop/422133$
```

```
student@sp-OptiPlex-7070:~/Desktop/422133$ head -n 20 wk33.txt | tail -10
Jharkhand
Karnataka
Kerala
Madhya Pradesh
Manipur
Meghalaya
Mizoram
Nagaland
Odisha
Punjab
```



## TAIL

```
student@sp-OptiPlex-7070:~/Desktop/422133$ tail wk34.txt
Itanagar
Dispur
Patna
Raiput
Panaji
Gandhinagar
Chandigarh
Shimla
Srinagar

student@sp-OptiPlex-7070:~/Desktop/422133$ tail -n 3 wk33.txt
Uttar Pradesh
Uttarakhand
West Bengal

student@sp-OptiPlex-7070:~/Desktop/422133$ tail +25 wk33.txt
Tripura
Uttar Pradesh
Uttarakhand
West Bengal

student@sp-OptiPlex-7070:~/Desktop/422133$ tail -c 7 wk33.txt
Bengal

student@sp-OptiPlex-7070:~/Desktop/422133$ tail -c +263 wk33.txt

West Bengal
student@sp-OptiPlex-7070:~/Desktop/422133$ tail wk33.txt wk34.txt
==> wk33.txt <==
Odisha
Punjab
Rajasthan
Sikkim
```

```
student@sp-OptiPlex-7070:~/Desktop/422133$ tail wk33.txt wk34.txt
==> wk33.txt <==
Odisha
Punjab
Rajasthan
Sikkim
Tamil Nadu
Telangana
Tripura
Uttar Pradesh
Uttarakhand
West Bengal

==> wk34.txt <==
Itanagar
Dispur
Patna
Raiput
Panaji
Gandhinagar
Chandigarh
Shimla
Srinagar
```

```
student@sp-OptiPlex-7070:~/Desktop/422133$ tail wk33.txt -q wk34.txt
Odisha
Punjab
Rajasthan
Sikkim
Tamil Nadu
Telangana
Tripura
Uttar Pradesh
Uttarakhand
West Bengal
Itanagar
Dispur
Patna
Raiput
Panaji
Gandhinagar
```

```
student@sp-OptiPlex-7070:~/Desktop/422133$ tail -v wk33.txt
==> wk33.txt <==
Odisha
Punjab
Rajasthan
Sikkim
Tamil Nadu
Telangana
Tripura
Uttar Pradesh
Uttarakhand
West Bengal
```

# CUT

```
student@sp-OptiPlex-7070:~/Desktop/422133$ cut -b 1-3,5-7 wk33.txt
Andra
Aruach
Assm
Bihr
Chattis
Goa
Gujrat
Harana
Himcha
Jamu
Jhakha
Karata
Kerla
Madya
Manpur
Megala
Mizram
Naglan
Odiha
Punab
Rajsth
Sikim
Taml N
Telnga
Triura
Uttr P
Uttrak
Wes Be
```

```
student@sp-OptiPlex-7070:~/Desktop/422133$ cut -c 2,5,7 wk33.txt
nr
rah
sm
ir
hts
o
urt
aaa
ica
au
hka
aaa
el
ay
apr
eaa
irm
aln
dh
ua
ash
ii
alN
ena
rua
trP
trk
e e
student@sp-OptiPlex-7070:~/Desktop/422133$
```

```
student@sp-OptiPlex-7070:~/Desktop/422133$ cut -c 1- wk33.txt
Andhra Pradesh
Arunachal Pradesh
Assam
Bihar
Chattisgarh
Goa
Gujarat
Haryana
Himachal Pradesh
Jammu
Jharkhand
Karnataka
Kerala
Madhya Pradesh
Manipur
Meghalaya
Mizoram
Nagaland
Odisha
Punjab
Rajasthan
Sikkim
Tamil Nadu
Telangana
Tripura
Uttar Pradesh
Uttarakhand
West Bengal
student@sp-OptiPlex-7070:~/Desktop/422133$
```

