

Assignment 6

Name:-Nikhil Balasaheb Kokale

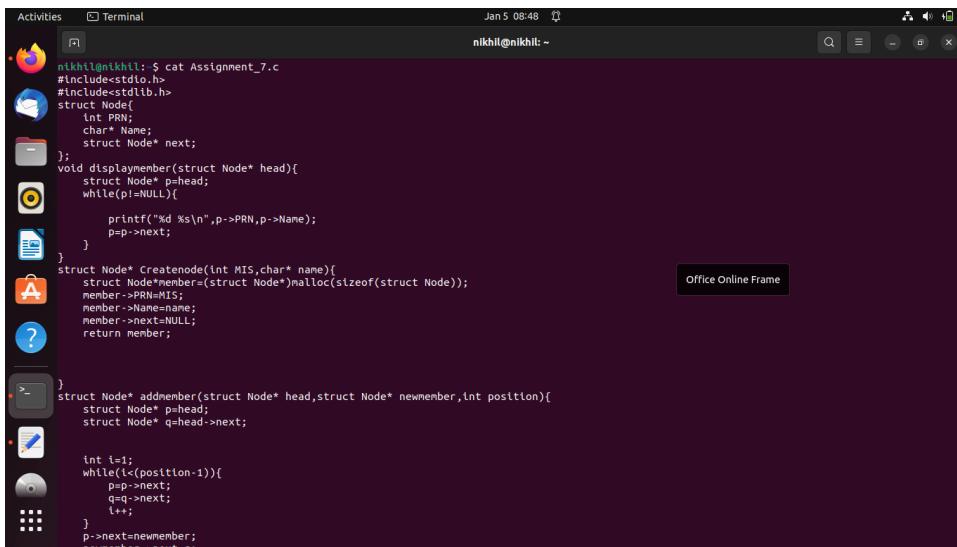
MIS:-112103072

DIV:-1

Batch:-S5

#40 linux commands

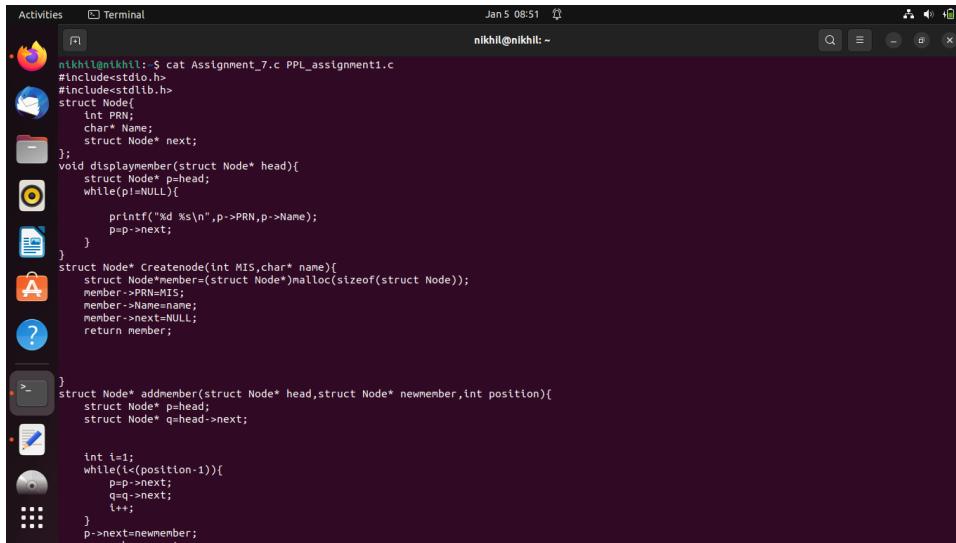
1.cat



```
nikhil@nikhil: ~$ cat Assignment_7.c
#include<stdio.h>
#include<stdlib.h>
struct Node{
    int PRN;
    char* Name;
    struct Node* next;
};
void displaymember(struct Node* head){
    struct Node* phead;
    while(p!=NULL){
        printf("%d %s\n",p->PRN,p->Name);
        p=p->next;
    }
}
struct Node* Createnode(int MIS,char* name){
    struct Node*member=(struct Node*)malloc(sizeof(struct Node));
    member->PRN=MIS;
    member->Name=name;
    member->next=NULL;
    return member;
}
struct Node* addmember(struct Node* head,struct Node* newmember,int position){
    struct Node* phead;
    struct Node* qhead->next;
    int i=1;
    while(i<(position-1)){
        p=p->next;
        q=q->next;
        i++;
    }
    p->next=newmember;
```

A)Using cat command ,we can view a single file and contents of the file are displayed

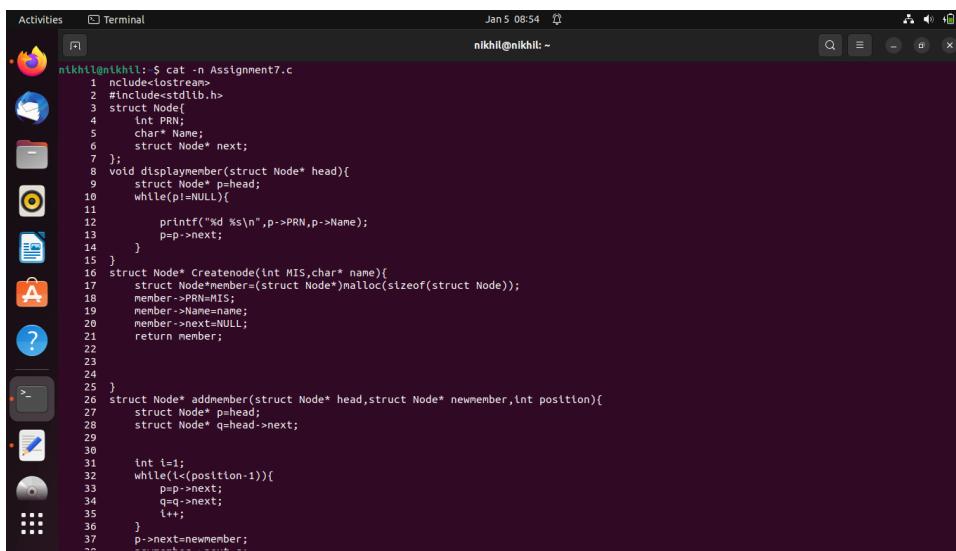
B)We can see multiple files.



A screenshot of a Linux desktop environment, likely Ubuntu, showing a terminal window. The terminal window has a dark background and contains C code. The code defines a struct Node with fields PRN and Name, and pointers next and phead. It includes functions to create nodes and add them to a linked list at a specific position. The terminal window is titled "Terminal" and shows the command "nikhil@nikhil: ~".

```
nikhil@nikhil: ~$ cat Assignment_7.c PPL_assignment1.c
#include<stdio.h>
#include<stdlib.h>
struct Node{
    int PRN;
    char* Name;
    struct Node* next;
}, void displaymember(struct Node* head){
    struct Node* phead;
    while(p!=NULL){
        printf("%d %s\n",p->PRN,p->Name);
        p=p->next;
    }
}
struct Node* Createnode(int M1S,char* name){
    struct Node* member=(struct Node*)malloc(sizeof(struct Node));
    member->PRN=M1S;
    member->Name=name;
    member->next=NULL;
    return member;
}
struct Node* addmember(struct Node* head,struct Node* newmember,int position){
    struct Node* phead;
    struct Node* q=head->next;
    int i=1;
    while(i<(position-1)){
        p=p->next;
        q=q->next;
        i++;
    }
    p->next=newmember;
    newmember->next=q;
}
```

C)We can see contents of file preceding their numbers.



A screenshot of a Linux desktop environment, likely Ubuntu, showing a terminal window. The terminal window has a dark background and contains the same C code as the previous image. The code defines a struct Node with fields PRN and Name, and pointers next and phead. It includes functions to create nodes and add them to a linked list at a specific position. The terminal window is titled "Terminal" and shows the command "nikhil@nikhil: ~".

```
nikhil@nikhil: ~$ cat -n Assignment7.c
1  nclude<iostream>
2  #include<stdlib.h>
3  struct Node{
4      int PRN;
5      char* Name;
6      struct Node* next;
7  }, void displaymember(struct Node* head){
8      struct Node* phead;
9      while(p!=NULL){
10         printf("%d %s\n",p->PRN,p->Name);
11         p=p->next;
12     }
13 }
14 struct Node* Createnode(int M1S,char* name){
15     struct Node* member=(struct Node*)malloc(sizeof(struct Node));
16     member->PRN=M1S;
17     member->Name=name;
18     member->next=NULL;
19     return member;
20 }
21
22
23
24
25 }
26 struct Node* addmember(struct Node* head,struct Node* newmember,int position){
27     struct Node* phead;
28     struct Node* q=head->next;
29
30     int i=1;
31     while(i<(position-1)){
32         p=p->next;
33         q=q->next;
34         i++;
35     }
36 }
37 p->next=newmember;
```

D)We can create a file .

2)ls:-View files of directories.

```
nikhil@nikhil: ~
```

```
nikhil@nikhil: $ ls
a-add.i          a-add.s          a-ppl_assignment_2.i    doc1.sh      hello.sh    PPL_assignment1.c  Templates
a-addition_1.i   add.c           addition_1.c        doc2         hello.sh    ppl_assignment2.c 'Untitled Document 1'
a-addition_1.o   addition_1.c   assignment1.c       '[doc2.sh]'  Music      ppl_assignment2.s  Videos
a-addition_1.s   addition_1.s   assignment1.sh     'doc2.sh'    Pictures   PPL.c
a-addition.i    addition.c     Assignment7.c      Assignment7.c  Documents  PPL1.c  Public
a-addition.s    a.out          Assignment7.c      a.out        Downloads  PPL_add.c snap
a-add.o          a-ppl_assignment_2.i
```

