Session 8

Use **grep 'text_you_want_to search' filename.**

Usually grep is case sensitive so use **grep -i 'text' filename.**

```
user@user-virtual-machine:~$ grep -i "a" add.txt
void main()
int a,b,sum;
scanf("%d%d",&a&b);
sum = a + b;
user@user-virtual-machine:~$ grep -i "a" add.txt f1
add.txt:void main()
add.txt:int a,b,sum;
add.txt:scanf("%d%d",&a&b);
add.txt:sum = a + b;
grep: f1: No such file or directory
user@user-virtual-machine:~$ grep -i "a" add.txt test_me.txt
add.txt:void main()
add.txt:int a,b,sum;
add.txt:scanf("%d%d",&a&b);
add.txt:sum = a + b;
test_me.txt:hello again
test_me.txt:hello again
```

Use **grep -c 'text_u_want_to_search' filename** for giving u the **count of the text in the file**.

```
user@user-virtual-machine:~$ grep -c "a" add.txt
4
```

If use *** in grep** command in place of filename it will display the number of text repeated in all files including filenames.

```
user@user-virtual-machine:~$ grep -c 'a' *
add.txt:4
grep: Desktop: Is a directory
Desktop:0
grep: Documents: Is a directory
Documents:0
grep: Downloads: Is a directory
Downloads:0
file1:2
file1~:0
file1.txt:0
file2:1
filename1:1
grep: m1: Is a directory
m1:0
grep: Music: Is a directory
Music:0
grep: Pictures: Is a directory
Pictures:0
grep: Public: Is a directory
Public:0
grep: s1: Is a directory
s1:0
table.txt:3
```

```
grep: s1: Is a directory
s1:0
table.txt:3
grep: Templates: Is a directory
Templates:0
test_me.txt:2
grep: Videos: Is a directory
Videos:0
```

Use **grep -l -n 'text' filename** to display the **line number which include the text** in that file.

```
user@user-virtual-machine:~$ grep -i -n 'a' add.txt
2:void main()
4:int a,b,sum;
6:scanf("%d%d",&a&b);
7:sum = a + b;
user@user-virtual-machine:~$
```

Use **grep -i -v 'text' filename** to display the **line which does not contain text in file**.

```
user@user-virtual-machine:~$ grep -iv 'a' add.txt
#include<stdio.>
{
printf("Enter the Numbers:");
printf("Sum of Numbers:%d",&sum);
}
user@user-virtual-machine:~$ cat add.txt
#include<stdio.>
void main()
{
int a,b,sum;
printf("Enter the Numbers:");
scanf("%d%d",&a&b);
sum = a + b;
printf("Sum of Numbers:%d",&sum);
}
user@user-virtual-machine:~$ █
```

Use **grep -i -o 'text' filename** to **only display the *text*** *not the whole line.*

```
user@user-virtual-machine:~$ grep -io 'a' add.txt
a
a
a
a
a
```

Use **grep -l '^text' filename** it display **all the lines which starts with text** in the filename.

```
user@user-virtual-machine:~$ grep -i '^Linux' filename
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llaboration. The source code may be used, modified and distributed commercially
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 as the GNU General Public License.[20]
```

Use **grep -l 'text$' filename** to display **all the lines which ends with text** in the filename.

```
user@user-virtual-machine:~$ cat filename
IS highly tailored to the system
I.e devices whose os
Also runs on embedded systems, i.e. devices whose operating system is typically
 built into the firmware and is highly tailored to the system. This includes ro
uters, automation controls, smart home technology (like Google Nest),[33] telev
isions (Samsung and LG Smart TVs use Tizen and WebOS, respectively),[34][35][36
] automobiles (for example, Tesla, Audi, Mercedes-Benz, Hyundai, and Toyota all
 rely on Linux),[37] digital video recorders, video game consoles, and smartwat
ches.[38] The Falcon 9's and the Dragon 2's avionics use a customized version o
f Linux.[39]

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 or non-commercially by anyone under the terms of its respective licenses, such
 as the GNU General Public License.[20]

90% of all cloud infrastructure is powered by Linux including supercomputers an
d cloud providers.[40] 74% of smartphones in the world are Linux-based.[41]
Just trying grep
test testing
Powered by incliding
user@user-virtual-machine:~$ grep -i 'License$' filename
user@user-virtual-machine:~$ grep -i 'testing$' filename
test testing
```

