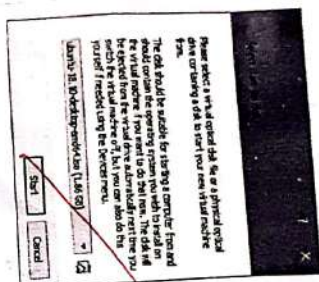
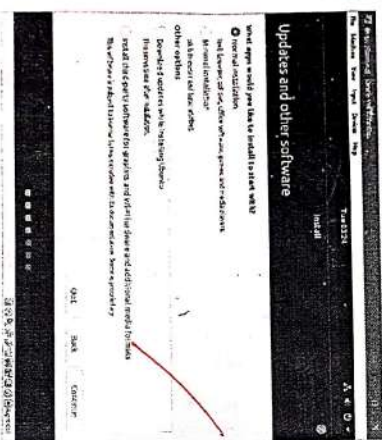


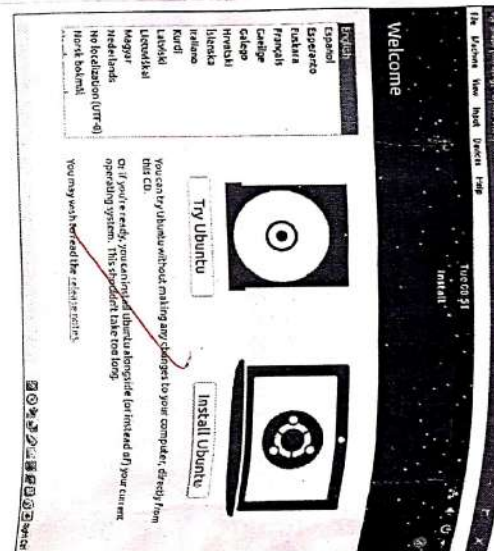
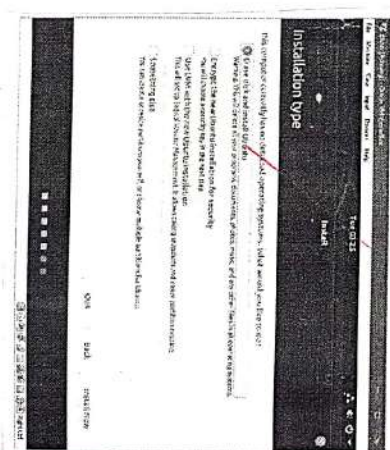
Step 1



Step 3



step 4



Aim: Install your choice of Linux Distribution  
eg: ubuntu, fedora, debian.

Ubuntu: Ubuntu is an free and 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 on a virtual box machine.

It is a popular foss for cloud computing with support of openstack.

\* Steps to install ubuntu in virtual Machine:

Step 1: select a ~~virtual~~ optical file or a physical drive to start ubuntu in your ~~virtual~~ machine. Space is 1.8GB.

Step 2: select the appropriate language and click on install ubuntu. You can also try ubuntu for free on computer device from this cd.

Step 3: In updates and add software click on the normal installation.

Step 4: While configuring installation type we need to click on the disk and install Ubuntu. In this step we would delete all the data in O.S.

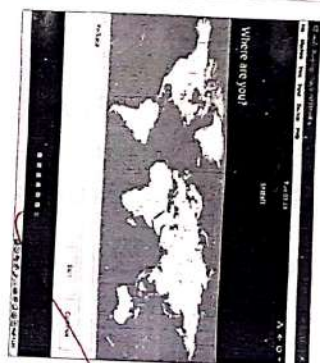
Step 5: In this you only need to choose the location for the OS to work on Ubuntu.

Step 6: In this type you need to choose the username & password again and it is done.

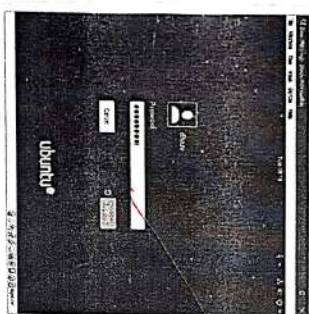
Step 7: Here you simply give no click on the virtual disk and the installation is done here. Hence installation is done.



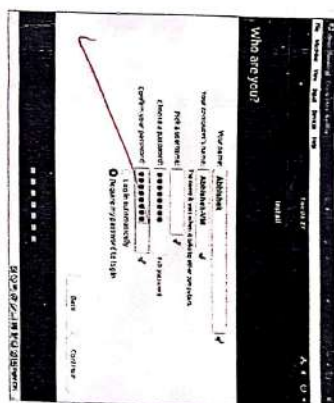
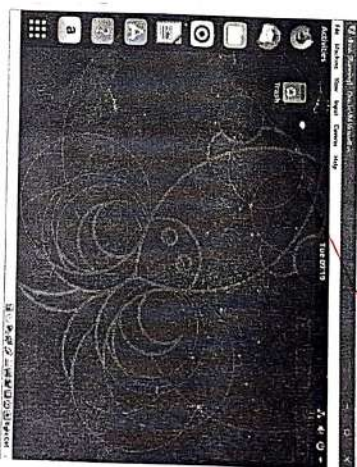
## Steps