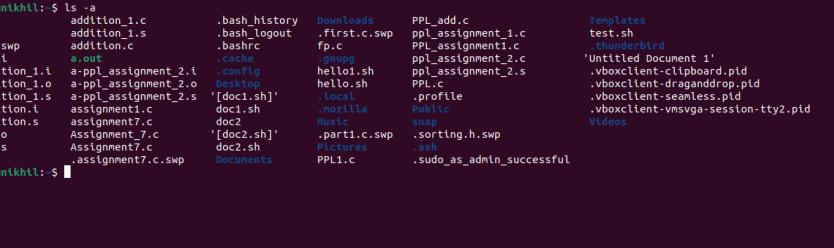
3)ls -l

```
nikhil@nikhil: ~
```

```
nikhil@nikhil: $ ls -l
total 0
-rw-rw-r-- 1 nikhil nikhil 17942 Nov 21 23:45 a-add.i
-rw-rw-r-- 1 nikhil nikhil 17900 Nov 21 23:35 a-addition_1.i
-rw-rw-r-- 1 nikhil nikhil 1528 Nov 21 23:35 a-addition_1.o
-rw-rw-r-- 1 nikhil nikhil 803 Nov 21 23:35 a-addition_1.s
-rw-rw-r-- 1 nikhil nikhil 18063 Nov 21 23:12 a-addition.i
-rw-rw-r-- 1 nikhil nikhil 20 Nov 21 23:12 a-addition.s
-rw-rw-r-- 1 nikhil nikhil 1248 Nov 21 22:45 a-add.o
-rw-rw-r-- 1 nikhil nikhil 673 Nov 21 22:45 a-add.s
-rw-rw-r-- 1 nikhil nikhil 64 Nov 21 22:45 add.c
-rw-rw-r-- 1 nikhil nikhil 1021 Nov 21 22:45 add1.c
-rw-rw-r-- 1 nikhil nikhil 803 Nov 21 23:11 addition_1.c
-rw-rw-r-- 1 nikhil nikhil 167 Nov 21 22:37 addition.c
-rwxrwxr-x 1 nikhil nikhil 16400 Jan 5 00:15 a.out
-rw-rw-r-- 1 nikhil nikhil 17995 Nov 21 21:52 a-ppl_assignment2.i
-rw-rw-r-- 1 nikhil nikhil 1264 Nov 21 21:52 a-ppl_assignment2.o
-rw-rw-r-- 1 nikhil nikhil 686 Nov 21 21:52 a-ppl_assignment2.s
-rw-rw-r-- 1 nikhil nikhil 33 Nov 21 22:34 assignment1.c
-rw-rw-r-- 1 nikhil nikhil 1920 Jan 4 23:59 assignment7.c
-rw-rw-r-- 1 nikhil nikhil 2932 Jan 5 00:44 Assignment7.c
-rw-rw-r-- 1 nikhil nikhil 2932 Jan 5 00:44 Assignment7.c
drwxr-xr-x 2 nikhil nikhil 4096 Jan 5 00:41 Documents
drwxr-xr-x 2 nikhil nikhil 4096 Jan 5 00:41 Downloads
-rw-rw-r-- 1 nikhil nikhil 0 Jan 5 00:12 '[doc1.sh]'
-rw-rw-r-- 1 nikhil nikhil 0 Jan 5 00:35 doc1.sh
-rw-rw-r-- 1 nikhil nikhil 6 Jan 5 00:10 doc2
-rw-rw-r-- 1 nikhil nikhil 0 Jan 5 00:13 '[doc2.sh]'
-rw-rw-r-- 1 nikhil nikhil 0 Jan 5 00:36 doc2.sh
drwxr-xr-x 2 nikhil nikhil 4096 Nov 22 00:02 Documents
drwxr-xr-x 2 nikhil nikhil 4096 Jan 5 00:37 Downloads
-rw-rw-r-- 1 nikhil nikhil 62 Nov 14 18:27 fp.c
-rw-rw-r-- 1 nikhil nikhil 102 Nov 14 18:27 hello1.sh
-rw-rw-r-- 1 nikhil nikhil 14 Jan 4 00:52 hello.sh
drwxr-xr-x 2 nikhil nikhil 4096 Nov 14 16:57 Pictures
drwxr-xr-x 3 nikhil nikhil 4096 Nov 21 22:14 Pictures
-rw-rw-r-- 1 nikhil nikhil 124 Nov 14 22:47 PPL1.c
-rw-rw-r-- 1 nikhil nikhil 34 Nov 21 22:30 PPL_add.c
-rw-rw-r-- 1 nikhil nikhil 61 Nov 21 22:26 ppl_assignment1.c
```

4)ls -a

This command shows hidden files.

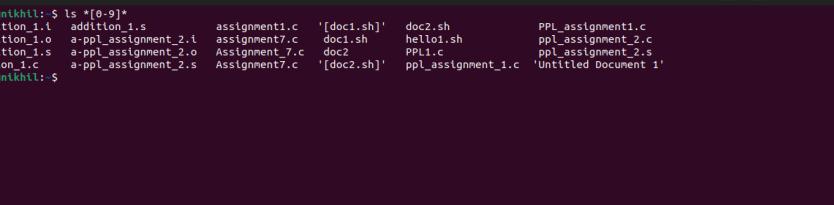


```
nikhil@nkhil: ~
```

```
nikhil@nkhil: $ ls -a
.                                .bash_history      Downloads      PPL_add.c      Templates
..                               .bash_logout      .first.c.swp   ppl_assignment_1.c  test.sh
.A1.c.swp                         .bashrc          fp.c          ppl_assignment1.c  .thunderbird
.a-add.i                           a.out           .cache        ppl_assignment_2.c  'Untitled Document 1'
.a-add.i.i                          a-ppl_assignment_2.i config        ppl_assignment_2.c  .vboxclient-clipboard.pid
.a-add.i.o                          a-ppl_assignment_2.o  .gnupg       ppl_assignment_2.s  .vboxclient-draganddrop.pid
.a-add.i.s                          a-ppl_assignment_2.s  hello.sh     PPL_assignment_1.c  .vboxclient-seamless.pid
.a-add.i.i.i                        assignment1.c    [doc1.sh]    .mozilla      Public
.a-add.i.i.o                        assignment1.o    doc1.sh     .profile      .snap
.a-add.i.s                          assignment1.s    doc2        .Music       .sortung.h.swp
.a-add.o                            Assignment7.c   [doc2.sh]    .part1.c.swp  .ssh
.a-add.s                            Assignment7.c   doc2.sh     Pictures     .sudo_as_admin_successful
add.c                             assignment7.c.swp Documents    PPL1.c
nikhil@nkhil: ~
```

5) ls *[0-9]*

Show files or directories containing numbers.



A screenshot of an Ubuntu desktop environment. The top bar shows 'Activities' and 'Terminal'. The terminal window title is 'nikhil@nikhil: ~'. The terminal displays the command 'ls *[0-2]*' followed by a list of files:

```
nikhil@nikhil: ~
ls *[0-2]*
a-addition_1.i    addition_1.s    assignment1.c  '[doc1.sh]'  doc2.sh      PPL_assignment1.c
a-addition_1.o    a-ppl_assignment_2.i  assignment7.c  doc1.sh     hello1.sh    ppl_assignment_2.c
a-addition_1.s    a-ppl_assignment_2.o  Assignment_7.c  doc2.c     PPL1.c      ppl_assignment_2.s
addition_1.c      a-ppl_assignment_2.s  Assignment7.c  '[doc2.sh]'  ppl_assignment_1.c  'Untitled Document 1'
nikhil@nikhil: ~
```

6)mkdir dir1

This command creates a directory named as dir1.

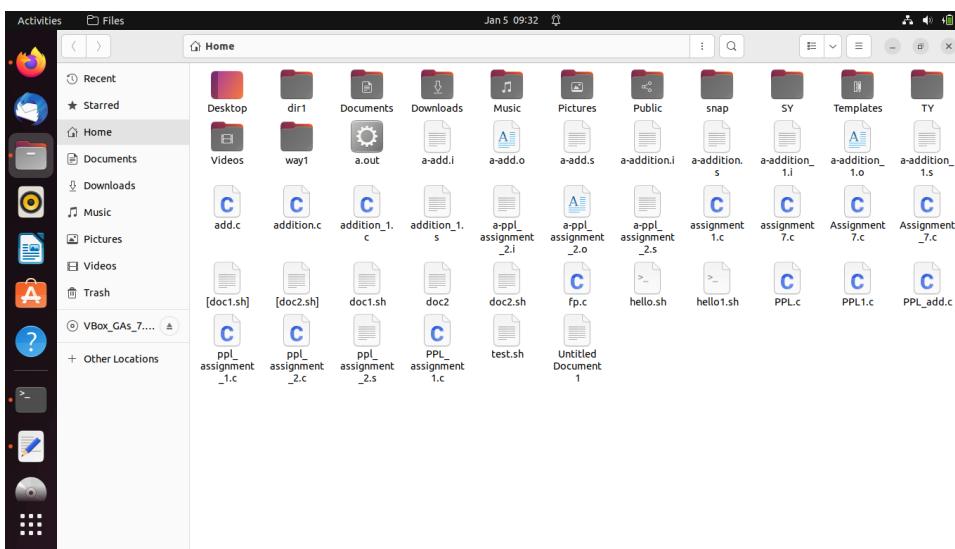
7)mkdir dir1 dir2

This command creates two directories simultaneously.

8)mkdir -p /tmp/dir1/dir2

This command creates a directory tree.

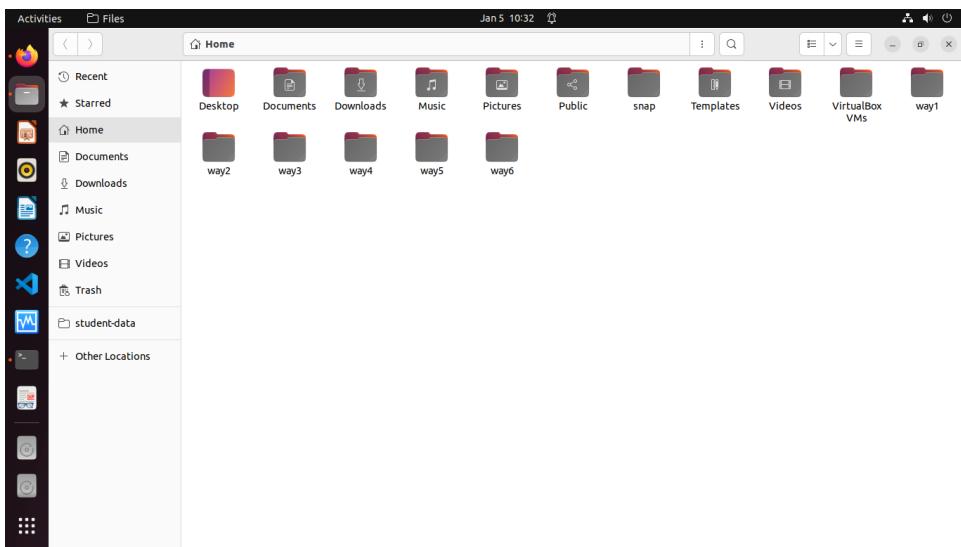
```
Activities Terminal Jan 5 09:26 nikhil@nikhil: ~
nikhil@nikhil: $ mkdir dir1
nikhil@nikhil: $ mkdir way1
nikhil@nikhil: $ mkdir SY TY
nikhil@nikhil: $ mkdir -p /tmp/SY/TY
nikhil@nikhil: $
```



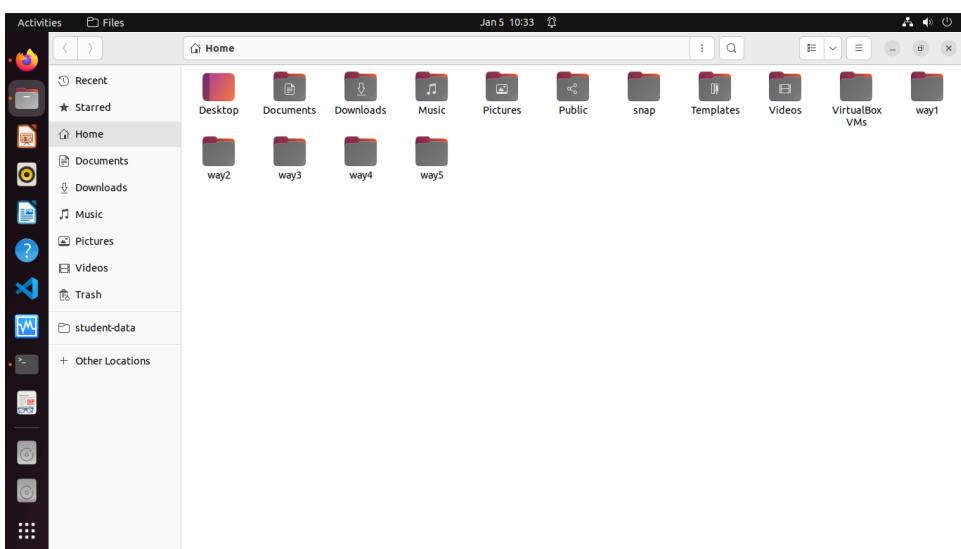
9)pwd

This command shows the current directory.