Use **grep -i -A5 'Linux' filename** it take last line which contains 'Linux' and display 5 lines below that 'Linux' text.

```
user@user-virtual-machine:~$ grep -i -A2 'Linux' filename
Linux also runs on embedded systems, i.e. devices whose operating system is typ
ically built into the firmware and is highly tailored to the system. This inclu
des routers, automation controls, smart home technology (like Google Nest),[33]
 televisions (Samsung and LG Smart TVs use Tizen and WebOS, respectively),[34][
35][36] automobiles (for example, Tesla, Audi, Mercedes-Benz, Hyundai, and Toyo
ta all rely on Linux),[37] digital video recorders, video game consoles, and sm
artwatches.[38] The Falcon 9's and the Dragon 2's avionics use a customized ver
sion of Linux.[39]

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 as the GNU General Public License.[20]

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d cloud providers.[40] 74% of smartphones in the world are Linux-based.[41]
Just trying grep
test testing
```

Use **grep -i -C5 'Linux' filename** it takes first line that contains "Linux' and display **5 line above** **similarly** it will take last
line which contain 'linux' text and **line below the Linux text** in the filename.
display **5**

```
user@user-virtual-machine:~$ grep -i -C2 'Linux' filename
IS highly tailored to the system
I.e devices whose os
Also runs on embedded systems, i.e. devices whose operating system is typically
 built into the firmware and is highly tailored to the system. This includes ro
uters, automation controls, smart home technology (like Google Nest),[33] telev
isions (Samsung and LG Smart TVs use Tizen and WebOS, respectively),[34][35][36
] automobiles (for example, Tesla, Audi, Mercedes-Benz, Hyundai, and Toyota all
 rely on Linux),[37] digital video recorders, video game consoles, and smartwat
ches.[38] The Falcon 9's and the Dragon 2's avionics use a customized version o
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 as the GNU General Public License.[20]

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d cloud providers.[40] 74% of smartphones in the world are Linux-based.[41]
Just trying grep
test testing
```

Use **grep -i -B5 'Linux' filename** it **takes first line which contains 'linux'** and display **5 line above the text Linux** in the filename.

```
user@user-virtual-machine:~$ grep -i -B2 'Linux' filename
IS highly tailored to the system
I.e devices whose os
Also runs on embedded systems, i.e. devices whose operating system is typically
 built into the firmware and is highly tailored to the system. This includes ro
uters, automation controls, smart home technology (like Google Nest),[33] telev
isions (Samsung and LG Smart TVs use Tizen and WebOS, respectively),[34][35][36
] automobiles (for example, Tesla, Audi, Mercedes-Benz, Hyundai, and Toyota all
 rely on Linux),[37] digital video recorders, video game consoles, and smartwat
ches.[38] The Falcon 9's and the Dragon 2's avionics use a customized version o
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 as the GNU General Public License.[20]

90% of all cloud infrastructure is powered by Linux including supercomputers an
d cloud providers.[40] 74% of smartphones in the world are Linux-based.[41]
```

