

ASSIGNMENT 1: LINUX COMMANDS

```
nanda@AIZENSOSUKE:~$ echo "User: $(whoami), Hostname: $(hostname)" && history | tail -n 40
User: nanda, Hostname: AIZENSOSUKE
81 cur >marks.txt
82 cut >marks.txt
83 cat test1.txt | grep 9
84 echo class7 | sed 's/class/jtp/'
85 cat test1.txt | tr 'prcu' 'PRCU'
86 sort test1.txt | uniq
87 find . -name "*.pdf"
88 locate test
89 date
90 cal
91 sleep 4
92 time
93 clear
94 ip a
95 mail -s "Helloworld" nandamonsterking@gmail.com
96 ping javapoint.com
97 host javapoint.com
98 history
99 clear
100 history
101 pwd
102 mkdir hi
103 rmdir hi
104 ls
105 cd test
106 touch hi1.txt
107 cat > hi1.txt
108 rm hi1.txt
109 cp test1.txt test2.txt
110 mv test1.txt test2
111 rename 's/\.txt%/.pdf/' *.txt
112 head test1.txt
113 tail test1.txt
114 tac test1.txt
115 more test1.txt
116 less test1.txt
117 su nanda1
118 su nanda
119 history
120 echo "User: $(whoami), Hostname: $(hostname)" && history | tail -n 40
nanda@AIZENSOSUKE:~$
```

Screenshot of executed LINUX commands

Linux commands and their use case:

System Information & Monitoring

1. **whoami** – Displays the current username.
2. **hostname** – Shows the system's hostname.
3. **echo "User: \$(whoami), Hostname: \$(hostname)"** – Prints username and hostname.
4. **date** – Displays the current date and time.
5. **cal** – Shows the current month's calendar.
6. **time** – Measures execution time of a command.
7. **df -h** – Shows disk space usage in a human-readable format.
8. **top** – Displays real-time system resource usage.

File & Directory Operations

9. **pwd** – Prints the current working directory.
10. **ls** – Lists files and directories.
11. **mkdir hi** – Creates a directory named "hi".
12. **rmdir hi** – Removes the "hi" directory.
13. **touch hi1.txt** – Creates an empty file named "hi1.txt".

- 14. `rm hi1.txt` – Deletes the file `hi1.txt`.
- 15. `cp test1.txt test2.txt` – Copies `test1.txt` to `test2.txt`.
- 16. `mv test1.txt test2` – Moves `test1.txt` to `test2`.
- 17. `rename 's/\.txt%/\.pdf/' *.txt` – (Incorrect syntax, but intent is renaming `.txt` files to `.pdf`).

File Viewing & Manipulation

- 18. `cat test1.txt` – Displays the content of `test1.txt`.
- 19. `cat test1.txt | grep 9` – Searches for the number "9" in `test1.txt`.
- 20. `echo class7 | sed 's/class/jtp/'` – Replaces "class" with "jtp" in the text "class7".
- 21. `cat test1.txt | tr 'pcu' 'PRCU'` – Transforms occurrences of 'p', 'c', 'u' into 'P', 'R', 'C', 'U'.
- 22. `sort test1.txt | uniq` – Sorts and removes duplicate lines from `test1.txt`.
- 23. `head test1.txt` – Displays the first 10 lines of `test1.txt`.
- 24. `tail test1.txt` – Displays the last 10 lines of `test1.txt`.
- 25. `tac test1.txt` – Displays `test1.txt` content in reverse order.
- 26. `more test1.txt` – Views `test1.txt` one page at a time.
- 27. `less test1.txt` – Similar to `more`, but allows backward navigation.

Search & Locate

- 28. `find . -name "*.pdf"` – Finds all PDF files in the current directory and subdirectories.
- 29. `locate test` – Searches for files and directories containing "test".

Networking Commands

- 30. `ip a` – Displays IP address and network information.
- 31. `ping javapoint.com` – Checks network connectivity to `javapoint.com`.
- 32. `host javapoint.com` – Retrieves DNS information for `javapoint.com`.
- 33. `mail -s "Helloworld" nandamonsterking@gmail.com` – Sends an email with "Helloworld" as the subject.

User & Session Management

- 34. `su nanda1` – Switches user to "nanda1".
- 35. `su nanda` – Switches user to "nanda".

Command History & Execution

- 36. `history` – Displays the command history.
- 37. `history | tail -n 40` – Shows the last 40 executed commands.

- 38. `clear` – Clears the terminal screen.
- 39. `sleep 4` – Pauses execution for 4 seconds.