10)Delete direotry using command mkdir dir



```
student@administrator-foss26:~$ rmdir way6  
student@administrator-foss26:~$
```



11) Remove two directories and their contents recursively.



It deleted two directories way5 and way4.

12) find command

To find a file by name and find file by name, but ignores its letters



```
nikhil@nikhil: ~
```

13) Command to check word count



```
nikhil@nikhil: ~
```



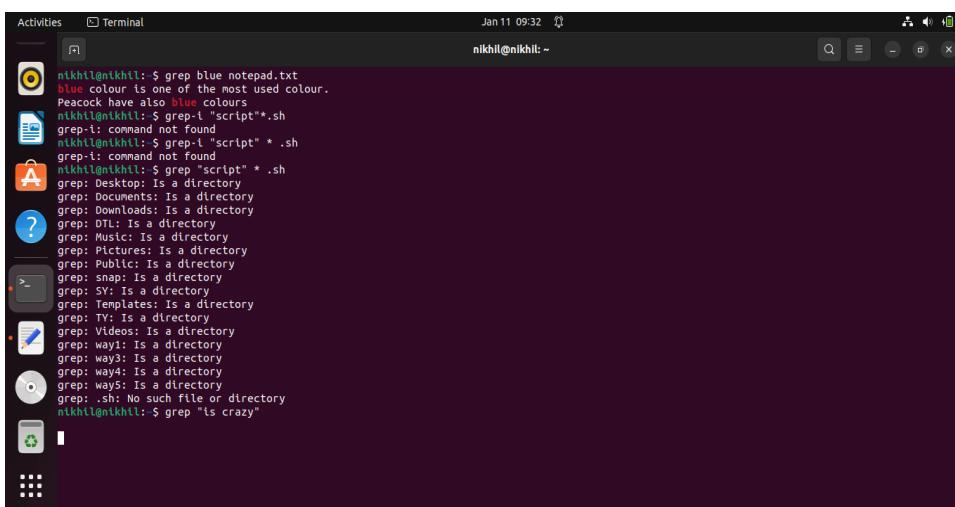
```
nikhil@nikhil: ~
```

14) sudo



```
nikhil@nikhil: ~
```

15) grep



```
nikhil@nikhil: ~
```

```
nikhil@nikhil: $ grep blue notepad.txt
blue colour is one of the most used colour.
Peacock have also blue colours
nikhil@nikhil: $ grep -l "script"*.sh
grep: command not found
nikhil@nikhil: $ grep -l "script" * .sh
grep: command not found
nikhil@nikhil: $ grep "script" * .sh
grep: Desktop: Is a directory
grep: Documents: Is a directory
grep: Downloads: Is a directory
grep: DLT: Is a directory
grep: Music: Is a directory
grep: Pictures: Is a directory
grep: Public: Is a directory
grep: Scripts: Is a directory
grep: SY: Is a directory
grep: Templates: Is a directory
grep: TV: Is a directory
grep: Videos: Is a directory
grep: way1: Is a directory
grep: way3: Is a directory
grep: way4: Is a directory
grep: way5: Is a directory
grep: .sh: No such file or directory
nikhil@nikhil: $ grep "is crazy"
```

16) df

Activities Terminal Jan 11 09:38 nikhil@nikhil:~

```
nikhil@nikhil:~$ df notepad.txt
Filesystem 1K-blocks Used Available Use% Mounted on
/dev/sda3 98069772 11542920 81499012 13% /
nikhil@nikhil:~$ df -h
Filesystem Size Used Avail Use% Mounted on
tmpfs 825M 1.6M 824M 1% /run
/dev/sda3 94G 12G 78G 13% /
tmpfs 4.1G 0 4.1G 0% /dev/shm
tmpfs 5.0M 4.0K 5.0M 1% /run/lock
/dev/sda2 512M 5.3M 507M 2% /boot/efi
tmpfs 825M 2.4M 823M 1% /run/user/1000
/dev/sr0 51M 51M 0 100% /media/nikhil/VBox_GAs_7.0.2
nikhil@nikhil:~$ df -m
Filesystem 1M-blocks Used Available Use% Mounted on
tmpfs 825 2 824 1% /run
/dev/sda3 95772 11273 79589 13% /
tmpfs 4125 0 4125 0% /dev/shm
tmpfs 5 1 5 1% /run/lock
/dev/sda2 512 6 507 2% /boot/efi
tmpfs 825 3 823 1% /run/user/1000
/dev/sr0 51 51 0 100% /media/nikhil/VBox_GAs_7.0.2
nikhil@nikhil:~$ df -k
Filesystem 1K-blocks Used Available Use% Mounted on
tmpfs 844704 1552 843152 1% /run
nikhil@nikhil:~$ df -T
Filesystem Type 1K-blocks Used Available Use% Mounted on
tmpfs tmpfs 844704 1552 843152 1% /run
```

Activities Terminal Jan 11 09:38 nikhil@nikhil:~

```
nikhil@nikhil:~$ df notepad.txt
Filesystem 1K-blocks Used Available Use% Mounted on
/dev/sda3 98069772 11542920 81499012 13% /
nikhil@nikhil:~$ df -h
Filesystem Size Used Avail Use% Mounted on
tmpfs 825M 1.6M 824M 1% /run
tmpfs 94G 12G 78G 13% /
tmpfs 4.1G 0 4.1G 0% /dev/shm
tmpfs 5.0M 4.0K 5.0M 1% /run/lock
tmpfs 512M 5.3M 507M 2% /boot/efi
tmpfs 825M 2.4M 823M 1% /run/user/1000
tmpfs 51M 51M 0 100% /media/nikhil/VBox_GAs_7.0.2
nikhil@nikhil:~$ df -m
Filesystem 1M-blocks Used Available Use% Mounted on
tmpfs 825 2 824 1% /run
/dev/sda3 95772 11273 79589 13% /
tmpfs 4125 0 4125 0% /dev/shm
tmpfs 5 1 5 1% /run/lock
/dev/sda2 512 6 507 2% /boot/efi
tmpfs 825 3 823 1% /run/user/1000
/dev/sr0 51 51 0 100% /media/nikhil/VBox_GAs_7.0.2
nikhil@nikhil:~$ df -k
Filesystem 1K-blocks Used Available Use% Mounted on
tmpfs 844704 1552 843152 1% /run
/dev/sda3 98069772 11542928 81499004 13% /
tmpfs 4223500 0 4223500 0% /dev/shm
tmpfs 5120 4 5116 1% /run/lock
tmpfs 524252 5364 518888 2% /boot/efi
tmpfs 844700 2424 842276 1% /run/user/1000
tmpfs 51716 51716 0 100% /media/nikhil/VBox_GAs_7.0.2
nikhil@nikhil:~$ df -T
Filesystem Type 1K-blocks Used Available Use% Mounted on
tmpfs tmpfs 844704 1552 843152 1% /run
```

16)du

Activities Terminal Jan 11 09:43 nikhil@nikhil:~

```
nikhil@nikhil:~$ du -m notepad.txt
1 notepad.txt
nikhil@nikhil:~$ du notepad.txt
4 notepad.txt
nikhil@nikhil:~$ du -s notepad.txt
4 notepad.txt
nikhil@nikhil:~$ du -h notepad.txt
4.0K notepad.txt
nikhil@nikhil:~$ du -k notepad.txt
4 notepad.txt
nikhil@nikhil:~$ du -k notepad.txt
4 notepad.txt
nikhil@nikhil:~$
```

17)head

Activities Terminal Jan 11 09:49 nikhil@nikhil:~

```
nikhil@nikhil:~$ head notepad.txt
blue colour is one of the most used colour.
Everyone likes this colour.
Peacock have also blue colours
nikhil@nikhil:~$ head -10 notepad.txt
blue colour is one of the most used colour.
Everyone likes this colour.
Peacock have also blue colours
nikhil@nikhil:~$ head -10 notepad.txt
blue colour is one of the most used colour.
Everyone likes this colour.
Peacock have also blue colours
peacock, also called peafowl, any of three species of resplendent birds of the pheasant family, Phasianidae (order Galliformes). Strictly, the male is a peacock, and the female is a peahen; both are peafowl. The two most-recognizable species of peafowl are the blue, or Indian, peacock (Pavo cristatus), of India and Sri Lanka, and the green, or Javanese, peacock (P. muticus), found from Myanmar (Burma) to Java. The Congo peacock (Afropavo congensis), which inhabits the forested interior of the Democratic Republic of the Congo, was discovered in 1936 after a search that began in 1913 with the finding of a single feather.
```

Natural history

```
nikhil@nikhil:~$ head -c notepad.txt
head: invalid number of bytes: 'notepad.txt'
nikhil@nikhil:~$ head -q notepad.txt
blue colour is one of the most used colour.
Everyone likes this colour.
Peacock have also blue colours
peacock, also called peafowl, any of three species of resplendent birds of the pheasant family, Phasianidae (order Galliformes). Strictly, the male is a peacock, and the female is a peahen; both are peafowl. The two most-recognizable species of peafowl are the blue, or Indian, peacock (Pavo cristatus), of India and Sri Lanka, and the green, or Javanese, peacock (P. muticus), found from Myanmar (Burma) to Java. The Congo peacock (Afropavo congensis), which inhabits the forested interior of the Democratic Republic of the Congo, was discovered in 1936 after a search that began in 1913 with the finding of a single feather.
```

18)tail

Activities Terminal Jan 11 09:52 nikhil@nikhil:~

```
nikhil@nikhil:~$ tail -5 notepad.txt
Francolins are partridges with leg spurs. The 5 Asian and about 35 African species of Francolinus are prized game birds, 25-40 cm long, with black plumage, but some are patterned in black, white, or red.
The snow partridge (Lerwa lewya) of high mountains of south-central Asia resembles a ptarmigan in appearance and habits.
This article was most recently revised and updated by Amy Tikkonen.
```