Use **cat filename | tr '[a-z]' '[A-Z]'**, this commands say **display a file while replacing all lower case to upper case** alphabets, **cat filename | tr '[:upper:]' '[:lower:]'** , we use | for adding extra command and tr stand for translate. So all the lower case alphabets will display in capital letter

```
user@user-virtual-machine:~$ cat filename | tr '[a-z]' '[A-Z]'
IS HIGHLY TAILORED TO THE SYSTEM
I.E DEVICES WHOSE OS
ALSO RUNS ON EMBEDDED SYSTEMS, I.E. DEVICES WHOSE OPERATING SYSTEM IS TYPIC
 BUILT INTO THE FIRMWARE AND IS HIGHLY TAILORED TO THE SYSTEM. THIS INCLUDE
UTERS, AUTOMATION CONTROLS, SMART HOME TECHNOLOGY (LIKE GOOGLE NEST),[33] T
ISIONS (SAMSUNG AND LG SMART TVS USE TIZEN AND WEBOS, RESPECTIVELY),[34][35
] AUTOMOBILES (FOR EXAMPLE, TESLA, AUDI, MERCEDES-BENZ, HYUNDAI, AND TOYOTA
 RELY ON LINUX),[37] DIGITAL VIDEO RECORDERS, VIDEO GAME CONSOLES, AND SMAR
CHES.THE FALCON 9'S AND THE DRAGON 2'S AVIONICS USE A CUSTOMIZED VERSION OF
UX.

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LLABORATION. THE SOURCE CODE MAY BE USED, MODIFIED AND DISTRIBUTED COMMERCI
 OR NON-COMMERCIALLY BY ANYONE UNDER THE TERMS OF ITS RESPECTIVE LICENSES,
 AS THE GNU GENERAL PUBLIC LICENSE.
90% OF ALL CLOUD INFRASTRUCTURE IS POWERED BY LINUX INCLUDING SUPERCOMPUTER
D CLOUD PROVIDERS 74% OF SMARTPHONES IN THE WORLD ARE LINUX.
JUST TRYING GREP
TEST TESTING
POWERED BY INCLIDING
```

Use **echo "Hello World" | tr '[:space:]' '\t'** to **replace the every space between Hello World to a tab**.

```
user@user-virtual-machine:~$ echo 'Hello
>
>
> WOrld' | tr '[:space:]' '\t'
Hello                           WOrld    user@user-virtual-machine:~$
```

Use **cat filename | tr '[]' '{}'**, to **translate [] to {}** in the file.

```
Powered by thettoing
user@user-virtual-machine:~$ cat filename | tr '[]' '{}'
IS highly tailored to the system
I.e devices whose os
Also runs on embedded systems, i.e. devices whose operating system is typic
 built into the firmware and is highly tailored to the system. This include
uters, automation controls, smart home technology (like Google Nest).{33} t
isions (Samsung and LG Smart TVs use Tizen and WebOS, respectively),{34}{35
} automobiles (for example, Tesla, Audi, Mercedes-Benz, Hyundai, and Toyota
 rely on Linux).{37} digital video recorders, video game consoles, and smar
ches.The Falcon 9's and the Dragon 2's avionics use a customized version of
ux.
```

Use **cat filename | tr 'L' 't'**, to **replace all the L in** file to t.

```
user@user-virtual-machine:~$ cat filename | tr 'L' 't'
IS highly tailored to the system
I.e devices whose os
Also runs on embedded systems, i.e. devices whose operating system is typic
 built into the firmware and is highly tailored to the system. This include
uters, automation controls, smart home technology (like Google Nest),[33] t
isions (Samsung and tG Smart TVs use Tizen and WebOS, respectively),[34][35
] automobiles (for example, Tesla, Audi, Mercedes-Benz, Hyundai, and Toyota
 rely on tinux),[37] digital video recorders, video game consoles, and smar
ches.The Falcon 9's and the Dragon 2's avionics use a customized version of
ux.

tinux is one of the most prominent examples of free and open-source softwar
llaboration. The source code may be used, modified and distributed commerci
 or non-commercially by anyone under the terms of its respective licenses,
 as the GNU General Public ticense.
90% of all cloud infrastructure is powered by tinux including supercomputer
d cloud providers 74% of smartphones in the world are tinux.
```

