PRACTICAL - 1

AIM: Install your choice of Linux Distribution eg ubuntu, fedora, Debian

Ubuntu: ubuntu is a free & open source Software based on debian ubuntu is officially released under 3 editions Desktop, Server, union

All the Editions can be runned on the computer alone or a virtual box machine

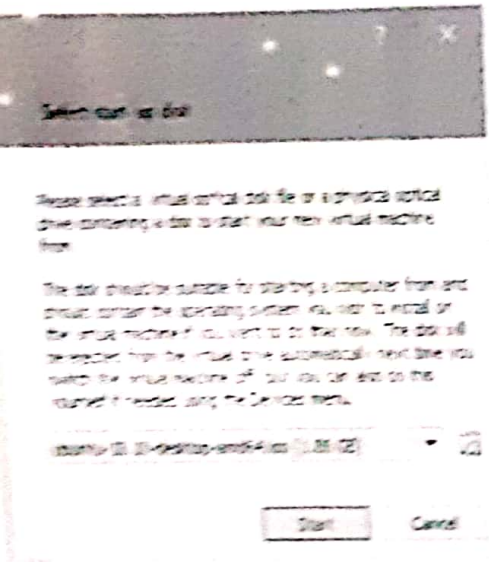
It is a popular open source Software for cloud computing with support of openstack

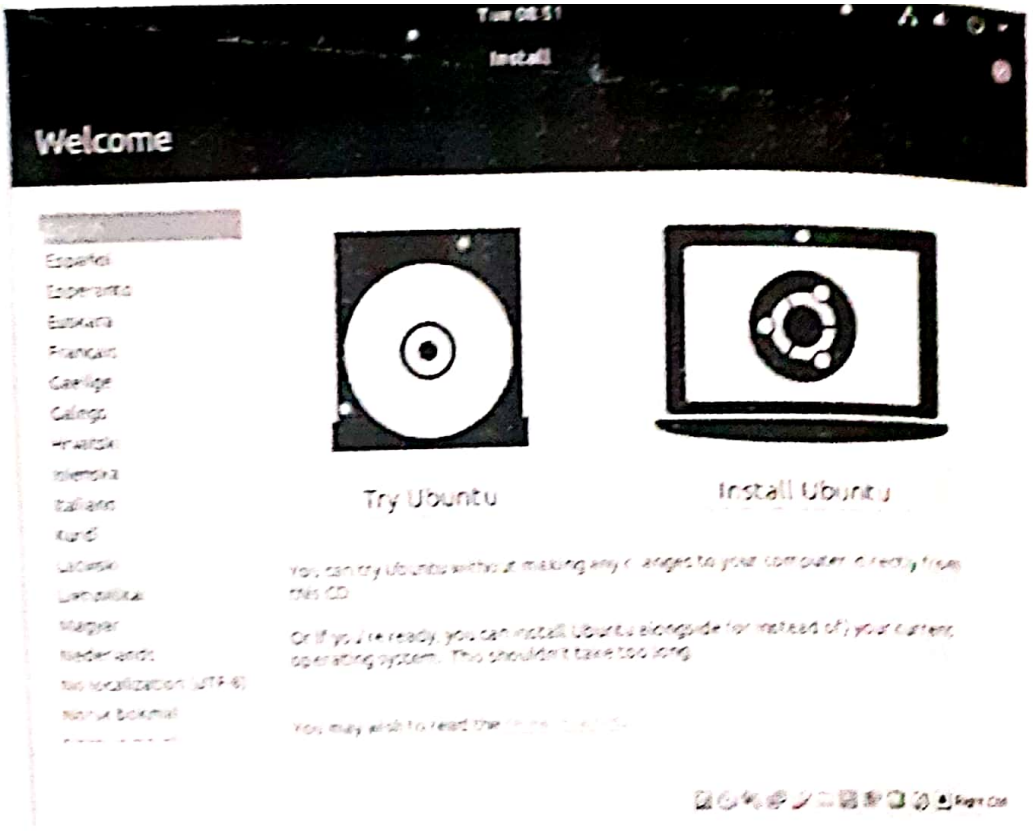
Steps for installing ubuntu as a virtual machine

Step 1: Select a virtual optical file on a physical drive to start ubuntu in your virtual machine. Space given to it is 1.86 GB

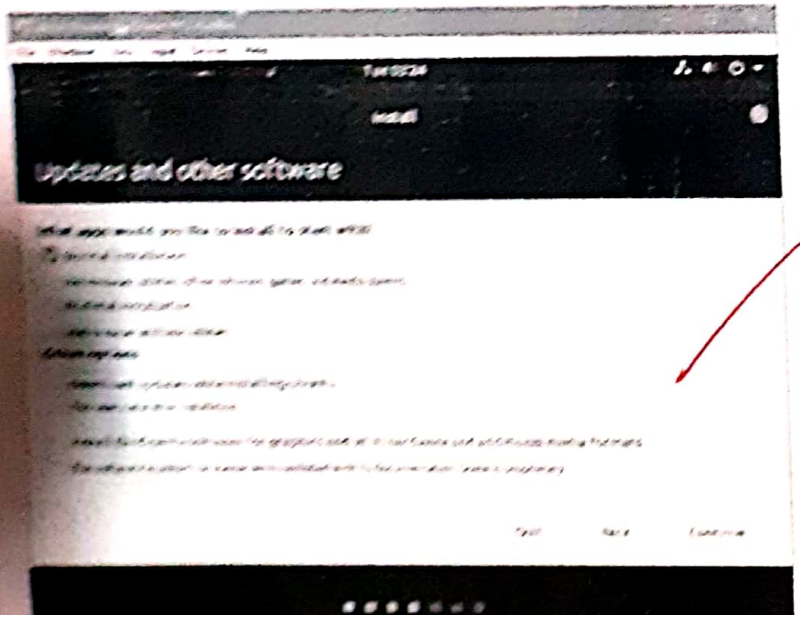
Step 2: Select the language of your choice & click on 'Install ubuntu'. You can also 'try ubuntu' for free on computer device from this CD.

Step 3: In 'updates & add Software' click on the normal installation.

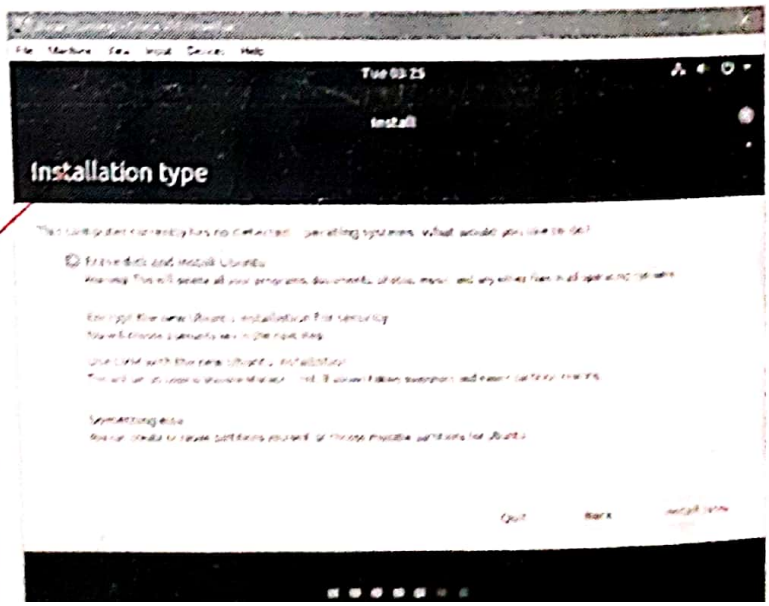




Step3



step 4



Step 4: While configuring installation type we need to click 'Erase' disk & install ubuntu. This step would delete all types of documents, photos, etc in all operating systems.