19)diff

```
Activities Terminal Jan 11 09:58 nikhil@nikhil: ~  
 nikhil@nikhil: $ diff s3.txt s4.txt  
2a3,5  
> blue colour is one of the most used colour.  
> Everyone likes this colour.  
> Peacock have also blue colours  
nikhil@nikhil: $ diff -c s3.txt s4.txt  
*** s3.txt      2023-01-11 09:57:16.946788362 +0530  
--- s4.txt      2023-01-11 09:57:12.398755969 +0530  
*** s3.txt***  
*** 1,2 ***  
--- 1,5 ---  
Hey I am Nikhil Kokale and I am studying at College of Engineering pune.  
Here are my friends.  
+ blue colour is one of the most used colour.  
+ Everyone likes this colour.  
+ Peacock have also blue colours  
nikhil@nikhil: $ diff -u s3.txt s4.txt  
--- s3.txt      2023-01-11 09:57:16.946788362 +0530  
+++ s4.txt     2023-01-11 09:57:12.398755969 +0530  
@@ -1,2 +1,5 @@  
Hey I am Nikhil Kokale and I am studying at College of Engineering pune.  
Here are my friends.  
+blue colour is one of the most used colour.  
+Everyone likes this colour.  
+Peacock have also blue colours  
nikhil@nikhil: $ diff -l s3.txt s4.txt  
2a3,5  
> blue colour is one of the most used colour.  
> Everyone likes this colour.  
> Peacock have also blue colours  
nikhil@nikhil: $
```

20)tar



22)chown

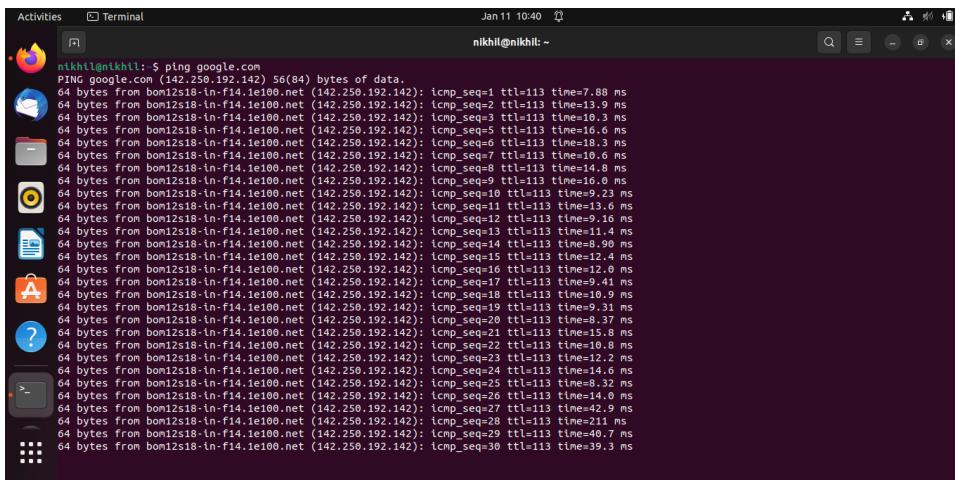


23)jobs



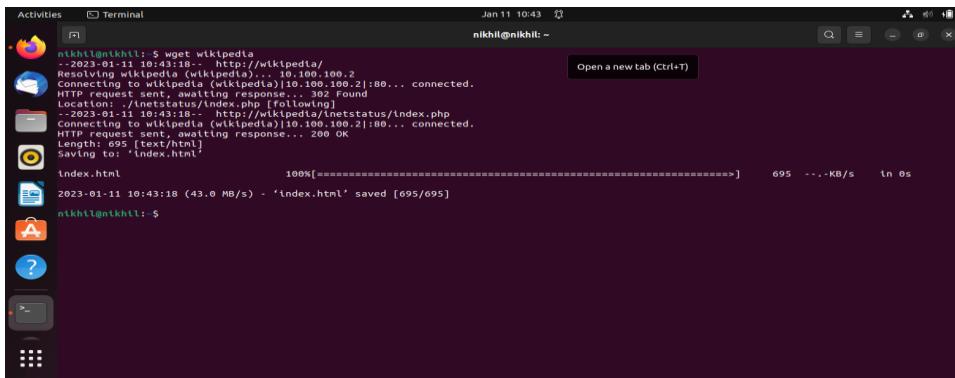
24)kill

25)ping



```
nikhil@nikhil:~$ ping google.com
PING google.com (142.250.192.142) 56(84) bytes of data.
64 bytes from bom12s18-1n-f14.ie100.net (142.250.192.142): icmp_seq=1 ttl=113 time=7.88 ms
64 bytes from bom12s18-1n-f14.ie100.net (142.250.192.142): icmp_seq=2 ttl=113 time=13.9 ms
64 bytes from bom12s18-1n-f14.ie100.net (142.250.192.142): icmp_seq=3 ttl=113 time=10.3 ms
64 bytes from bom12s18-1n-f14.ie100.net (142.250.192.142): icmp_seq=5 ttl=113 time=16.6 ms
64 bytes from bom12s18-1n-f14.ie100.net (142.250.192.142): icmp_seq=7 ttl=113 time=18.3 ms
64 bytes from bom12s18-1n-f14.ie100.net (142.250.192.142): icmp_seq=9 ttl=113 time=10.6 ms
64 bytes from bom12s18-1n-f14.ie100.net (142.250.192.142): icmp_seq=8 ttl=113 time=10.8 ms
64 bytes from bom12s18-1n-f14.ie100.net (142.250.192.142): icmp_seq=10 ttl=113 time=14.0 ms
64 bytes from bom12s18-1n-f14.ie100.net (142.250.192.142): icmp_seq=11 ttl=113 time=13.6 ms
64 bytes from bom12s18-1n-f14.ie100.net (142.250.192.142): icmp_seq=12 ttl=113 time=9.16 ms
64 bytes from bom12s18-1n-f14.ie100.net (142.250.192.142): icmp_seq=13 ttl=113 time=11.4 ms
64 bytes from bom12s18-1n-f14.ie100.net (142.250.192.142): icmp_seq=14 ttl=113 time=8.90 ms
64 bytes from bom12s18-1n-f14.ie100.net (142.250.192.142): icmp_seq=15 ttl=113 time=12.4 ms
64 bytes from bom12s18-1n-f14.ie100.net (142.250.192.142): icmp_seq=16 ttl=113 time=12.0 ms
64 bytes from bom12s18-1n-f14.ie100.net (142.250.192.142): icmp_seq=17 ttl=113 time=9.41 ms
64 bytes from bom12s18-1n-f14.ie100.net (142.250.192.142): icmp_seq=18 ttl=113 time=10.9 ms
64 bytes from bom12s18-1n-f14.ie100.net (142.250.192.142): icmp_seq=19 ttl=113 time=31 ms
64 bytes from bom12s18-1n-f14.ie100.net (142.250.192.142): icmp_seq=20 ttl=113 time=10.8 ms
64 bytes from bom12s18-1n-f14.ie100.net (142.250.192.142): icmp_seq=21 ttl=113 time=15.8 ms
64 bytes from bom12s18-1n-f14.ie100.net (142.250.192.142): icmp_seq=22 ttl=113 time=10.8 ms
64 bytes from bom12s18-1n-f14.ie100.net (142.250.192.142): icmp_seq=23 ttl=113 time=12.2 ms
64 bytes from bom12s18-1n-f14.ie100.net (142.250.192.142): icmp_seq=24 ttl=113 time=14.6 ms
64 bytes from bom12s18-1n-f14.ie100.net (142.250.192.142): icmp_seq=25 ttl=113 time=8.32 ms
64 bytes from bom12s18-1n-f14.ie100.net (142.250.192.142): icmp_seq=26 ttl=113 time=14.0 ms
64 bytes from bom12s18-1n-f14.ie100.net (142.250.192.142): icmp_seq=27 ttl=113 time=42.9 ms
64 bytes from bom12s18-1n-f14.ie100.net (142.250.192.142): icmp_seq=28 ttl=113 time=211 ms
64 bytes from bom12s18-1n-f14.ie100.net (142.250.192.142): icmp_seq=29 ttl=113 time=40.7 ms
64 bytes from bom12s18-1n-f14.ie100.net (142.250.192.142): icmp_seq=30 ttl=113 time=39.3 ms
```

26)wget



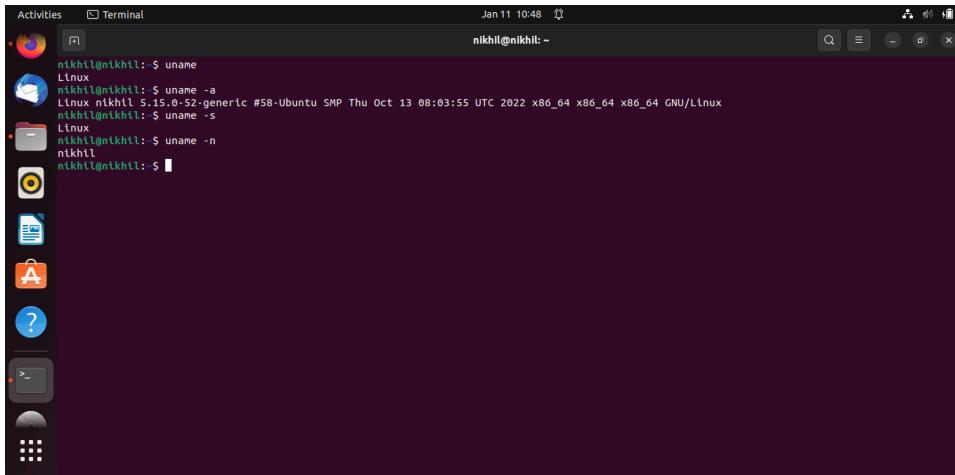
```
nikhil@nikhil:~$ wget wikipedia
--2023-01-11 10:43:18-- http://wikipedia/
Resolving wikipedia (wikipedia)... 10.100.100.2
Connecting to wikipedia (wikipedia)|10.100.100.2|:80... connected.
HTTP request sent, awaiting response... 302 Found
Location: /netstatus/index.php [following]
--2023-01-11 10:43:18-- http://wikipedia/netstatus/index.php
Connecting to wikipedia (wikipedia)|10.100.100.2|:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 695 [text/html]
Saving to: 'index.html'

index.html          100%[=====] 695  --.-KB/s   in 0s

2023-01-11 10:43:18 (43.0 MB/s) - 'index.html' saved [695/695]

nikhil@nikhil:~$
```

27)uname



```
nikhil@nikhil:~$ uname
Linux
nikhil@nikhil:~$ uname -a
Linux nikhil 5.15.0-52-generic #58-Ubuntu SMP Thu Oct 13 08:03:55 UTC 2022 x86_64 x86_64 x86_64 GNU/Linux
nikhil@nikhil:~$ uname -s
nikhil
nikhil@nikhil:~$
```