Use **cat filename | tr 'LOo' 'OpP'** tr deals with **character by character first L will be**

```
user@user-virtual-machine:~$ cat filename | tr 'LOo' 'OpP'
IS highly tailPred tP the system
I.e devices whPse Ps
AlsP runs Pn embedded systems, i.e. devices whPse Pperating system is typic
 built intP the firmware and is highly tailPred tP the system. This include
uters, autPmatiPn cPntrPls, smart hPme technPlPgy (like GPPgle Nest),[33] t
isiPns (Samsung and OG Smart TVs use Tizen and WebpS, respectively),[34][35
] autPmPbiles (fPr example, Tesla, Audi, Mercedes-Benz, Hyundai, and TPyPta
 rely Pn Oinux),[37] digital videP recPrders, videP game cPnsPles, and smar
ches.The FalcPn 9's and the DragPn 2's aviPnics use a custPmized versiPn Pf
ux.

Oinux is Pne Pf the mPst prPminent examples Pf free and Ppen-sPurce sPftwar
llabPratiPn. The sPurce cPde may be used, mPdified and distributed cPmmerci
 Pr nPn-cPmmercially by anyPne under the terms Pf its respective licenses,
 as the GNU General Public Oicense.
```

Use **cat filename | tr -d 'Linux'** d for delete it **deleted Linux in filename**.

Use **cat filename | tr '-d '[:digits:]' | tr -d '[:upper:]'** deleted digits and upper case alphabet from filename.

Use **cat filename | tr -s '[:space:]'** to **delete space between lines**

```
user@user-virtual-machine:~$ cat add.txt
#include<stdio.>
void main()
{
int a,b,sum;
printf("Enter the Numbers:");
scanf("%d%d",&a&b);
sum = a + b;
printf("Sum of Numbers:%d",&sum);
}



#include<stdio.>
void main()
{
int a,b,sum;
printf("Enter the Numbers:");
scanf("%d%d",&a&b);
sum = a + b;
printf("Sum of Numbers:%d",&sum);
}
#include<stdio.>
void main()
{
int a,b,sum;
printf("Enter the Numbers:");
user@user-virtual-machine:~$ cat add.txt | tr -s '[:space:]'
#include<stdio.>
void main()
{
int a,b,sum;
printf("Enter the Numbers:");
scanf("%d%d",&a&b);
sum = a + b;
printf("Sum of Numbers:%d",&sum);
}
#include<stdio.>
void main()
{
int a,b,sum;
printf("Enter the Numbers:");
scanf("%d%d",&a&b);
sum = a + b;
printf("Sum of Numbers:%d",&sum);
}
#include<stdio.>
void main()
```

Use **more filename** to **w** **ill load initially some % of file** if data in file is huge, in this case *hit space to load next 25%.*

```
IS highly tailored to the system
I.e devices whose os
Also runs on embedded systems, i.e. devices whose operating system is typically
 built into the firmware and is highly tailored to the system.
This includes routers, automation controls, smart home technology (like Google
Nest),[33] televisions (Samsung and LG Smart TVs use Tizen and WebOS, respecti
ely),[34][35][36] automobiles (for example, Tesla, Audi, Mercedes-Benz, Hyunda
, and Toyota all rely on Linux),[37] digital video recorders, video game conso
es, and smartwatches.
The Falcon 9's and the Dragon 2's avionics use a customized version of Linux.
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 or non-commercially by anyone under the terms of its respective licenses, such
 as the GNU General Public License.
90% of all cloud infrastructure is powered by Linux including supercomputers a
d cloud providers 74% of smartphones in the world are Linux.
Just trying grep
test testing
Powered by incliding
Memory management: Another function that kernel has to manage is the memory ma
agement.
The kernel keeps track of used and unused memory and makes sure that processes
shouldn't manipulate data of each other using virtual memory addresses.
Process management: In the process, management kernel assigns enough time and
ives priorities to processes before handling CPU to other processes.
It also deals with security and ownership information.
Handling system calls: Handling system calls means a programmer can write a qu
ry or ask the kernel to perform a task.
--More--(71%)
```