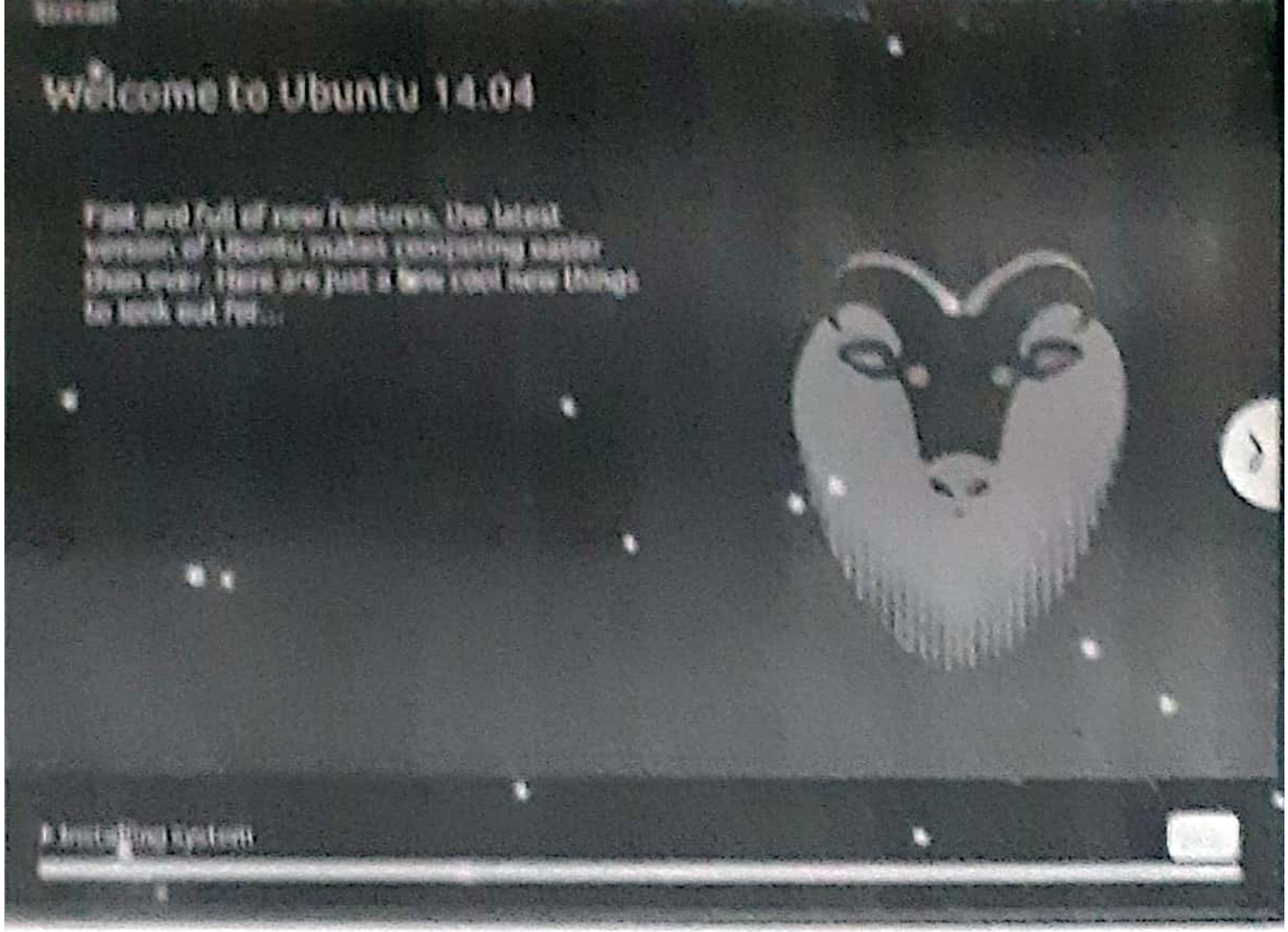
Step 5: In this you only need to choose the location for the clock to work on ubuntu.

Step 6: In this type you need to choose username & password for the login in ubuntu & then click on continue.

step 7: Here you simply need to type password again & it is done.

step 3: Type name of virtual disk & recommended Size of to be given is 2048 GB or 2TB.

Therefore, now the virtual Box is ready to use.



6) Customize desktop environment by changing different default opt like changing default background, themes, Screensavors.

Accessing Appearance Settings:

To access Appearance Settings in ubuntu, let's click on user menu at the top right corner, on the top menu bar & Select System Settings.

A window will pop-up with All Settings divided into personal, Hardware & System opt icons. let's first Select the appearance icon.

Changing wallpaper picture:

In the left side of Background part, you can see your current Wallpaper.

In the right side is part where we can Select one of ubuntu wallpapers. clicking on any thumbnail our wallpaper will be changed right away. with a fadding effect.

you want to Select wallpaper from your picture folder, click the drop. down menu above thumbnails & Select the pictures folder.

You will see all the pictures in your pictures folder as thumbnails, where you can select them as your wallpaper.

To add wallpaper that is in another folder, just click the plus icon below the thumbnail & then in pop-up window.

Changing ubuntu theme:

ubuntu also has an opt to change the Desktop theme, which in one click will change the entire way your computer looks.

To do that, click on the drop-down menu below the wallpaper. thumbnails, & choose between Ambiance, Radiance or High contrast.

Ambiance is a light theme that looks a bit more mac-like, while Radiance is the darker known theme used in ubuntu by default.

c) Screen Resolution: As certain the current screen resolution for your desktop.

changes the size or rotation of the screen.

d) You can change how big things appear on the screen by charging the screen resolution.

e) You can change which way up things appear if you have a rotating display.

a) click the icon on the very right of the menu bar & select System Settings.

) open Screen display.

) If you have multiple displays & they are not mirrored, you can have different settings o each display. select a display in the preview area.

) Select your desired resolution & rotation.

) Click Apply. The new settings will be ap for 30 seconds before reverting back.

1) Time settings change the time zone of your System to New York time.

1) If you are currently in Indian Time cha... change.

2) After noting the time change, change the tim... Zone back to your local time Zone.

3) Just click on the clock on the top bar, & cho... time & Date Settings. Once the time & Dat... window opens, choose manualling, so you can change the time & date manually.

8/9/1101

PRACTICAL - 2

AIM: Installing & removing Software.

1) Install gcc package, verify that it runs & then remove it.

Step 1: First type 'gcc -v' to know if you have already installed gcc compiler or not if the output is blank then it means that you don't have gcc installed.

Step 2: Type 'sudo apt-get install gcc'. After typing the following command installation will take place.

Step 3: Type 'sudo apt-get install build essential' This will install all the libraries required for C & C++ programming language.

Now to uninstall GCC compiler.

In GCC 5.1.0, although there is no top level uninstall target, some directories do have it, in particular gcc, so you can do:

Type: cd build/gcc.

Sudo make uninstall.

This does not remove everything that was installed but is removed major executables like gcc, g++, cpp ... contained in that directory.

PRACTICAL - 3.

AIM: Utilization of grep, man commands
Documentation:

finding into documentation from the comm
line: bring up the info page for the gr
command & bring up the usage section.

AIM: To find info about any command info
command is used the syntax. of inf
command is "info command name".

we are giving to find the info about the
'grep' command:

Open the terminal (ctrl+Alt+T) &
type: info grep.

After typing the command following output
will be displayed onto your screen.

You can also scroll through pages using
(space = up). & (backspace = down) keys.

Another more summarised from of showing
info as the 'man' command. The command
is same as 'info'. but required data

NAME

tar - an archiving utility.

synopsis.

Traditional usage.

tar [A|c|d|r|t|u|x][GnskUWomps M Biaj Jz Zhp lRv MwO].