28)top

```
nikhil@nikhil: ~ top
top - 10:51:17 up 1:36, 1 user, load average: 1.95, 1.71, 1.54
Tasks: 215 total, 1 running, 214 sleeping, 0 stopped, 0 zombie
%CPU(s): 9.3 us, 1.4 sy, 0.0 ni, 89.3 id, 0.0 wa, 0.0 hi, 0.0 st, 0.0 st
Mem Mem: 8249.0 total, 4339.6 free, 1864.5 used, 2104.9 buff/cache
Mem Swap: 2048.0 total, 2048.0 free, 0.0 used, 6131.8 avail Mem

PID USER PR NI VIRT RES SHD S %CPU %MEM TIME+ COMMAND
0:0 nikhil 20 0 2860932 445092 103908 5 15.7 0:00.00 /usr/bin/lsmash Web Co
4236 nikhil 20 0 4538572 365008 139464 5 1.6 4.3 0:14.16 gnome-shell
10971 nikhil 20 0 637868 54488 41908 5 1.3 0.6 0:01.42 gnome-terminal-
11026 nikhil 20 0 21852 4180 3356 R 1.0 0.0 0:00.04 top
8702 nikhil 20 0 2803772 60964 44888 5 0.7 0.7 0:04.40 gjs
594 systemd+ 20 0 14824 6016 5212 5 0.3 0.1 0:13.70 systemd-oomd
8088 nikhil 9 -11 2217548 27284 21644 5 0.3 0.3 0:00.63 pulseaudio
8017 nikhil 20 0 11220 7428 4056 5 0.3 0.1 0:01.65 dbus-daemon
8639 nikhil 20 0 204568 67940 53868 5 0.3 0.8 0:13.53 Xwayland
8765 nikhil 20 0 227504 2500 2144 5 0.3 0.0 0:02.39 VBoxClient
8805 nikhil 20 0 12.9g 4592 210468 5 0.3 5.8 3:24.44 firefox
20 0 107812 13236 8268 5 0.0 0.0 0:00.07 libinput
2 root 20 0 0 0 0 0 0.0 0.0 0:00.01 kthreadd
3 root 0 -20 0 0 0 I 0.0 0.0 0:00.00 rCU_gp
4 root 0 -20 0 0 0 I 0.0 0.0 0:00.00 rCU_par_gp
5 root 0 -20 0 0 0 I 0.0 0.0 0:00.00 netns
7 root 0 -20 0 0 0 I 0.0 0.0 0:00.00 kworker/0:0H-events_highpri
9 root 0 -20 0 0 0 I 0.0 0.0 0:01.64 kworker/0:1h-kblockd
10 root 0 -20 0 0 0 I 0.0 0.0 0:00.00 mn_percpu_wq
11 root 20 0 0 0 0 S 0.0 0.0 0:00.00 rCU_tasks_rude_
12 root 20 0 0 0 0 S 0.0 0.0 0:00.00 rCU_tasks_trace
13 root 20 0 0 0 0 S 0.0 0.0 0:00.58 ksoftirqd/0
14 root 20 0 0 0 I 0.0 0.0 0:04.48 rCU_sched
15 root rt 0 0 0 0 S 0.0 0.0 0:00.07 migration/0
```

29)history

```
nikhil@nikhil: ~ history
1 sudo apt install build-essential dkms linux-headers-$(uname -r)
2 sudo apt update
3 sudo apt install -y build-essential linux-headers-$(uname-r)
4 sudo apt upgrade
5 sudo apt install -y build-essential linux-headers-$(uname-r)
6 ls
./autorun.sh
8 vi .
9 gcc fp.c
10 ./a.out
11 vi fp.c
12 gcc fp.c
13 ./a.out
14 gcc fp.c
15 ./a.out
16 PPL.c
17 vi PPL.c
18 vi PPL.c
19 vi A1.c
20 ppl_assignment_2.c
21 vi ppl_assignment_2.c
22 gcc ppl_assignment_2.c -S
23 ./a.out
24 vi ppl_assignment_2.c
25 gcc ppl_assignment_2.c --save-temp
26 ./a.out
27 gcc ppl_assignment_2.c --save-temp
28 ./a.out
29 vi ppl_assignment_2.c
30 gcc ppl_assignment_2.c
31 ./a.out
32 clear
```

```
nikhil@nikhil: ~ history
64 clear
65 vi add.c
66 clear
67 vi PPL_add.c
68 clear
69 PPL_assignment1.c
70 clear
71 vi PPL_assignment1.c
72 vi assignment1.c
73 vi addition_1.c
74 clear
75 vi addition.c
76 clear
77 vi addition_1.c
78 gcc addition_1.c
79 ./a.out
80 clear
81 vi addition_1.c
82 gcc addition_1.c -S
83 ./a.out
84 C:\Users\Nikhil\Documents\GitHub\Assignment1\add
85 vi addition_1.c
86 gcc addition_1.c --save-temp
87 ./a.out
88 clear
89 vi add.c
90 gcc --save-temp add.c
91 ls
92 objdump
93 objdump -f a-add.o
94 objdump -p a-add.o
95 objdump -p a-add.o
96 objdump -h a-add.c
```

Activities Terminal Jan 11 10:54 nikhil@nikhil: ~

```
128 vi Assignment7.c
129 gcc Assignment7.c
130 vi Assignment7.c
131 gcc Assignment7.c
132 clear
133 vi Assignment_7.c
134 gcc Assignment_7.c
135 vi Assignment_7.c
136 clear
137 vi Assignment_7.c
138 gcc Assignment_7.c
139 ./a.out
140 vi Assignment_7.c
141 cat > doc2
142 cat > test.sh
143 cd DTL
144 clear
145 mkdir DTL
146 cd DTL
147 touch hello-world.sh
148 nano hello-world.sh
149 echo 'echo Hello World!' > hello_world.sh
150 cat hello_world.sh
151 bash hello_world.sh
152 cat <<ALLDONE>
153 hello_world_multiline.sh
154 echo Hello World!
155 echo Yet another line.
156 echo This is getting boring.
157 ALLDONE
158 clear
159 cat <<ALLDONE>
160 hello.world_multiline.sh
```

Activities Terminal Jan 11 10:55 nikhil@nikhil: ~

```
192 echo {A..Z}
193 mkdir z{1..10}
194 ls
195 clear
196 echo $((12-7))
197 a=4
198 b=8
199 echo $((a+b))
200 echo $a
201 a=4
202 ((a++))
203 echo $a
204 b=8
205 unset b
206 ((b--))
207 echo $b
208 a=1
209 let a++
210 echo $a
211 clear
212 echo `uname -n`
213 echo '$uname -n'
214 echo ${uname -n}
215 clear
216 echo uname -n
217 echo `uname -n`
218 echo ${uname -n}
219 echo ${uname -n}
220 clear
221 echo uname -n
222 echo `uname -n`
223 echo ${uname -n}
224 clear
```

Activities Terminal Jan 11 10:55 nikhil@nikhil: ~

```
212 echo uname -n
213 echo `uname -n`
214 echo ${uname -n}
215 clear
216 echo uname -n
217 echo `uname -n`
218 echo ${uname -n}
219 echo ${uname -n}
220 clear
221 echo uname -n
222 echo `uname -n`
223 echo ${uname -n}
224 clear
225 nano
226 grep blue notepad.txt
227 clear
228 grep blue notepad.txt
229 grep-l "script*.sh"
230 grep-l "script" *.sh
231 grep "script" *.sh
232 grep "is crazy"
233 dt notepad.txt
234 dt -h
235 df -n
236 df -k
237 df -T
238 df -n notepad.txt
239 clear
240 du
241 clear
242 du notepad.txt
243 du -m/way1
244 du -m notepad.txt
```

Activities Terminal Jan 11 10:55 nikhil@nikhil: ~

```
304 clear
305 jobs
306 jobs -p
307 jobs -p %p
308 clear
309 jobs
310 jobs -r
311 jobs
312 clear
313 jobs
314 jobs -c
315 clear
316 jobs
317 jobs -l
318 jobs -n
319 jobs -p
320 clear
321 ping
322 until 1579
323 ping google.com
324 wget wikipedia
325 clear
326 wget wikipedia
327 clear
328 uname
329 uname -a
330 uname -s
331 uname -S
332 uname -n
333 clear
334 uname
335 uname -a
336 uname -s
```

Activities Terminal Jan 11 10:54 nikhil@nikhil: ~

```
nikhil@nikhil: $ history
1 sudo apt install build-essential dkms linux-headers-$(uname -r)
2 sudo apt update
3 sudo apt install -y build-essential linux-headers-$(uname -r)
4 sudo apt upgrade
5 sudo apt install -y build-essential linux-headers-$(uname -r)
6 ls
7 ./aut run.sh
8 vi fp.c
9 gcc fp.c
10 vi /fp.c
11 vi fp.c
12 gcc fp.c
13 .a.out
14 gcc fp.c
15 .a.out
16 PPL1.c
17 vi PPL1.c
18 vi PPL.c
19 vi PPL
20 ppl_assignment_2.c
21 vi ppl_assignment_2.c
22 gcc ppl_assignment_2.c -S
23 .a.out
24 vi ppl_assignment_2.c
25 gcc ppl_assignment_2.c --save-temp
26 .a.out
27 gcc ppl_assignment_2.c --save-temp
28 .a.out
29 vi ppl_assignment_2.c
30 gcc ppl_assignment_2.c
31 ./a.out
32 clear
```

Activities Terminal Jan 11 10:54 nikhil@nikhil: ~

```
nikhil@nikhil: ~
64 clear
65 vi add.c
66 clear
67 vi PPL_add.c
68 clear
69 PPL_assignment1.c
70 clear
71 vi PPL_assignment1.c
72 vi assignment1.c
73 vi addition_1.c
74 clear
75 vi addition.c
76 clear
77 vi addition_1.c
78 gcc addition_1.c
79 .a.out
80 clear
81 vi addition_1.c
82 gcc addition_1.c -S
83 .a.out
84 clear
85 vi addition_1.c
86 gcc addition_1.c --save-temp
87 .a.out
88 clear
89 vi add.c
90 gcc --save-temp add.c
91 ls
92 objdump
93 objdump -f a-add.o
94 objdump -p a-add.c
95 objdump -p a-add.o
96 objdump -h a-add.c
```

Activities Terminal Jan 11 10:54 nikhil@nikhil: ~

```
128 vi Assignment7.c
129 gcc Assignment7.c
130 vi Assignment7.c
131 gcc Assignment7.c
132 clear
133 vi Assignment_7.c
134 gcc Assignment_7.c
135 vi Assignment_7.c
136 clear
137 vi Assignment_7.c
138 gcc Assignment_7.c
139 ./a.out
140 vi Assignment_7.c
141 cat > doc2
142 cat > test.sh
143 cd DTL
144 clear
145 cd DTL
146 touch hello-world.sh
147 nano hello-world.sh
148 echo 'echo Hello World!' > hello_world.sh
149 cat hello_world.sh
150 bash hello_world.sh
151 clear
152 cat <<ALLDONE>
153 hello_world_multiline.sh
154 echo Hello World!
155 echo Yet another line.
156 echo This is getting boring.
157 ALLDONE
158 clear
159 cat <<ALLDONE>
160 hello.world_multiline.sh
```

Activities Terminal Jan 11 10:55 nikhil@nikhil: ~

```
192 echo {..,2}
193 mkdir z{1..10}
194 ls
195 clear
196 echo $((12-7))
197 a=4
198 b=8
199 echo $((a+b))
200 echo $a
201 a=4
202 ((a++))
203 echo $a
204 b=8
205 unset b
206 ((b--))
207 echo $b
208 a=1
209 let a++
210 echo $a
211 clear
212 echo `uname -n`
213 echo '$uname -n'
214 echo ${uname -n}
215 clear
216 echo uname -n
217 echo `uname -n`
218 echo ${uname -n}
219 echo ${uname -n}
220 clear
221 echo uname -n
222 echo `uname -n`
223 echo ${uname -n}
224 clear
```