Use **more -d filename** to get the **m** **ore description/control option** on the end of screen; *d --> description*

```
IS highly tailored to the system
I.e devices whose os
Also runs on embedded systems, i.e. devices whose operating system is
 built into the firmware and is highly tailored to the system.
This includes routers, automation controls, smart home technology (lik
Nest),[33] televisions (Samsung and LG Smart TVs use Tizen and WebOS,
ely),[34][35][36] automobiles (for example, Tesla, Audi, Mercedes-Benz
, and Toyota all rely on Linux),[37] digital video recorders, video ga
es, and smartwatches.
The Falcon 9's and the Dragon 2's avionics use a customized version of
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 or non-commercially by anyone under the terms of its respective licen
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Just trying grep
test testing
Powered by incliding
Memory management: Another function that kernel has to manage is the m
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The kernel keeps track of used and unused memory and makes sure that p
shouldn't manipulate data of each other using virtual memory addresses
Process management: In the process, management kernel assigns enough t
ives priorities to processes before handling CPU to other processes.
It also deals with security and ownership information.
Handling system calls: Handling system calls means a programmer can wr
ry or ask the kernel to perform a task.
--More--(71%)[Press space to continue, 'q' to quit.]
```

Use **more -f filename** to it **prevent from dividing the word** if screen size is low.

```
user@user-virtual-machine:~$ more -f filename
IS highly tailored to the system
I.e devices whose os
Also runs on embedded systems, i.e. devices whose operating system is
 built into the firmware and is highly tailored to the system.
This includes routers, automation controls, smart home technology (lik
Nest),[33] televisions (Samsung and LG Smart TVs use Tizen and WebOS,
ely),[34][35][36] automobiles (for example, Tesla, Audi, Mercedes-Benz
, and Toyota all rely on Linux),[37] digital video recorders, video ga
onsoles, and smartwatches.
The Falcon 9's and the Dragon 2's avionics use a customized version of
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llaboration. The source code may be used, modified and distributed com
 or non-commercially by anyone under the terms of its respective licen
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90% of all cloud infrastructure is powered by Linux including supercom
d cloud providers 74% of smartphones in the world are Linux.
Just trying grep
test testing
Powered by incliding
Memory management: Another function that kernel has to manage is the m
agement.
The kernel keeps track of used and unused memory and makes sure that p
shouldn't manipulate data of each other using virtual memory addresses
Process management: In the process, management kernel assigns enough t
ives priorities to processes before handling CPU to other processes.
It also deals with security and ownership information.
Handling system calls: Handling system calls means a programmer can wr
ry or ask the kernel to perform a task.
```

Use **more -c filename** it **overrides whole terminal so until one press space key** we can't use terminal for other
commands.

```
IS highly tailored to the system
i.e devices whose os
Also runs on embedded systems, i.e. devices whose operating system is
 built into the firmware and is highly tailored to the system.
This includes routers, automation controls, smart home technology (lik
Nest),[33] televisions (Samsung and LG Smart TVs use Tizen and WebOS,
ely),[34][35][36] automobiles (for example, Tesla, Audi, Mercedes-Benz
, and Toyota all rely on Linux),[37] digital video recorders, video ga
es, and smartwatches.
The Falcon 9's and the Dragon 2's avionics use a customized version of
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llaboration. The source code may be used, modified and distributed com
 or non-commercially by anyone under the terms of its respective licen
 as the GNU General Public License.
90% of all cloud infrastructure is powered by Linux including supercom
d cloud providers 74% of smartphones in the world are Linux.
Just trying grep
test testing
Powered by incliding
Memory management: Another function that kernel has to manage is the m
agement.
The kernel keeps track of used and unused memory and makes sure that p
shouldn't manipulate data of each other using virtual memory addresses
Process management: In the process, management kernel assigns en
ives priorities to processes before handling CPU to other proces
It also deals with security and ownership information.
Handling system calls: Handling system calls means a programmer
ry or ask the kernel to perform a task.
--More--(71%)
```