UNIX - Style usage.

tar - A [OPTIONS] Archive ARCHIVE.

tar - c [-f ARCHIVE] [OPTIONS] [FILE ----].

tar - d [-f ARCHIVE] [OPTIONS] [FILE ----]

tar - t [-f ARCHIVE] [OPTIONS] [FILE ----]

tar - r [-F ARCHIVE] [OPTIONS] [FILE ----].

tar - x [-f ARCHIVE] [OPTIONS] [MEMBER ----].

1) finding man pages from the cmd line: Bring
the man page for the 'ls' command Scro
down to the examples section.
To use the 'man' command simply type
'man (command name);
Now we are going to find the manual fo
'ls'
simply type: 'man ls'.

2) finding man pages by topic: what man pages a
available that document file compression.
'Tar', 'zip' are some man pages which are
available for document file compression
simply type: map zip.
man tar

find man pages by section from the cmd
ring up the man page for the printf lib
unction which manual page section are
library function found?
he number corresponds to what section of th
anual page is from, 1 is user command
hile 8 is System admin stuff. The man
ge for man itself explain it el dist
the std one.

There are certain terms that have different pages in different Sections. (eg. 'printf' as a command appears in Section 1 as a 'stdlib' function appears in Section 3, in cases like this you can pass the Section no to the man before the page name to choose which on you want or use 'man -a' to show every matching page in a row.

You can tell what Section a term falls in with 'man -k'. It will do substring matches too. So you need to use "term" to limit it

e) command-line Helps list the available options for the mkdir command. How you do this?

$ mkdir -m a=rwx directoryname.

8/7/2021

Command Line Operations.

1) find / -name password

→ /etc/cron.daily/passwd
/etc/pam.d/passwd.
/etc/passwd
/usr/bin/passwd
/usr/share/bash-completion/completions/passwd.
/usr/share/doc/passwd.
/usr/share/lintian/overrides/passwd.

2) find / -maxdepth 2 -name passwd.

/etc/passwd

3) find / -maxdepth 2 -maxdepth 3 -name passwd.

/etc/cron.daily/passwd
/etc/pam.d/passwd
/etc/passwd
/usr/bin/passwd.
/rofs/etc/passwd.

) find / -maxdepth 3 -maxdepth 5 -name pa

/etc/cron.daily/passwd
/etc/pam.d/passwd
/etc/passwd.
/usr/bin/passwd.
/usr/share/bash-completion/completions/

~~) ln -s filename1.txt.~~

ln -s abc.txt viz.txt.
-ls.

Desktop Downloads Music. Public Templates.
Documents filename2.txt pictures viz.txt videos.

Whereis ls.

ls: /bin/ls /usr/share/man/man1/ls.1.gz.

whereis ps.

/bin/ps /usr/share/man/man1/ps.1.gz.

PRACTICAL - 5

FILE OPERATIONS.

1) Explore mounted file Systems on your computer.

→ df-k.

Ans: **df-k**

```
jeba@jeba-VirtualBox:~$ df -k
Filesystem     1K-blocks    Used Available Use% Mounted on
udev             494436       0    494436   0% /dev
tmpfs            102416    3676     98740   4% /run
/dev/sda1       7092728 3383372   3326024  51% /
tmpfs            512076     216    511860   1% /dev/shm
tmpfs              5120       4      5116   1% /run/lock
tmpfs            512076       0    512076   0% /sys/fs/cgroup
tmpfs            102416      48    102368   1% /run/user/1000
jeba@jeba-VirtualBox:~$
```

2) what are the different ways of exploring mounted file Systems on Linux?

→ mount.

```
jeba@jeba-VirtualBox:~$ mount
sysfs on /sys type sysfs (rw,nosuid,nodev,noexec,relatime)
proc on /proc type proc (rw,nosuid,nodev,noexec,relatime)
udev on /dev type devtmpfs (rw,nosuid,relatime,size=494436k,nr_inodes=123609,mode=755)
devpts on /dev/pts type devpts (rw,nosuid,noexec,relatime,gid=5,mode=620,ptmxmode=000)
tmpfs on /run type tmpfs (rw,nosuid,noexec,relatime,size=102416k,mode=755)
/dev/sda1 on / type ext4 (rw,relatime,errors=remount-ro,data=ordered)
securityfs on /sys/kernel/security type securityfs (rw,nosuid,nodev,noexec,relatime)
tmpfs on /dev/shm type tmpfs (rw,nosuid,nodev)
tmpfs on /run/lock type tmpfs (rw,nosuid,nodev,noexec,relatime,size=5120k)
tmpfs on /sys/fs/cgroup type tmpfs (ro,nosuid,nodev,noexec,mode=755)
cgroup on /sys/fs/cgroup/systemd type cgroup (rw,nosuid,nodev,noexec,relatime,xattr,release_agent=/lib/systemd/systemd-cgroups-agent,name=systemd,nsroot=/)
pstpre on /sys/fs/pstore type pstore (rw,nosuid,nodev,noexec,relatime)
cgroup on /sys/fs/cgroup/cpuset type cgroup (rw,nosuid,nodev,noexec,relatime,cpuset,nsroot=/)
cgroup on /sys/fs/cgroup/net_cls,net_prio type cgroup (rw,nosuid,nodev,noexec,relatime,net_cls,net_prio,nsroot=/)
cgroup on /sys/fs/cgroup/pids type cgroup (rw,nosuid,nodev,noexec,relatime,pids,nsroot=/)
cgroup on /sys/fs/cgroup/freezer type cgroup (rw,nosuid,nodev,noexec,relatime,freezer,nsroot=/)
cgroup on /sys/fs/cgroup/cpu,cpuacct type cgroup (rw,nosuid,nodev,noexec,relatime,cpu,cpuacct,nsroot=/)
cgroup on /sys/fs/cgroup/devices type cgroup (rw,nosuid,nodev,noexec,relatime,devices,nsroot=/)
cgroup on /sys/fs/cgroup/memory type cgroup (rw,nosuid,nodev,noexec,relatime,memory,nsroot=/)
cgroup on /sys/fs/cgroup/blkio type cgroup (rw,nosuid,nodev,noexec,relatime,blkio,nsroot=/)
cgroup on /sys/fs/cgroup/perf_event type cgroup (rw,nosuid,nodev,noexec,relatime,perf_event,nsroot=/)
cgroup on /sys/fs/cgroup/hugetlb type cgroup (rw,nosuid,nodev,noexec,relatime,hugetlb,nsroot=/)
systemd-1 on /proc/sys/fs/binfmt_misc type autofs (rw,relatime,fd=32,pgrp=1,timeout=0,minproto=5,maxproto=5,direct)
hugetlbfs on /dev/hugepages type hugetlbfs (rw,relatime)
```