Activities Terminal Jan 11 10:55 nikhil@nikhil: ~

```
304 clear
305 jobs
306 jobs -p
307 jobs -p %p
308 clear
309 jobs
310 jobs -r
311 jobs
312 clear
313 jobs
314 jobs -c
315 clear
316 jobs
317 jobs -l
318 jobs -n
319 jobs -p
320 clear
321 ps ux
322 kill 1579
323 ping google.com
324 wget wikipedia
325 clear
326 wget wikipedia
327 clear
328 uname
329 uname -a
330 uname -s
331 uname -s
332 uname -n
333 clear
334 uname
335 uname -a
336 uname -s
```

30)man

```
Activities Terminal Jan 11 11:02 nikhil@nikhil: ~ User Commands LS(1)

NAME      ls - list directory contents
SYNOPSIS  ls [OPTION]... [FILE]...
DESCRIPTION
List information about the FILEs (the current directory by default). Sort entries alphabetically if none of -cftuvSUX nor --sort is specified.

Mandatory arguments to long options are mandatory for short options too.

-a, --all      do not ignore entries starting with .
-A, --almost-all    do not list implied . and ..
--author      with -l, print the author of each file
-b, --escape    print C-style escapes for nongraphic characters
--block-size=SIZE
              with -l, scale sizes by SIZE when printing them; e.g., '--block-size=M'; see SIZE format below
-B, --ignore-backups
              do not list implied entries ending with ~

Manual page ls(1) lline 1 (press h for help or q to quit)
```

```
Activities Terminal Jan 11 11:02 nikhil@nikhil: ~ User Commands LS(1)

NAME      ls - list directory contents
SYNOPSIS  ls [OPTION]... [FILE]...
DESCRIPTION
List information about the FILEs (the current directory by default). Sort entries alphabetically if none of -cftuvSUX nor --sort is specified.

Mandatory arguments to long options are mandatory for short options too.

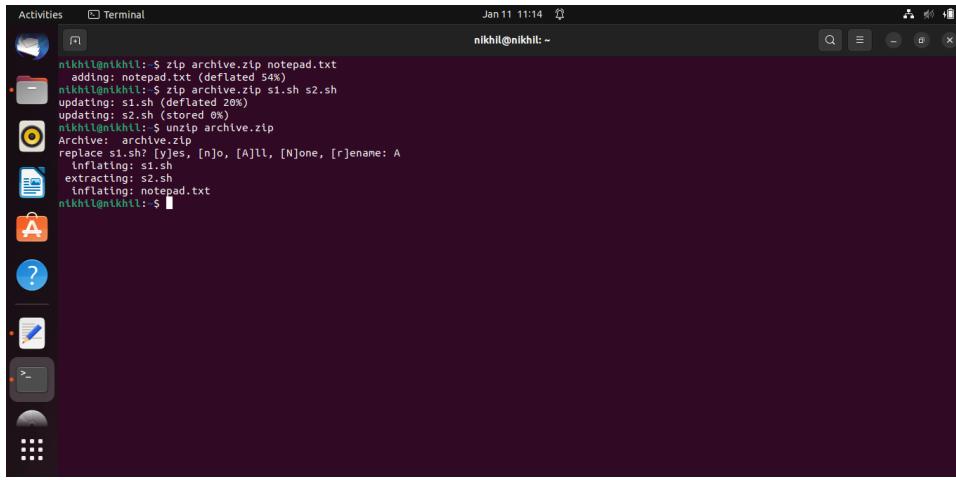
-a, --all      do not ignore entries starting with .
-A, --almost-all    do not list implied . and ..
--author      with -l, print the author of each file
-b, --escape    print C-style escapes for nongraphic characters
--block-size=SIZE
              with -l, scale sizes by SIZE when printing them; e.g., '--block-size=M'; see SIZE format below
-B, --ignore-backups
              do not list implied entries ending with ~

Manual page ls(1) lline 1 (press h for help or q to quit)
```

31)echo

```
Activities Terminal Jan 11 11:10 nikhil@nikhil: ~
nikhil@nikhil: $ echo "Nikhil is bright"
Nikhil is bright
nikhil@nikhil: $ echo -n "Hi"
Hi
nikhil@nikhil: $ echo -e "Hello"
Hello
nikhil@nikhil: $ echo -E "COEP"
COEP
nikhil@nikhil: $ echo -a "Hi"
-a Hi
nikhil@nikhil: $ echo -b "Nikhil is bright"
-b Nikhil is bright
nikhil@nikhil: $ echo \c "Hi"
c Hi
nikhil@nikhil: $ echo \a "Hello"
a Hello
nikhil@nikhil: $
```

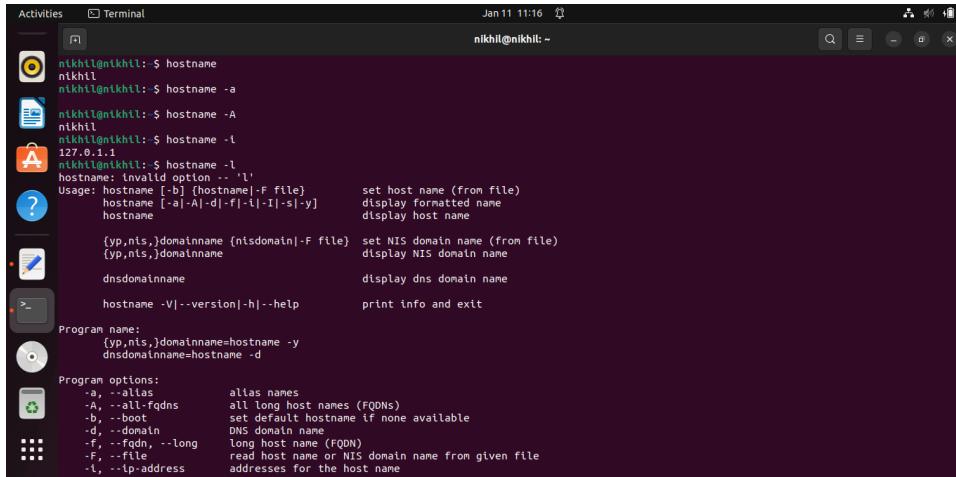
32)zip,unzip



A screenshot of a Linux desktop environment. On the left is a vertical dock with icons for various applications like a file manager, terminal, and system settings. The main area shows a terminal window titled 'nikhil@nikhil: ~' with the date 'Jan 11 11:14'. The terminal output is:

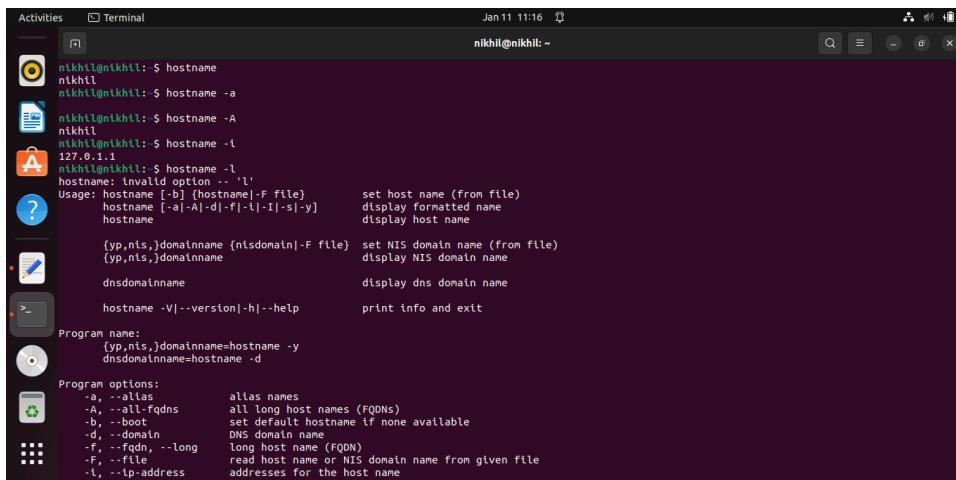
```
nikhil@nikhil:~$ zip archive.zip notepad.txt
adding: notepad.txt (deflated 54%)
nikhil@nikhil:~$ zip archive.zip s1.sh s2.sh
updating: s1.sh (deflated 20%)
updating: s2.sh (stored 0%)
nikhil@nikhil:~$ unzip archive.zip
Archive: archive.zip
  inflating: s1.sh, [n]o, [A]ll, [N]one, [r]ename: A
    inflating: s2.sh
      extracting: s2.sh
        inflating: notepad.txt
nikhil@nikhil:~$
```

33)hostname



A screenshot of a Linux desktop environment. On the left is a vertical dock with icons for various applications like a file manager, terminal, and system settings. The main area shows a terminal window titled 'nikhil@nikhil: ~' with the date 'Jan 11 11:16'. The terminal output is:

```
nikhil@nikhil:~$ hostname
nikhil
nikhil@nikhil:~$ hostname -a
nikhil
nikhil@nikhil:~$ hostname -l
127.0.1.1
nikhil@nikhil:~$ hostname -l
hostname: invalid option -- 'l'
Usage: hostname [-b] [hostname|-F file]      set host name (from file)
          hostname [-a|-A|-d|-f|-l|-I|-s|-y]   display formatted name
          hostname                                         display host name
          {yp,ntsl}domainname {nisdomain|-F file}  set NIS domain name (from file)
          {yp,ntsl}domainname                         display NIS domain name
          dnsdomainname                                display dns domain name
          hostname -V|--version|-h|--help            print info and exit
Program name:
          {yp,ntsl}domainname=hostname -y
          dnsdomainname=hostname -d
Program options:
          -a, --alias           alias names
          -A, --all-fqdns       all long host names (FQDNs)
          -b, --boot             set default hostname if none available
          -d, --domain          DNS domain name
          -f, --fqdn, --long    long host name (FQDN)
          -F, --file            read host name or NIS domain name from given file
          -l, --lp-address      addresses for the host name
```

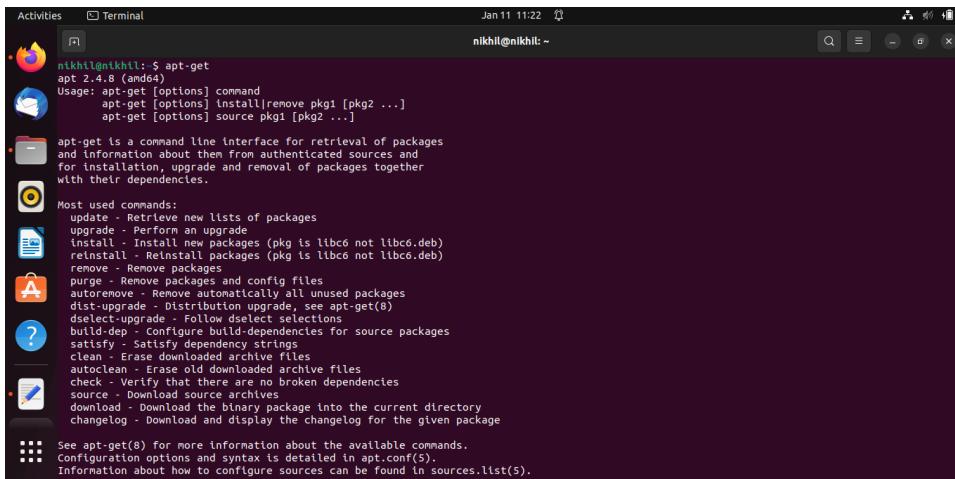


A screenshot of a Linux desktop environment. On the left is a vertical dock with icons for various applications like a file manager, terminal, and system settings. The main area shows a terminal window titled 'nikhil@nikhil: ~' with the date 'Jan 11 11:16'. The terminal output is identical to the one above:

```
nikhil@nikhil:~$ hostname
nikhil
nikhil@nikhil:~$ hostname -a
nikhil
nikhil@nikhil:~$ hostname -l
127.0.1.1
nikhil@nikhil:~$ hostname -l
hostname: invalid option -- 'l'
Usage: hostname [-b] [hostname|-F file]      set host name (from file)
          hostname [-a|-A|-d|-f|-l|-I|-s|-y]   display formatted name
          hostname                                         display host name
          {yp,ntsl}domainname {nisdomain|-F file}  set NIS domain name (from file)
          {yp,ntsl}domainname                         display NIS domain name
          dnsdomainname                                display dns domain name
          hostname -V|--version|-h|--help            print info and exit
Program name:
          {yp,ntsl}domainname=hostname -y
          dnsdomainname=hostname -d
Program options:
          -a, --alias           alias names
          -A, --all-fqdns       all long host names (FQDNs)
          -b, --boot             set default hostname if none available
          -d, --domain          DNS domain name
          -f, --fqdn, --long    long host name (FQDN)
          -F, --file            read host name or NIS domain name from given file
          -l, --lp-address      addresses for the host name
```