Use **less filename** to **same as more command but better control system** than more command.

```
The Falcon 9's and the Dragon 2's avionics use a customized version of
Linux is one of the most prominent examples of free and open-source so
llaboration. The source code may be used, modified and distributed com
 or non-commercially by anyone under the terms of its respective licen
 as the GNU General Public License.
90% of all cloud infrastructure is powered by Linux including supercom
d cloud providers 74% of smartphones in the world are Linux.
Just trying grep
test testing
Powered by incliding
Memory management: Another function that kernel has to manage is the m
agement.
The kernel keeps track of used and unused memory and makes sure that p
shouldn't manipulate data of each other using virtual memory addresses
Process management: In the process, management kernel assigns enough t
ives priorities to processes before handling CPU to other processes.
It also deals with security and ownership information.
Handling system calls: Handling system calls means a programmer can wr
ry or ask the kernel to perform a task.
Also runs on embedded systems, i.e. devices whose operating system is
 built into the firmware and is highly tailored to the system.
This includes routers, automation controls, smart home technology
(for example, Tesla, Audi, Mercedes-Benz, Hyundai, and Toyota all rely
),[37] digital video recorders, video game consoles, and smartwatches.
The kernel keeps track of used and unused memory and makes sure that p
shouldn't manipulate data of each other using virtual memory addresses
Process management: In the process, management kernel assigns enough t
ives priorities to processes before handling CPU to other processes.
(END)
```

Use **head filename** to **display top 10 line** from file

```
user@user-virtual-machine:~$ head add.txt
#include<stdio.>
void main()
{
int a,b,sum;
printf("Enter the Numbers:");
scanf("%d%d",&a&b);
sum = a + b;
printf("Sum of Numbers:%d",&sum);
}
#include<stdio.>
```

Use **head -n25 filename** to **display any top number of line** from file. *In this case it is 25.*

```
user@user-virtual-machine:~$ head -n25 add.txt
#include<stdio.>
void main()
{
int a,b,sum;
printf("Enter the Numbers:");
scanf("%d%d",&a&b);
sum = a + b;
printf("Sum of Numbers:%d",&sum);
}
#include<stdio.>
void main()
{
int a,b,sum;
printf("Enter the Numbers:");
scanf("%d%d",&a&b);
sum = a + b;
printf("Sum of Numbers:%d",&sum);
}
#include<stdio.>
void main()
{
int a,b,sum;
printf("Enter the Numbers:");
scanf("%d%d",&a&b);
sum = a + b;
```

Use **head -c5 filename** to **display any number of byte** from file. *In his case it is 25.*

```
printuser@user-virtual-machine:~$ head -c25 add.txt
#include<stdio.>
void maiuser@user-virtual-machine:~$
```

Use **head -v filename** to while displaying first 10 line from file, **on top it shows name of the file**.
Can also used as **head -vn5 filename**, first 5 line with name of file on top. (*Only for one command at a time*)

```
user@user-virtual-machine:~$ head -vn5 add.txt
==> add.txt <==
#include<stdio.>
void main()
{
int a,b,sum;
printf("Enter the Numbers:");
user@user-virtual-machine:~$
```

Use **tail filename** to **display top 10 line** from file

```
user@user-virtual-machine:~$ tail add.txt
}
#include<stdio.>
void main()
{
int a,b,sum;
printf("Enter the Numbers:");
scanf("%d%d",&a&b);
sum = a + b;
printf("Sum of Numbers:%d",&sum);
}
```

Use **tail -n2 filename** to **display any top number of line** from file. *In his case it is 2.*

```
user@user-virtual-machine:~$ tail -n2 add.txt
printf("Sum of Numbers:%d",&sum);
}
```

Use **head -n15 filename && tail -n2** to **consider line of top 15 lines within those line display last 2 lines.**

```
user@user-virtual-machine:~$ head -n5 add.txt && tail -n2 add.txt
#include<stdio.>
void main()
{
int a,b,sum;
printf("Enter the Numbers:");
printf("Sum of Numbers:%d",&sum);
}
user@user-virtual-machine:~$
```

Use **tac filename** to reverse the file **line by line** as **Reverse of cat is tac.**

```
user@user-virtual-machine:~$ tac add.txt
}
printf("Sum of Numbers:%d",&sum);
sum = a + b;
scanf("%d%d",&a&b);
printf("Enter the Numbers:");
int a,b,sum;
{
void main()
#include<stdio.>
}
printf("Sum of Numbers:%d",&sum);
sum = a + b;
scanf("%d%d",&a&b);
printf("Enter the Numbers:");
int a,b,sum;
{
void main()
#include<stdio.>
}
printf("Sum of Numbers:%d",&sum);
sum = a + b;
scanf("%d%d",&a&b);
printf("Enter the Numbers:");
int a,b,sum;
{
void main()
#include<stdio.>
}
```