3) →

4) →

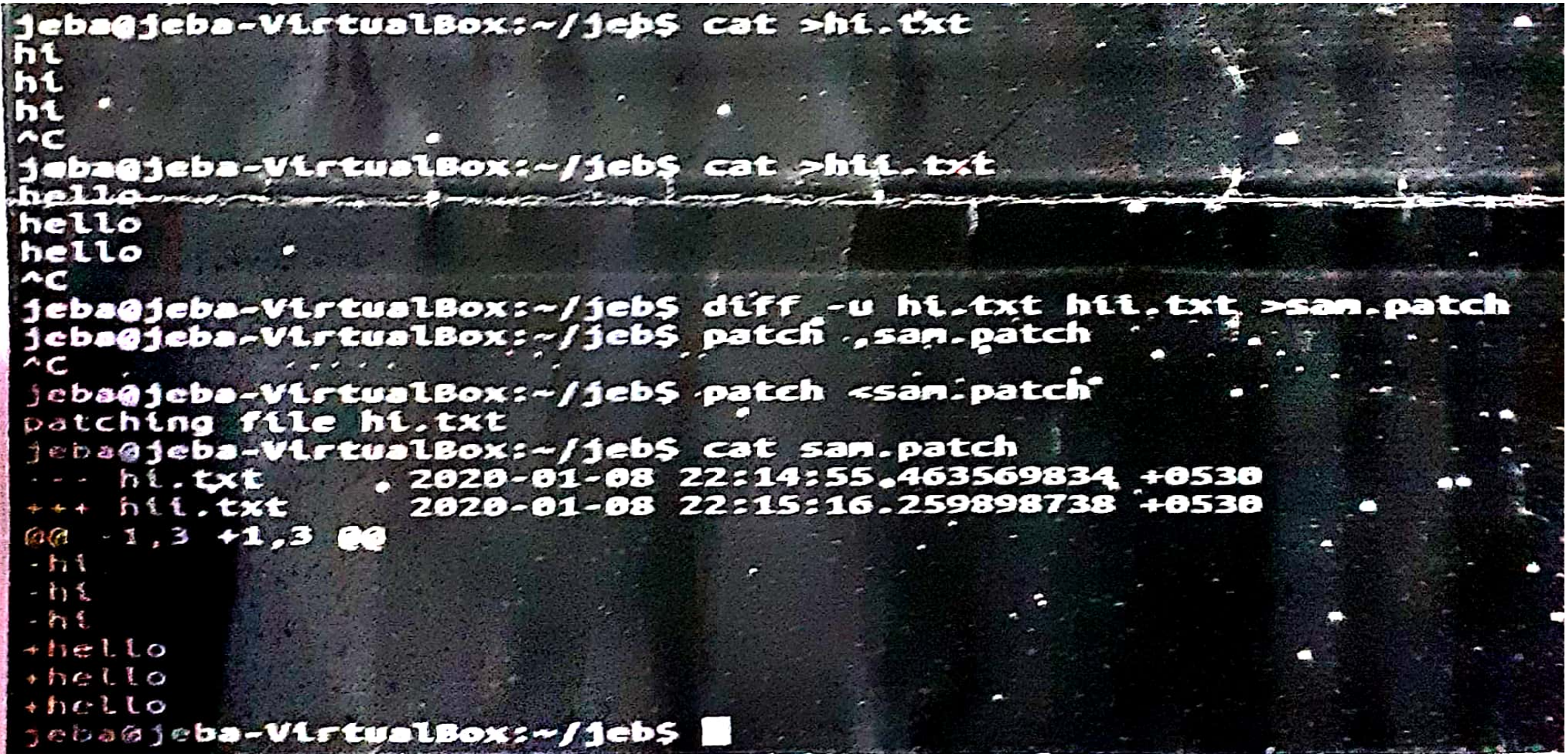
```
jeba@jeba-VirtualBox:~/jeb$ touch ss.txt
jeba@jeba-VirtualBox:~/jeb$ mv gg.txt ss.txt
jeba@jeba-VirtualBox:~/jeb$ cat gg.txt
cat: gg.txt: No such file or directory
jeba@jeba-VirtualBox:~/jeb$ cat ss.txt
welcome
Linux
jeba@jeba-VirtualBox:~/jeb$
```

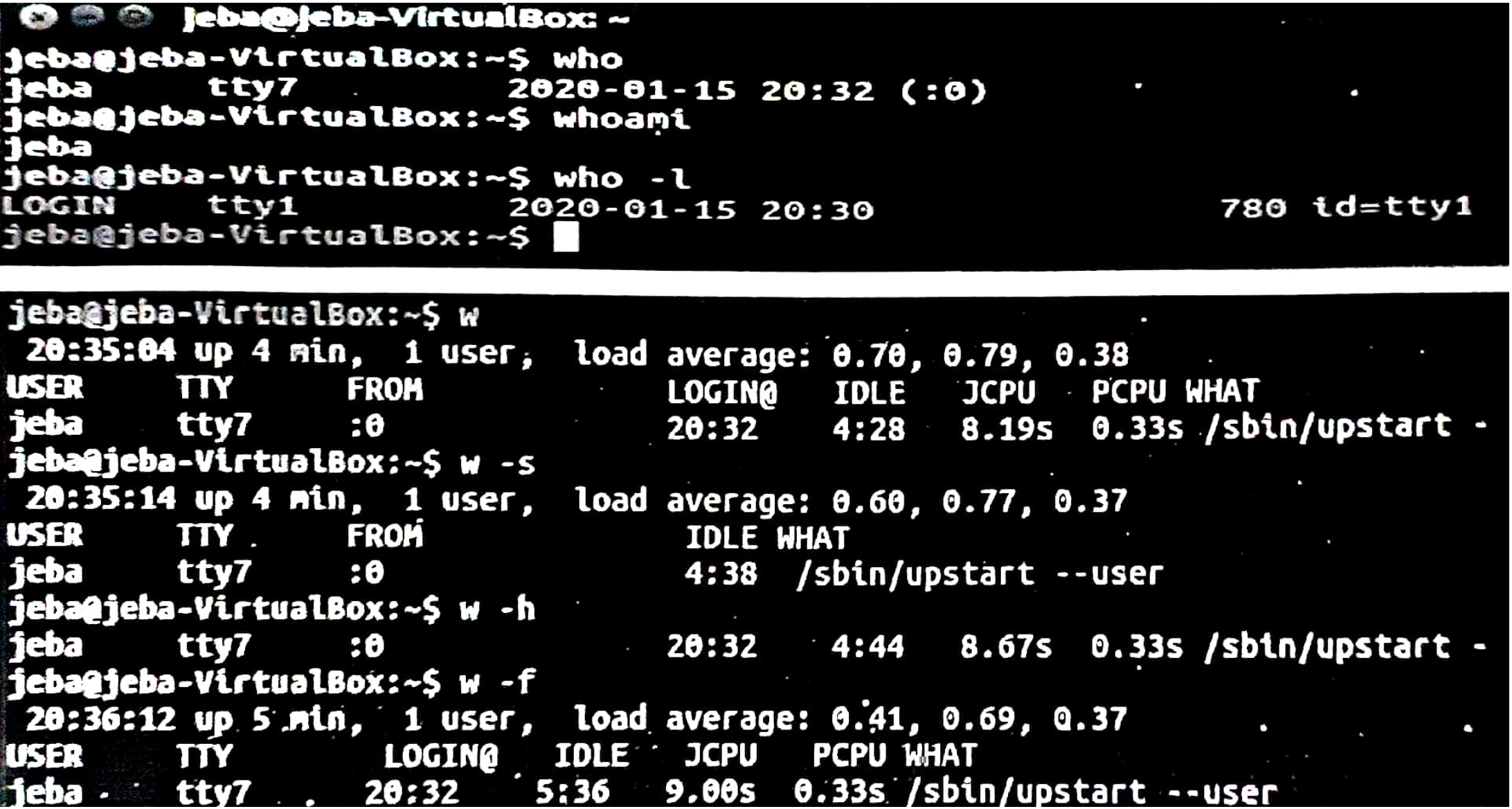
1) Archiving & backup the work dire
tar, gzip & bzip2 commando.