34)useradd,userdel

35)apt-get

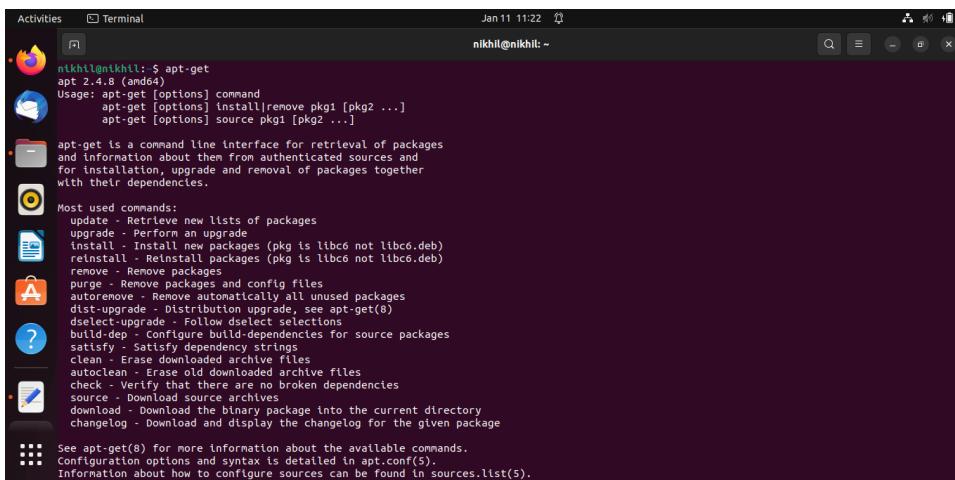


```
nikhil@nikhil:~$ apt-get
apt 2.4.8 (amd64)
Usage: apt-get [options] command
      apt-get [options] install|remove pkg1 [pkg2 ...]
      apt-get [options] source pkg1 [pkg2 ...]

apt-get is a command line interface for retrieval of packages
and information about them from authenticated sources and
for installation, upgrade and removal of packages together
with their dependencies.

Most used commands:
  update - Retrieve new lists of packages
  upgrade - Perform an upgrade
  install - Install new packages (pkg is libc6 not libc6.deb)
  reinstall - Reinstall packages (pkg is libc6 not libc6.deb)
  remove - Remove packages
  purge - Remove packages and config files
  autoremove - Remove automatically all unused packages
  dist-upgrade - Distribution upgrade, see apt-get(8)
  dselect-upgrade - Follow dselect selections
  build-dep - Configure build-dependencies for source packages
  satisfy - Satisfy dependency strings
  clean - Erase downloaded archive files
  autoclean - Erase old downloaded archive files
  check - Verify that there are no broken dependencies
  source - Download source archives
  download - Download the binary package into the current directory
  changelog - Download and display the changelog for the given package

See apt-get(8) for more information about the available commands.
Configuration options and syntax is detailed in apt.conf(5).
Information about how to configure sources can be found in sources.list(5).
```



```
nikhil@nikhil:~$ apt-get
apt 2.4.8 (amd64)
Usage: apt-get [options] command
      apt-get [options] install|remove pkg1 [pkg2 ...]
      apt-get [options] source pkg1 [pkg2 ...]

apt-get is a command line interface for retrieval of packages
and information about them from authenticated sources and
for installation, upgrade and removal of packages together
with their dependencies.

Most used commands:
  update - Retrieve new lists of packages
  upgrade - Perform an upgrade
  install - Install new packages (pkg is libc6 not libc6.deb)
  reinstall - Reinstall packages (pkg is libc6 not libc6.deb)
  remove - Remove packages
  purge - Remove packages and config files
  autoremove - Remove automatically all unused packages
  dist-upgrade - Distribution upgrade, see apt-get(8)
  dselect-upgrade - Follow dselect selections
  build-dep - Configure build-dependencies for source packages
  satisfy - Satisfy dependency strings
  clean - Erase downloaded archive files
  autoclean - Erase old downloaded archive files
  check - Verify that there are no broken dependencies
  source - Download source archives
  download - Download the binary package into the current directory
  changelog - Download and display the changelog for the given package

See apt-get(8) for more information about the available commands.
Configuration options and syntax is detailed in apt.conf(5).
Information about how to configure sources can be found in sources.list(5).
```

36)nano,vi,jed

A screenshot of a terminal window titled "nikhil@nikhil: ~". The window shows the output of the command "nano s1.sh". The content of the file "s1.sh" is:

```
GNU nano 6.2
script is most in various acting events.
Hey I am Nikhil Kokale and I am studying at College of Engineering pune.
Here are my friends.
I am adding content through nano command.
```

The terminal window has a dark background and a light-colored text area. The bottom of the window displays a series of keyboard shortcuts for nano commands.

A screenshot of a terminal window titled "nikhil@nikhil: ~". The window shows the command "nano s1.sh" being typed into the terminal.

A screenshot of a terminal window titled "nikhil@nikhil: ~". The window shows the command "vt insert s1.sh" being run, followed by "vt command.insert s1.sh". Both commands result in the message "2 files to edit".

37)alias,unalias

Activities Terminal Jan 11 11:35 nikhil@nikhil:~

```

nikhil@nikhil:~$ alias k='kill'
nikhil@nikhil:~$ unalias k
nikhil@nikhil:~$ alias p='chmod'
nikhil@nikhil:~$ unalias p
nikhil@nikhil:~$ 

```

38)su

Activities Terminal Jan 11 11:40 nikhil@nikhil:~

```

nikhil@nikhil:~$ su
Password: Authentication failure
nikhil@nikhil:~$ sudo
usage: sudo -h [-K] [-V]
usage: sudo [-l [-ABknS] [-g group] [-h host] [-p prompt] [-u user] [command]
usage: sudo [-l [-ABknS] [-g group] [-h host] [-p prompt] [-u user] [command]
usage: sudo [-e [-ABknPS] [-r role] [-t type] [-c num] [-D directory] [-g group] [-h host] [-p prompt] [-R directory] [-T timeout] [-u user]
           [VAR=value] [-l|-s] [<command>]
usage: sudo [-e [-ABknS] [-r role] [-t type] [-c num] [-D directory] [-g group] [-h host] [-p prompt] [-R directory] [-T timeout] [-u user]
           file ...
nikhil@nikhil:~$ su -p
Password: Authentication failure
nikhil@nikhil:~$ sudo -p
usage: sudo [-h] [-K] [-V]
usage: sudo [-l [-ABknS] [-g group] [-h host] [-p prompt] [-u user] [command]
usage: sudo [-l [-ABknS] [-g group] [-h host] [-p prompt] [-u user] [command]
usage: sudo [-e [-ABknPS] [-r role] [-t type] [-c num] [-D directory] [-g group] [-h host] [-p prompt] [-R directory] [-T timeout] [-u user]
           [VAR=value] [-l|-s] [<command>]
usage: sudo [-e [-ABknS] [-r role] [-t type] [-c num] [-D directory] [-g group] [-h host] [-p prompt] [-R directory] [-T timeout] [-u user]
           file ...
nikhil@nikhil:~$ sudo -
[sudo] password for nikhil:
Sorry, try again.
[sudo] password for nikhil:
Sorry, try again.
[sudo] password for nikhil:
sudo: 3 incorrect password attempts
nikhil@nikhil:~$ sudo -l

```

39)htop

Activities Terminal Jan 11 11:43 nikhil@nikhil:~

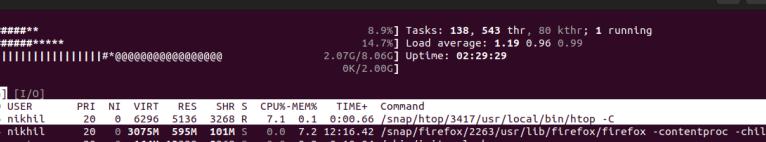
```

Main I/O: PID USER PRI NI VIRT RES SHR S CPU%+MEM% TIME+ Command
 8068 nikhil 20 0 167M 6072 5596 S 0.0 0.1 0:00.00 /usr/libexec/gdm-wayland-session env GNOME_SHELL_SESSION_MODE=ubuntu /usr/b
 8070 nikhil 20 0 167M 6072 5596 S 0.0 0.1 0:00.00 /usr/libexec/gdm-wayland-session env GNOME_SHELL_SESSION_MODE=ubuntu /usr/b
 8091 nikhil 20 0 226M 15512 13888 S 0.0 0.2 0:00.13 /usr/libexec/gnome-session-binary --session=ubuntu
 8093 nikhil 39 19 627M 31168 19028 S 6.0 0.4 0:06.95 /usr/libexec/tracker-miner-fs-3
 8114 nikhil 39 19 627M 31168 19028 S 6.0 0.4 0:06.95 /usr/libexec/tracker-miner-fs-3
 8116 nikhil 39 19 627M 31168 19028 S 6.0 0.4 0:06.95 /usr/libexec/tracker-miner-fs-3
 8120 nikhil 39 19 627M 31168 19028 S 6.0 0.4 0:06.95 /usr/libexec/tracker-miner-fs-3
 8121 nikhil 39 19 627M 31168 19028 S 6.0 0.4 0:01.19 /usr/libexec/tracker-miner-fs-3
 8143 nikhil 20 0 389M 10636 8796 S 0.0 0.1 0:00.56 /usr/libexec/gvfs-udisks2-volume-monitor
 8147 nikhil 20 0 389M 10636 8796 S 0.0 0.1 0:00.00 /usr/libexec/gvfs-udisks2-volume-monitor
 8149 nikhil 20 0 389M 10636 8796 S 0.0 0.1 0:00.10 /usr/libexec/gvfs-udisks2-volume-monitor
 8153 nikhil 20 0 389M 10636 8796 S 0.0 0.1 0:00.00 /usr/libexec/gvfs-udisks2-volume-monitor
 8154 nikhil 20 0 226M 15512 13888 S 0.0 0.2 0:00.00 /usr/libexec/gnome-session-binary --session=ubuntu
 8155 nikhil 20 0 226M 15512 13888 S 0.0 0.2 0:00.00 /usr/libexec/gnome-session-binary --session=ubuntu
 8161 nikhil 20 0 98M 5884 4652 S 0.0 0.2 0:00.00 /usr/libexec/gnome-session-binary --session=ubuntu
 8166 nikhil 20 0 239M 6088 6088 S 0.0 0.1 0:00.00 /usr/libexec/gnome-session-binary --session=ubuntu
 8168 nikhil 20 0 98M 5884 4652 S 0.0 0.1 0:00.00 /usr/libexec/gnome-session-binary --session=ubuntu
 8173 nikhil 20 0 239M 6088 6088 S 0.0 0.1 0:00.09 /usr/libexec/gvfs-ftp-volume-monitor
 8175 nikhil 20 0 587M 17684 14764 S 0.0 0.2 0:00.30 /usr/libexec/gnome-session-binary --systemd-service --session=ubuntu
 8176 nikhil 20 0 239M 6088 6088 S 0.0 0.1 0:00.00 /usr/libexec/gvfs-ftp-volume-monitor
 8179 nikhil 20 0 239M 6088 6088 S 0.0 0.1 0:00.05 /usr/libexec/gvfs-ftp-volume-monitor
 8180 nikhil 20 0 316M 8048 7064 S 0.0 0.1 0:00.43 /usr/libexec/gvfs-afc-volume-monitor
 8181 nikhil 20 0 316M 8048 7064 S 0.0 0.1 0:00.33 /usr/libexec/gvfs-afc-volume-monitor
 8182 nikhil 20 0 17684 14764 S 0.0 0.2 0:00.00 /usr/libexec/gnome-session-binary --systemd-service --session=ubuntu