Use **chmod u-w filename, revoke the write permission** from the
 owner. g means group user
 o means other
 a means all user
If **+** it means **add some**
permission If **-** then **Revock**
some permission If **= specify**
mode
If **r** means **read**
If **w** means **write**
If x then it means
execute The **d** means
directory Starts from **'-'**
means file
Owner - group user - other means
(drwxrwxrw) 0 no permission
1 w permission
2 x permission
4 r permission
To give all permission 4+2+1 = 7
To give read and write permission 2+1 = 3
777 --> (ugo) --> (owner permission , group-user permission, other
permission). 000 --> (ugo) --> file has no permission.

chmod 000 filename given **all the permission** of **filename** to all **user.**

```
user@user-virtual-machine:~/w1$ ls -lh
total 8.0K
-rw-rw-r-- 1 user user    0 Sep 29 14:52 empty.txt
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file1
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file10
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file2
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file3
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file4
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file5
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file6
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file7
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file8
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file9
drwxrwxr-x 2 user user 4.0K Sep 29 17:15 s2
drwxrwxr-x 4 user user 4.0K Sep 29 14:40 w2
```

```
user@user-virtual-machine:~/w1$ chmod 000 w2
user@user-virtual-machine:~/w1$ ls -lh
total 8.0K
-rw-rw-r-- 1 user user    0 Sep 29 14:52 empty.txt
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file1
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file10
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file2
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file3
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file4
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file5
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file6
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file7
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file8
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file9
drwxrwxr-x 2 user user 4.0K Sep 29 17:15 s2
d--------- 4 user user 4.0K Sep 29 14:40 w2
```

Use **chmod 777 w2** to give **all access to all users**.

```
user@user-virtual-machine:~/w1$ chmod 777 w2
user@user-virtual-machine:~/w1$ ls -lh
total 8.0K
-rw-rw-r-- 1 user user    0 Sep 29 14:52 empty.txt
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file1
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file10
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file2
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file3
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file4
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file5
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file6
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file7
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file8
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file9
drwxrwxr-x 2 user user 4.0K Sep 29 17:15 s2
drwxrwxrwx 4 user user 4.0K Sep 29 14:40 w2
```

Use **chmod a = rwx empty.txt** to give **read write execute access to all user**.

```
user@user-virtual-machine:~/w1$ chmod a=rwx empty.txt
user@user-virtual-machine:~/w1$ ls -lh
total 8.0K
-rwxrwxrwx 1 user user    0 Sep 29 14:52 empty.txt
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file1
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file10
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file2
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file3
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file4
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file5
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file6
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file7
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file8
-rw-rw-r-- 1 user user    0 Sep 30 15:51 file9
drwxrwxr-x 2 user user 4.0K Sep 29 17:15 s2
drwxrwxrwx 4 user user 4.0K Sep 29 14:40 w2
```

Question 1: Print only those people who's name starts with a and in ascending order?

```
user@user-virtual-machine:~$ cat sort.txt
nayan 79879
aatish 909
able 879
amit 132
adsh 8709
user@user-virtual-machine:~$ sort -k1 sort.txt
aatish 909
able 879
adsh 8709
amit 132
nayan 79879
user@user-virtual-machine:~$ grep '^a' sort.txt
aatish 909
able 879
amit 132
adsh 8709
user@user-virtual-machine:~$ sort -k1 sort.txt | grep '^a'
aatish 909
able 879
adsh 8709
amit 132
```

Question 2 : Print top 3 files in a directory.

```
user@user-virtual-machine:~/w1$ ls
empty.txt  file10  file3  file5  file7  file9  w2
file1      file2   file4  file6  file8  s2
user@user-virtual-machine:~/w1$ ls | head -n3
empty.txt
file1
file10
```