→ gzip filename.txt.
Bzip2 filename.txt.

```
jeba@jeba-VirtualBox:/$ tar -cvf data.tar /mnn
tar: data.tar: Cannot open: Permission denied
tar: Error is not recoverable: exiting now
jeba@jeba-VirtualBox:/$ sudo tar -cvf data.tar /mnn
tar: Removing leading `/' from member names
/mnn/
/mnn/hd/
jeba@jeba-VirtualBox:/$ ls
bin   data.tar  etc         lib         mnn   opt   run   srv  usr
boot  dd        home        lost+found  mnt   proc  sbin  sys  var
cdrom dev       initrd.img  media       mnt1  root  snap  tmp  vmlinuz
jeba@jeba-VirtualBox:/$ cat data.tar
mnn/0000755000000000000000000000000013605376557010365 5ustar  rootrootmnn/hd/0000755000000
0000000000000000000013605376557010760 5ustar  rootrootjeba@jeba-VirtualBox:/$
```

```
jeba@jeba-VirtualBox:~/jeb$ bzip2 ss.txt
jeba@jeba-VirtualBox:~/jeb$ ls
dd.txt  ss.txt.bz2
jeba@jeba-VirtualBox:~/jeb$ cat ss.txt.bz2
BZh91AY&SY`◆[illegible]◆[illegible]
'J◆w$S◆◆[illegible]1 jeba@jeba-VirtualBox:~/jeb$ gzip dd.txt
jeba@jeba-VirtualBox:~/jeb$ ls
dd.txt.gz  ss.txt.bz2
jeba@jeba-VirtualBox:~/jeb$ cat dd.txt.gz
◆[illegible]d.txt+O◆I◆◆M◆◆◆◆+◆◆[illegible]◆Xzjeba@jeba-VirtualBox:~/jeb$
```





1. Username upto characters, use sensitive usually all lowercase. A direct to the username in the etc/ passwd file.

2. Passwd. 13. characters encrypted. A blank entry (eg: :) indicates a passwd is not required to log in (usually a bad day) if a "*" entry (eg: *:) indicates the accounts has been disabled.

3. The no. of days since January 1, 1975 since passwd was changed.

4. The no. of days to warn user of an expiring passwd.

5. The no. of days passwd expires that accounts disabled.

6. The no. of days since January 1, 1970 that an account has been disabled.

The served field for possible future

```
jeba@jeba-VirtualBox:~$ sudo cat /etc/shadow
[sudo] password for jeba:
root:!:18240:0:99999:7:::
daemon:*:16911:0:99999:7:::
bin:*:16911:0:99999:7:::
sys:*:16911:0:99999:7:::
sync:*:16911:0:99999:7:::
games:*:16911:0:99999:7:::
man:*:16911:0:99999:7:::
lp:*:16911:0:99999:7:::
mail:*:16911:0:99999:7:::
news:*:16911:0:99999:7:::
```

Pg4

Each field in a passwd entry is separated with ":" colon charachters, 7 are as follows:

1. username upto 32 charachters, case sensative usually all lowercase.

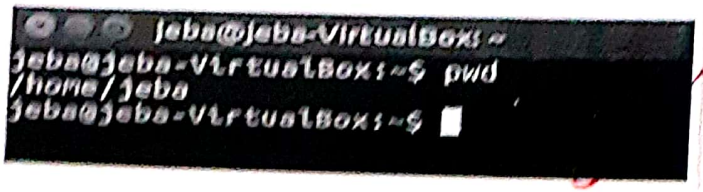
2. username 'x' in the passwd field, passwd are stored in the "etc/shadow" file.

3. Numeric user id. This is assigned by the 'adduser' script. unix uses this field plus the following group id field, to identify which fields which files belong to the user.

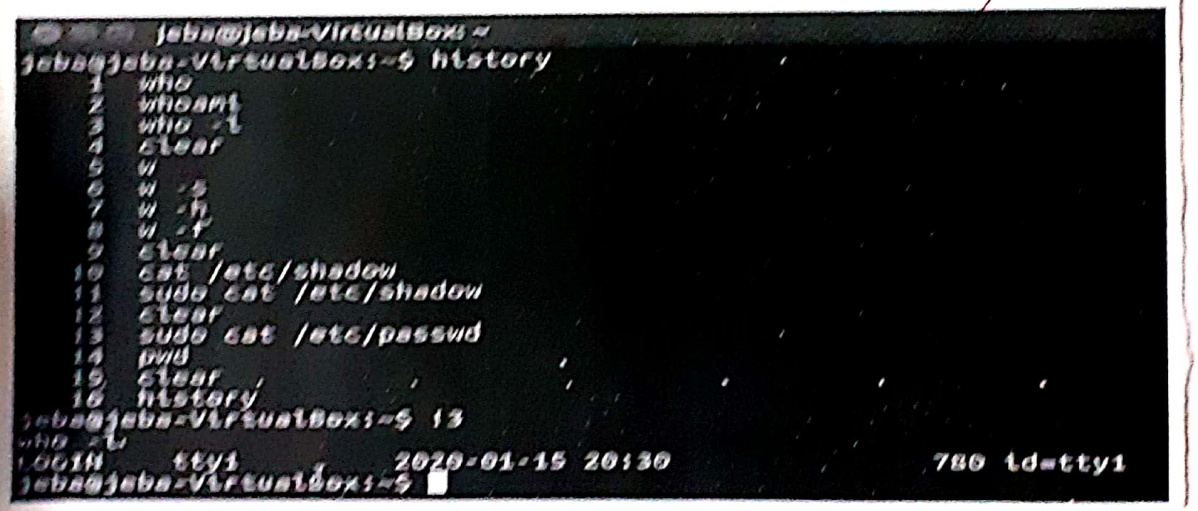
4. fullname of user. I'm not sure what maximus length for this field but try to keep it reasonable (under 30 charachters).

5. users "shell accounts" often set to "/bin/bash to provide access to bash shell any person to various shell.

) Get your current working directory
) pwd pwd.



) Explore different ways of getting command history, how to run previously executed command without typing it.



Create alias to most commonly used commands.
Alias command instructs the shell to replace one string with another string while executing.
Alias label = "command"

LINUX EDITORS : VI.

a) create, modify, Search & navigate a file in editor

i) Creating a file.
- To create a file on the terminal type is followed by filename.

ii) Modify the file;
To modify the file, on vi editor, type "O".

iii) Searching a file:
To find a word (forward search) press // followed by the word to search

iv) Navigate:

Movements in four directions:

key	Action.
k	Move cursor up
j	Moves cursor down
h	Moves cursor left
l	Moves cursor right.

Word Navigation

Key	Action
b	Moves back to beginning of word
e	Moves forward to end of word
w	Moves forward to beggining
0	Moves to first character
$	Moves to end of line.

Scrolling

Key	Action
ctrl + j	Scrolls forward.
ctrl + b	Scrolls backward
ctrl + d	Scrolls half page
ctrl + u	Scrolls half page backward

b. learn all essential commands like Search/replace, highlight, Show line numbers

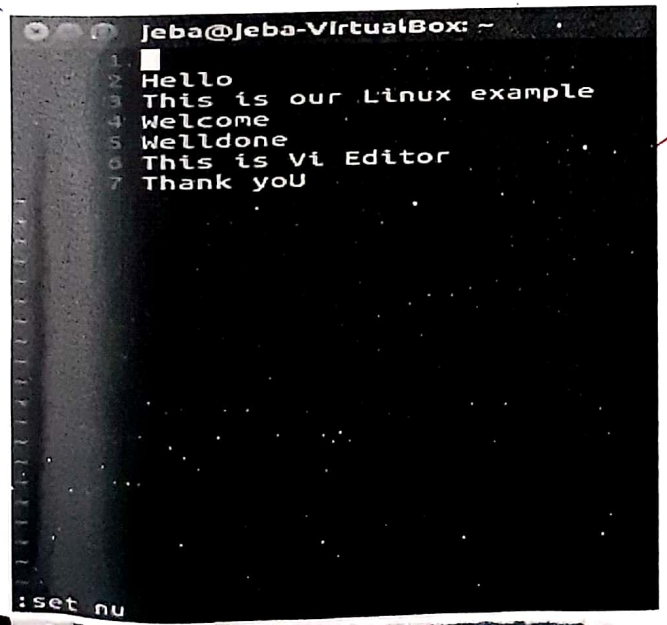
i) Replace.

Syntax: /g/word to be replaced/s/new word

iii) Highlight
use set to search.