```

```
Activities Terminal Jan 11 11:44 nikhil@nikhil: ~
[0*****]
[0*****]
Men[*****]#*@0000000000000000
Swpl

[Mate] [T/O]
 PID USER PRI NI VIRT RES SHR S CPU% MEM% TIME+ Command
 14746 nikhil 20 0 6296 5136 3268 R 7.1 0.1 0:00.66 /snap/htop/3417/usr/local/bin/htop -C
 9614 nikhil 20 0 3075K 959M 1015 S 0.0 7.2 12:16.42 /snap/firefox/2263/usr/lib/firefox/firefox -contentproc -childID 8 -lsForBr
 1 root 20 0 1646 1328 8268 S 0.0 0.2 0:10.40 /sbin/init splash
 240 root 19 -1 48688 21576 19928 S 0.0 0.3 0:03.12 /lib/systemd/systemd-journald
 365 root 20 0 26744 7100 4624 S 0.0 0.1 0:00.97 /lib/systemd/systemd-udevd
 594 systemd-udevd 20 0 14824 6010 5212 S 0.0 0.1 0:20.71 /lib/systemd/systemd-udevd
 595 systemd-re 20 0 25940 14196 1032 S 0.0 0.1 0:00.45 /lib/systemd/systemd-resolved
 605 systemd-t 20 0 25376 5560 5036 S 0.0 0.1 0:00.45 /lib/systemd/systemd-timesyncd
 620 systemd-t 20 0 89376 6500 5363 S 0.0 0.1 0:00.08 /lib/systemd/systemd-timesyncd
 645 root 20 0 242M 7598 6588 S 0.0 0.1 0:00.74 /usr/libexec/accounts-daemon
 646 root 20 0 2812 1200 1116 S 0.0 0.0 0:01.21 /usr/sbin/acpid
 649 avah1 20 0 7628 3624 3288 S 0.0 0.0 0:00.36 avahi-daemon: running [nikhil.local]
 650 root 20 0 18148 2972 2720 S 0.0 0.0 0:00.03 /usr/sbin/cron -f
 651 messagebus 20 0 11556 6568 4036 S 0.0 0.1 0:09.26 @dbus-daemon --system --address=systemd: --nofork --nopidfile --systemd-act
 652 root 20 0 263M 19298 15952 S 0.0 0.2 0:02.28 /usr/sbin/networkManager --no-daemon
 658 root 20 0 82696 3988 3652 S 0.0 0.0 0:00.73 /usr/sbin/irbalance --foreground
 659 root 20 0 4970 1000 952 S 0.0 0.0 0:00.00 /usr/sbin/irbalance-dispatcher --run-startup-triggers
 661 root 20 0 233M 10186 6768 S 0.0 0.1 0:11.25 /usr/libexec/polkitd --no-debug
 662 root 20 0 242M 6900 6312 S 0.0 0.1 0:00.16 /usr/libexec/power-profiles-daemon
 663 syslog 20 0 217M 5484 4396 S 0.0 0.1 0:00.54 /usr/bin/syslogd -n :NONE
 665 root 20 0 239M 6312 5796 S 0.0 0.1 0:00.07 /usr/libexec/switcheroo-control
 675 root 20 0 23700 8124 6856 S 0.0 0.1 0:00.81 /lib/systemd/systemd-logind
 679 root 20 0 383M 13488 10756 S 0.0 0.2 0:00.62 /usr/libexec/udisks2/udisksd
 681 root 20 0 16492 5836 5020 S 0.0 0.1 0:00.00 /sbin/wpa_supplicant -u -s -0 /run/wpa_supplicant
File Help F2:Edit F3:Search F4:Terminal F5:Tree F6:Sortby F7:Nice F8:Nice F9:Killall F10:Quit
```

```
Activities Terminal Jan 11 11:44 nikhil@nikhil: ~


```
0#####*
1#####
Men[|||||*****]#*@0000000000000000
Swap[

[Main] [I/O]
PID USER PRI NI VIRT RES SHR S CPU% MEM% TIME+ Command
14745 nikhil 20 0 6296 5136 3269 R 7.1 0.1 0:00.66 /snap/httpd/3417/usr/local/bin/htop -C
9014 nikhil 20 0 30759 959 101M S 0.0 7.2 12:16.42 /snap/firefox/2263/usr/lib/firefox/firefox -contentproc -childID 8 -lsForBr
1 root 0 1646 13328 9928 S 0.0 0.2 0:10.04 /sbin/init splash
240 root 19 -1 48688 21576 19928 S 0.0 0.3 0:03.12 /lib/systemd/systemd-journald
305 root 20 0 26744 7100 4624 S 0.0 0.1 0:00.97 /lib/systemd/systemd-udevd
594 systemd-udevd 20 0 14824 6010 5212 S 0.0 0.1 0:20.72 /lib/systemd/systemd-udevd
595 systemd-re 20 0 25798 14108 9688 S 0.0 0.2 0:11.40 /lib/systemd/systemd-resolved
605 systemd-timedate 20 0 8976 6500 5065 S 0.0 0.1 0:00.00 /lib/systemd/systemd-timesyncd
620 systemd-timedate 20 0 8976 6500 5065 S 0.0 0.1 0:00.00 /lib/systemd/systemd-timesyncd
645 root 20 0 942M 568 6588 S 0.0 0.1 0:00.74 /usr/libexec/accounts-daemon
646 root 20 0 2812 1200 1116 S 0.0 0.0 0:00.00 avahi-daemon: running [nikhil.local]
650 root 20 0 7628 3624 3288 S 0.0 0.0 0:00.36 avahi-daemon: running [nikhil.local]
651 messagebus 20 0 11156 6568 4036 S 0.0 0.1 0:09.26 @dbus-daemon --system --address=/systemd: --nofork --nopidfile --systemd-act
652 root 20 0 263M 19028 15952 S 0.0 0.2 0:02.28 /usr/sbin/networkManager --no-daemon
658 root 20 0 82696 3988 3652 S 0.0 0.0 0:00.73 /usr/sbin/rqlbalance -foreground
659 root 20 0 49712 21942 12024 S 0.0 0.3 0:00.28 /usr/bin/python3 /usr/bin/networkd-dispatcher --run-startup-triggers
660 root 20 0 2000 1000 1000 S 0.0 0.0 0:00.00 /usr/libexec/power-profiles-daemon
662 root 20 0 424K 6000 6312 S 0.0 0.1 0:00.16 /usr/libexec/power-profiles-daemon
663 syslog 20 0 217M 5484 4396 S 0.0 0.1 0:00.54 /usr/bin/syslogd -n NONE
665 root 20 0 2399 6312 5796 S 0.0 0.1 0:00.07 /usr/libexec/switcheroo-control
675 root 20 0 23700 8124 6856 S 0.0 0.1 0:00.81 /lib/systemd/systemd-logind
679 root 20 0 383M 13488 10756 S 0.0 0.2 0:00.02 /usr/libexec/udisks2/udisksd
681 root 20 0 16492 5836 5020 S 0.0 0.1 0:00.10 /sbin/wpa_supplicant -u -s -0 /run/wpa_supplicant
F1 Help F2 Setup F3 Search F4 Filter F5 Tree F6 Sortby F7 Nice F8 Ncice F9 Kill F10 Out
```


```

40)ps

```
Activities Terminal Jan 11 11:47 nikhil@nikhil:~  
nikhil@nikhil:~$ ps  
 PID TTY      TIME CMD  
15025 pts/0    00:00:00 bash  
15035 pts/0    00:00:00 ps  
nikhil@nikhil:~$ ps -u  
USER      PID SCPU XHEM   VSZ   RSS TTY      STAT START  TIME COMMAND  
nikhil    8865  0.0  0.0 171036  6972 ttys2  S+ 10:36 0:00 /usr/libexec/gdm-wayland-session env GNOME_SHELL_SESSION_MODE=ubuntu /usr/b  
nikhil    8861  0.0  0.1 231684 15512 ttys2  S+ 10:36 0:00 /usr/libexec/gnome-session-binary --session=ubuntu  
nikhil    15025  0.2  0.0 19788  5324 pts/0  S+ 11:47 0:00 bash  
nikhil    15036  0.0  0.0 21324 1604 pts/0  R+ 11:47 0:00 ps -u  
nikhil@nikhil:~$ ps -e  
 PID TTY      TIME CMD  
 1 ?    00:00:10 systemd  
 2 ?    00:00:00 kthread  
 3 ?    00:00:00 rcu_gp  
 4 ?    00:00:00 rcu_par_gp  
 5 ?    00:00:00 netns  
 7 ?    00:00:00 kworker/0:1H-events_highpri  
 9 ?    00:00:02 kworker/0:1H-events_highpri  
10 ?    00:00:00 mm_percpu_wq  
11 ?    00:00:00 rcu_tasks_rude  
12 ?    00:00:00 rcu_tasks_trace  
13 ?    00:00:00 ksoftirqd/0  
14 ?    00:00:05 rcu_sched  
15 ?    00:00:00 migration/0  
16 ?    00:00:00 idle_inject/0  
18 ?    00:00:00 cpuhp/0  
19 ?    00:00:00 idle/0  
20 ?    00:00:00 idle_inject/1  
21 ?    00:00:01 migration/1  
22 ?    00:00:02 ksoftirqd/1  
24 ?    00:00:00 kworker/1:0H-events_highpri  
25 ?    00:00:00 kdevtmpfs
```