```
student@sp-OptiPlex-7070:~/Desktop/422133$ cut -f 1 wk33.txt
Andhra Pradesh
Arunachal Pradesh
Assam
Bihar
Chattisgarh
Goa
Gujarat
Haryana
Himachal Pradesh
Jammu
Jharkhand
Karnataka
Kerala
Madhya Pradesh
Manipur
Meghalaya
Mizoram
Nagaland
Odisha
Punjab
Rajasthan
Sikkim
Tamil Nadu
Telangana
Tripura
Uttar Pradesh
Uttarakhand
West Bengal
student@sp-OptiPlex-7070:~/Desktop/422133$
```

```
student@sp-OptiPlex-7070:~/Desktop/422133$ cut --complement -d " " -f 1 wk33.txt
Pradesh
Pradesh
Assam
Bihar
Chattisgarh
Goa
Gujarat
Haryana
Pradesh
Jammu
Jharkhand
Karnataka
Kerala
Pradesh
Manipur
Meghalaya
Mizoram
Nagaland
Odisha
Punjab
Rajasthan
Sikkim
Nadu
Telangana
Tripura
Pradesh
Uttarakhand
Bengal
```

## PASTE

```
student@sp-OptiPlex-7070:~/Desktop/422133$ paste wk33.txt wk34.txt
Andhra Pradesh Amaravathi
Arunachal Pradesh Itanagar
Assam Dispur
Bihar Patna
Chattisgarh Raipur
Goa Panaji
student@sp-OptiPlex-7070:~/Desktop/422133$ paste -d "|" wk33.txt wk34.txt
Andhra Pradesh|Amaravathi
Arunachal Pradesh|Itanagar
Assam|Dispur
Bihar|Patna
Chattisgarh|Raipur
Goa|Panaji
student@sp-OptiPlex-7070:~/Desktop/422133$ paste -s -d ":" wk33.txt wk34.txt
Andhra Pradesh:Arunachal Pradesh:Assam:Bihar:Chattisgarh:Goa
Amaravathi:Itanagar:Dispur:Patna:Raipur:Panaji
```

## SORT

```
student@sp-OptiPlex-7070:~/Desktop/422133$ sort -t wk33.txt
sort: multi-character tab 'wk33.txt'
student@sp-OptiPlex-7070:~/Desktop/422133$ sort -t wk34.txt
sort: multi-character tab 'wk34.txt'
```

## UNIQ

```
student@sp-OptiPlex-7070:~/Desktop/422133$ uniq wk33.txt
Andhra Pradesh
Arunachal Pradesh
Assam
Bihar
Chattisgarh
Goa
student@sp-OptiPlex-7070:~/Desktop/422133$ uniq -c wk33.txt
1 Andhra Pradesh
1 Arunachal Pradesh
1 Assam
1 Bihar
1 Chattisgarh
1 Goa
student@sp-OptiPlex-7070:~/Desktop/422133$ uniq -d wk33.txt
student@sp-OptiPlex-7070:~/Desktop/422133$ uniq -u list2.txt
uniq: list2.txt: No such file or directory
student@sp-OptiPlex-7070:~/Desktop/422133$ uniq -u wk33.txt
Andhra Pradesh
Arunachal Pradesh
Assam
Bihar
Chattisgarh
Goa
```

## TR

```
student@sp-OptiPlex-7070:~/Desktop/422133$ cat wk33.txt | tr [a-z] [A-Z]
ANDHRA PRADESH
ARUNACHAL PRADESH
ASSAM
BIHAR
CHATTISGARH
GOA
student@sp-OptiPlex-7070:~/Desktop/422133$ echo "Welcome" | tr -d W
elcome
student@sp-OptiPlex-7070:~/Desktop/422133$ echo "my ID is 422133" | tr -d [:digit:]
my ID is
student@sp-OptiPlex-7070:~/Desktop/422133$
```

**NAME : CH V CHARAN**  
**SECTION : A**  
**ROLL NO : 422133**