Show the line number

Use **set nu**



```
# Please consider adding local content in /etc/sudoers.d/ instead of
# directly modifying this file.
#
# See the man page for details on how to write a sudoers file.
#
Defaults        env_reset
Defaults        mail_badpass
Defaults        secure_path="/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/
sbin:/bin"

# Host alias specification

# User alias specification

# Cmnd alias specification

# User privilege specification
root    ALL=(ALL:ALL) ALL
```

```
jeba@jeba-VirtualBox:~$ sudo chage user1
Changing the aging information for user1
Enter the new value, or press ENTER for the default

        Minimum Password Age [0]: 100
        Maximum Password Age [99999]: 200
        Last Password Change (YYYY-MM-DD) [2020-01-20]: 2020-01-21
        Password Expiration Warning [7]: 5
        Password Inactive [-1]:
        Account Expiration Date (YYYY-MM-DD) [-1]: 2020-01-31
eba@jeba-VirtualBox:~$ sudo chage -l user1
ast password change                                     : Jan 21, 2020
assword expires                                         : Aug 08, 2020
assword inactive                                        : never
ccount expires                                          : Jan 31, 2020
inimum number of days between password change           : 100
aximum number of days between password change           : 200
umber of days of warning before password expires        : 5
eba@jeba-VirtualBox:~$
```

```
ba@jeba-VirtualBox:~$ sudo chage -E 25/01/2020 -m 10 -M 90 -I 30 -W 30 user1
ba@jeba-VirtualBox:~$ sudo chage -l user1
st password change                                      : Jan 21, 2020
ssword expires                                          : Apr 20, 2020
ssword inactive                                         : May 20, 2020
count expires                                           : Jan 01, 2022
nimum number of days between password change            : 10
ximum number of days between password change            : 90
mber of days of warning before password expires         : 30
a@jeba-VirtualBox:~$
```

Network Management.

048

Setup address of your machine using ifconfig

```
jeba@jeba-VirtualBox:~$ ifconfig
enp0s3    Link encap:Ethernet  HWaddr 08:00:27:0e:6b:69
          inet addr:10.0.2.15  Bcast:10.0.2.255  Mask:255.255.255.0
          inet6 addr: fe80::c0cd:53a0:d5a3:848e/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:2 errors:0 dropped:0 overruns:0 frame:0
          TX packets:73 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:1180 (1.1 KB)  TX bytes:8518 (8.5 KB)

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          inet6 addr: ::1/128 Scope:Host
          UP LOOPBACK RUNNING  MTU:65536  Metric:1
          RX packets:53240 errors:0 dropped:0 overruns:0 frame:0
          TX packets:53240 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1
          RX bytes:4225072 (4.2 MB)  TX bytes:4225072 (4.2 MB)
```

Get hostname of your machine.

```
jeba@jeba-VirtualBox: ~
jeba@jeba-VirtualBox:~$ hostname
jeba-VirtualBox
jeba@jeba-VirtualBox:~$
```

using ping to check the network connectivity to remote machines.

```
jeba@jeba-VirtualBox:~$ ping www.google.com
PING www.google.com (172.217.31.196) 56(84) bytes of data.
64 bytes from maa03s28-in-f4.1e100.net (172.217.31.196): icmp_seq=1 ttl=54 time=
97.8 ms
64 bytes from maa03s28-in-f4.1e100.net (172.217.31.196): icmp_seq=2 ttl=54 time=
82.0 ms
64 bytes from maa03s28-in-f4.1e100.net (172.217.31.196): icmp_seq=3 ttl=54 time=
84.8 ms
64 bytes from maa03s28-in-f4.1e100.net (172.217.31.196): icmp_seq=4 ttl=54 time=
87.1 ms
64 bytes from maa03s28-in-f4.1e100.net (172.217.31.196): icmp_seq=5 ttl=54 time=
93.5 ms
64 bytes from maa03s28-in-f4.1e100.net (172.217.31.196): icmp_seq=6 ttl=54 time=
86.9 ms
64 bytes from maa03s28-in-f4.1e100.net (172.217.31.196): icmp_seq=7 ttl=54 time=
98.0 ms
64 bytes from maa03s28-in-f4.1e100.net (172.217.31.196): icmp_seq=8 ttl=54 time=
90.9 ms
^Z
[1]+  Stopped                 ping www.google.com
jeba@jeba-VirtualBox:~$
```

```
jeba@jeba-VirtualBox:~$ route
Kernel IP routing table
Destination     Gateway         Genmask         Flags Metric Ref    Use Iface
default         10.0.2.2        0.0.0.0         UG    100    0        0 enp0s3
10.0.2.0        *               255.255.255.0   U     100    0        0 enp0s3
link-local      *               255.255.0.0     U     1000   0        0 enp0s3
jeba@jeba-VirtualBox:~$
```

```
jeba@jeba-VirtualBox:~$ netstat
Active Internet connections (w/o servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State
Active UNIX domain sockets (w/o servers)
Proto RefCnt Flags       Type       State         I-Node   Path
unix  2      [ ]         DGRAM                    42149    /run/user/1000/system
d/notify
unix  2      [ ]         DGRAM                    9694     /run/systemd/journal/
syslog
unix  16     [ ]         DGRAM                    9695     /run/systemd/journal/
dev-log
unix  7      [ ]         DGRAM                    9704     /run/systemd/journal/
socket
unix  3      [ ]         DGRAM                    9684     /run/systemd/notify
unix  3      [ ]         STREAM     CONNECTED     44042    @/tmp/dbus-CymTeI7AQG
unix  3      [ ]         STREAM     CONNECTED     43331
unix  3      [ ]         STREAM     CONNECTED     42988    @/tmp/dbus-CymTeI7AQG
unix  3      [ ]         STREAM     CONNECTED     42690    @/tmp/dbus-CMGGc6G7PS
unix  3      [ ]         STREAM     CONNECTED     13242    /run/systemd/journal/
stdout
unix  3      [ ]         STREAM     CONNECTED     43113    /run/systemd/journal/
stdout
unix  3      [ ]         STREAM     CONNECTED     43013
unix  3      [ ]         STREAM     CONNECTED     42935
```

```
jeba@jeba-VirtualBox:~$ nmap www.google.com

Starting Nmap 7.01 ( https://nmap.org ) at 2020-01-20 22:51 IST
Nmap scan report for www.google.com (216.58.196.68)
Host is up (0.044s latency).
Other addresses for www.google.com (not scanned): 2404:6800:4007:811::2004
rDNS record for 216.58.196.68: bom05s11-in-f4.1e100.net
Not shown: 998 filtered ports
PORT    STATE SERVICE
80/tcp  open  http
443/tcp open  https

Nmap done: 1 IP address (1 host up) scanned in 20.32 seconds
jeba@jeba-VirtualBox:~$
```

PRACTICAL - 10.

AIM: SHELL SCRIPTING

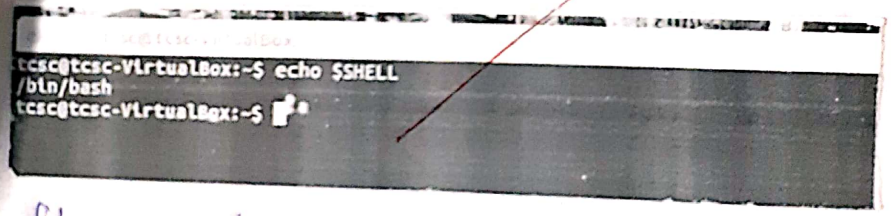
Basics of Shell Scripting

a) To get a shell, you need to start a terminal.

b) To see what shell you have, run
echo $SHELL.

b) #!bin/bash - it is called Shebang. It is written at the top of a shell Script & it passes the instruction to the program /bin/bash.

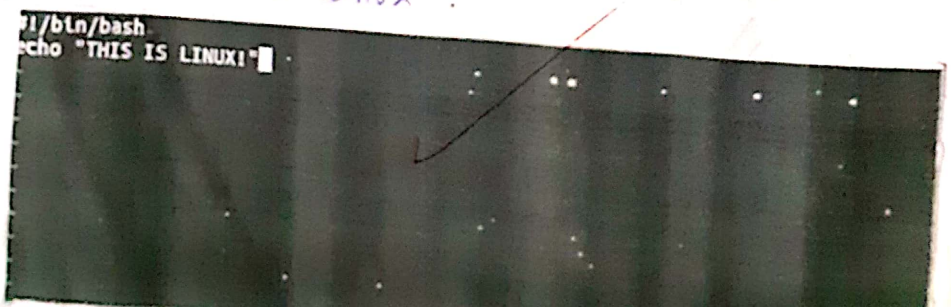
Echo $ SHELL.



vi filename.sh

#!/bin/bash

echo "This is linux".

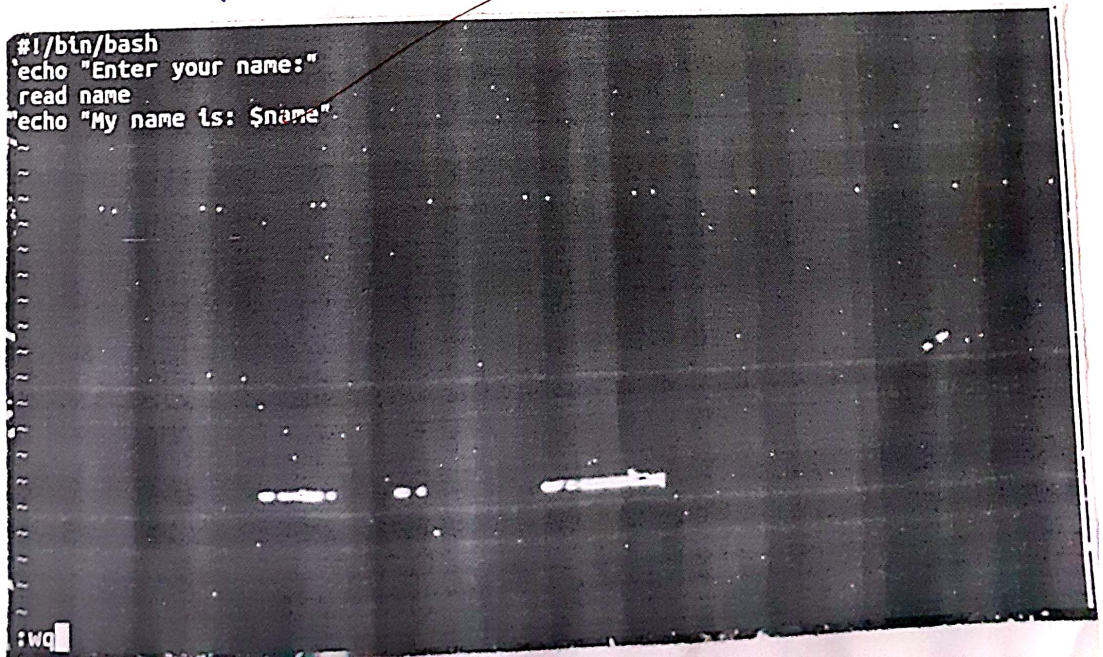


chmod 777 filename.sh.
./filename.sh.

Step to write & execute a shell script.
shell script is just a simple text file with .sh extension, having executable permission.

Program to display your name.

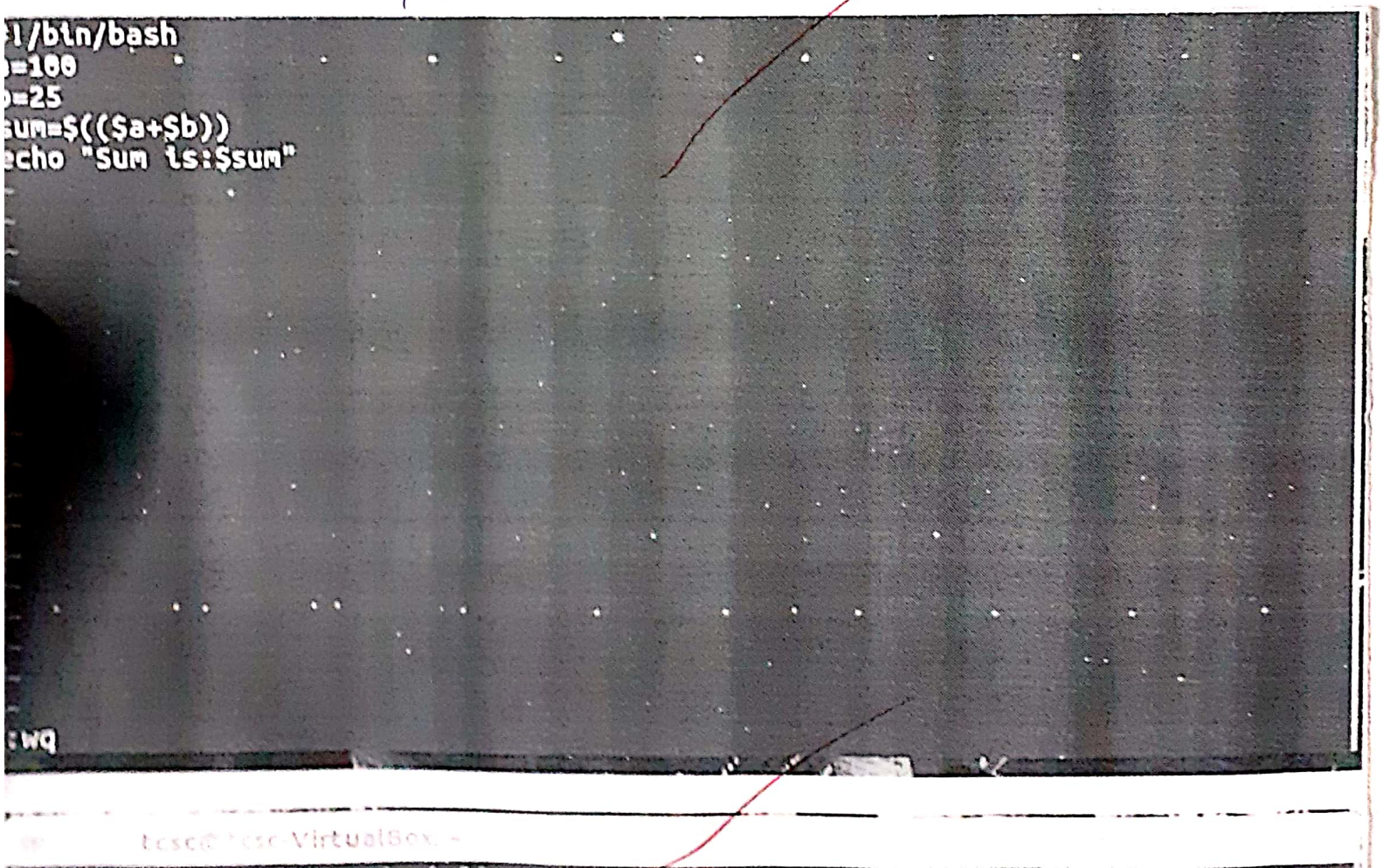
```
#!/bin/bash
Echo "Enter your name".
Read name.
Echo "My name is : $name".
```



gram to find sum of numbers.

filename.sh.

```
!/bin/bash.
= 100
= 25
n = $ (($a + $b))
no "sum is : $sum".
```



program to find the sum of two numbers

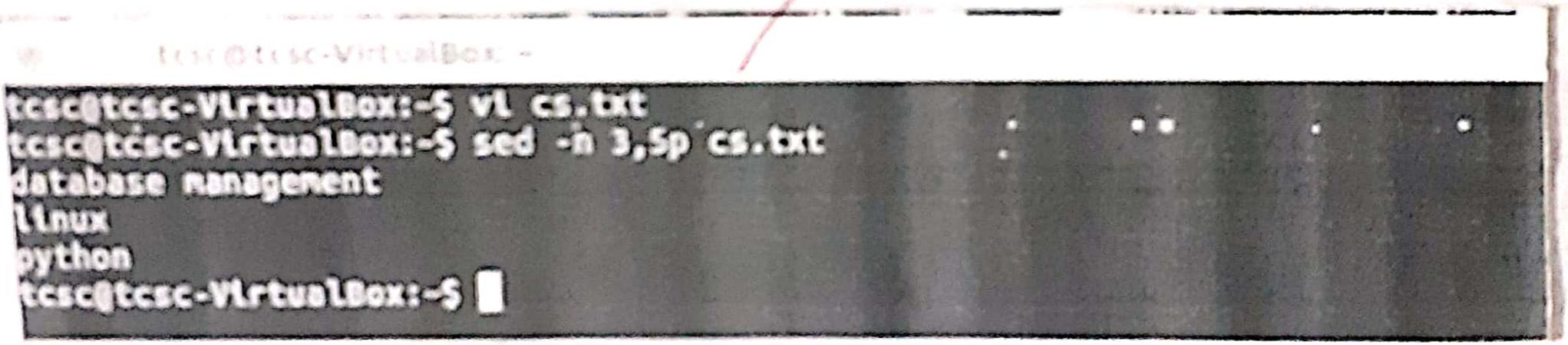
```
#!/bin/bash
sum=$((a1+a2))
echo "sum is"$sum"
```

"lin.sh" 3 lines, 46 characters

sed

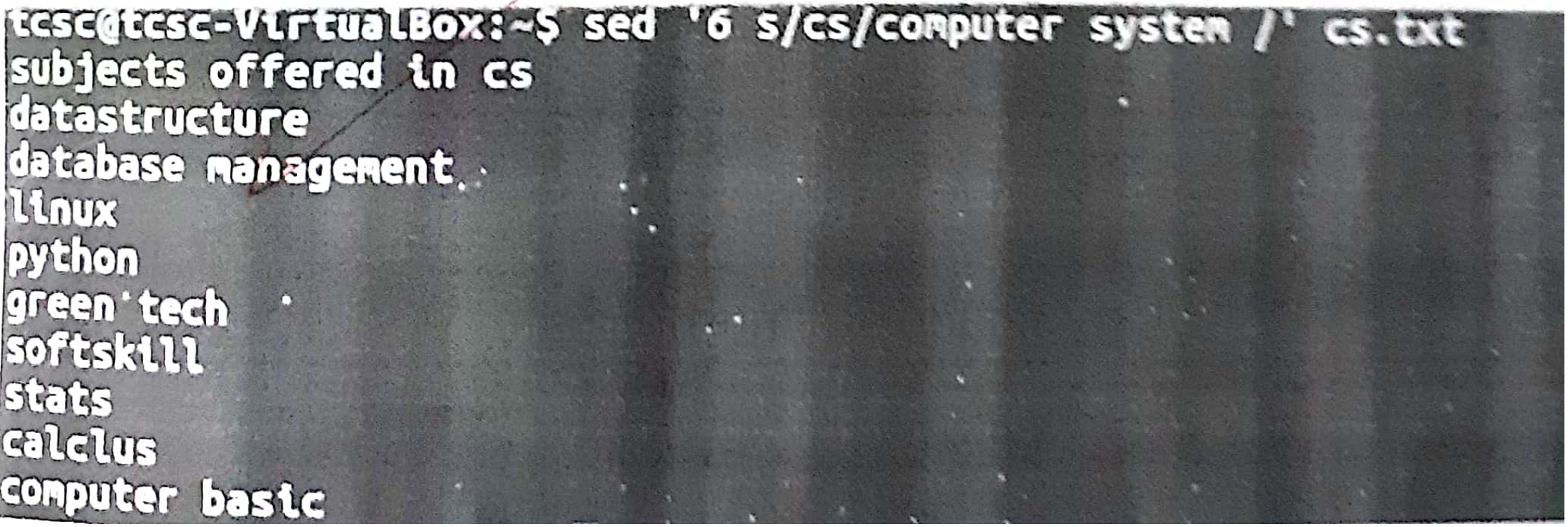
Sed command or stream Editor is very powerful utility offered by Linux system. It is mainly used to text substitution find & replace but it can perform other text manipulations like insertion, deletion, search etc.

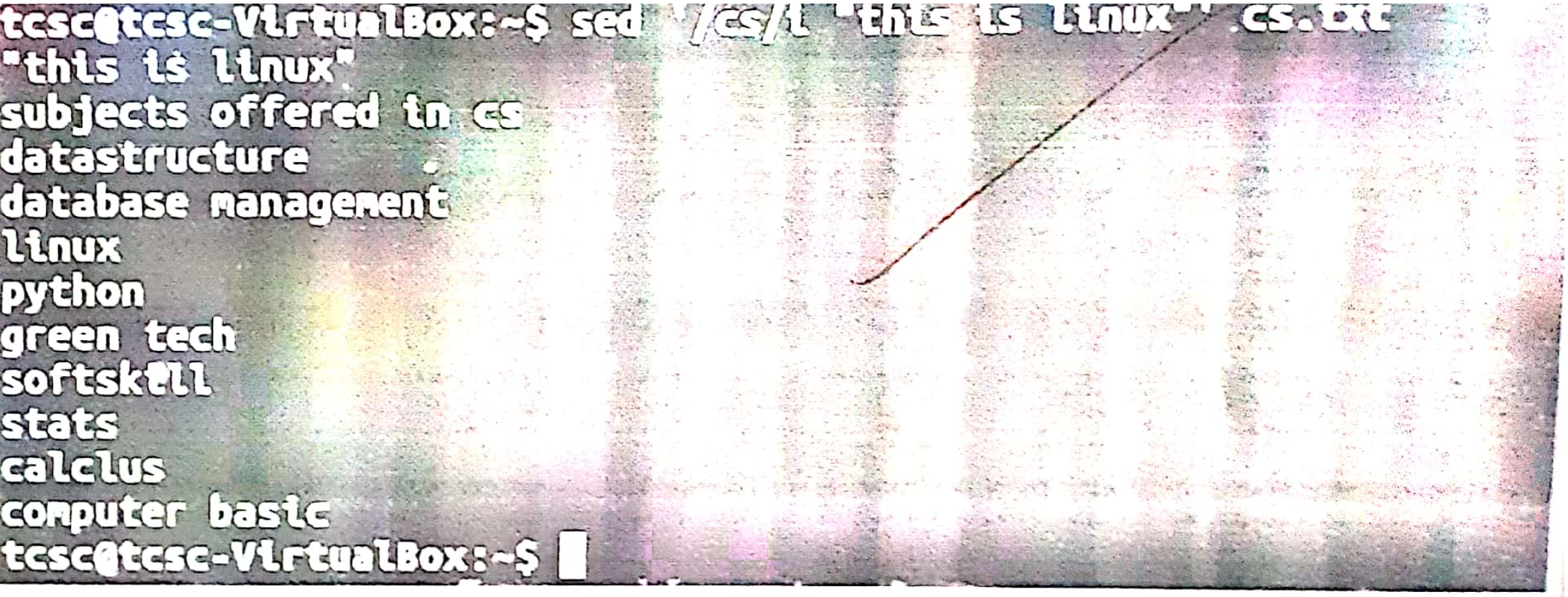
splay partial text of a file.
ith sed, we can view only
art of a file. rather than (seeing
whole file)



Display all except some lines.

Replace a string on a particu





appending lines

```
thanks subjects offered in cs
thanks datastructure
thanks database management
thanks linux
thanks python
thanks green tech
thanks softskill
thanks stats
thanks calclus
thanks computer basic
```

11/02