## Step 7



## step 8



38



07 cust

chc

chc

acc

7

3 + 6

0

0

0

0

0

0

0

0

8) Customise desktop environment by changing default options like changing the background, themes, Screensavers

### Accessing Appearance Settings:-

is To access appearance setting in ubuntu, let's click on user menu at the top right corner, on the top menu bar and select system settings

ii) A window will pop up with all settings ~~divided~~ divided into personal, Hardware and system option icons. Let's first select appearance icon,

### \* Changing wallpaper:-

i) On the left side of background part you can see your current wallpaper.  
 ii) Click on the right side and select any of the wallpapers from the ubuntu file of wallpapers.  
 iii) The pictures are in the form of thumbnails in your picture folder.



## Changing Ubuntu Theme.

Changing Ubuntu has an option to change the desktop theme, which in the desktop will change the entire look of computer looks.

i) To do that, click on the drop down menu below the wallpaper thumbnails and choose between Ambiance, Radiance and High Contrast.

ii) select any of the theme and access the PC as per your choice.

\* Screen Resolution: Adjusting the current resolution for your desktop.

i) You can change how big things have been appeared on screen by changing the resolution.

ii) You can change which way up things appear (for eg. If you have a rotating display change it by rotation).

iii. Click the icon on the right hand menu bar and select system settings.

iv. Open screen display.

v. Select your desired resolution.

vi. Click on the apply and after 30 seconds the settings are applied to the VM machine of your ubuntu.

to time settings.



as

## PRACTICAL-2

Aim: Installing and removing software.

as install gcc package, verify that it runs and then remove it.

Step 1:

First type 'gcc -v' to know if you already have it 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 installation will take place.

Step 3:

Type 'sudo apt-get install build-essential'. This will install all the libraries required for C and C++ programming.

Now to Uninstall Gcc compiler.

In Gcc 5.1.0, although there is no option `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 installed ~~by~~ but it removes the major executables like gcc, g++, c++ contained that directory,

~~Bo~~  
~~10/10~~



## Documentation

ANSI

we are a

open the top.

$\text{Fe} + \text{e}^- + \text{H}^+$

will be displayed

keys, and (backspace)



b) Finding the man pages from the end line. Bring up the man page for the command. Scroll down to example section.

Ans: To use the man command simply type:-  
'man (command name)'.  
Now we are going to find the manual for 'ls' command simply type:- 'man ls'.

Finding man pages by topic. What man pages are available that document file compression.

according man pages by section  
from the end lines bringing  
the man page for the pm  
tip.

ans. The number correspond  
to the what section of the  
manual page is from, it is used  
while it is sys admin stuff  
The man page for man itself  
explain it and list the standard

There are certain terms that  
have different sections (eg: pm  
as a command appears in  
In cases like that you can  
pass the section no. to the  
man before the pagename  
choose. which on you want  
use man - a to show every  
matching page in a row.

you can tell what section  
terms focus in man (equivalent  
to the proper command), it  
will do substituting man  
to limit it.



command line operations:

a) Install new package on your system.

Ans:

`sudo apt-get install (packagename)`

b) Remove package.

~~sudo apt-get remove (package name)~~

Ans:

`sudo apt-get remove (packagename)`

c) Find the password file in using find command.

Ans:

`# find / -name password,`

`./usr/share/doc/nginx-1.4.9-25.31/passwd`

`./usr/bin/passwd`

`./etc/passwd`

~~`./etc/passwd`~~

d) Find password file between the sub directories level 2 to 4.

Ans:

`# find -maxdepth 3 -maxdepth 5 -name,`

`password`

`/usr/bin/passwd`

`/etc/passwd`



e) create symbolic link to  
file you  
last step.

# ln -s file 1 file 2

f) create an empty file example  
.txt and move it to another  
directory using relative path  
name.

# touch example .txt

# mv example .txt /tmp.

g) delete the file moved to tmp  
in previous step by absolute  
method

# rm /tmp/example.txt

f) find the location of ls, ps and  
bash batch commands.

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

# where is ps

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

usr/share/man/man1/ps.1

~~#where~~ ~~batch~~ ~~is~~ ~~the~~ ~~name~~ ~~of~~ ~~the~~ ~~file~~

~~batch~~ ~~/bin/batch~~ ~~etc~~ ~~/batch~~ ~~batch~~

#where bash.

bash: /bin/bash/etc /bash. bashrc /usr.  
share/man/man1 /bash.1.gz

~~10/10/10~~

PRACTICAL - 05

10-11-12

Aim:- File ops  
in a linked file system

to explore more on your computer

$$K - df - 1$$

22) What are different ways of exploring mounted file system on linux:-

→ mount

3) Copying text from file:

→ C P command, in command

jeba@jeba  
 jeba@jeba  
 dd.txt  
 jeba@jeba  
 Bzh91AYAS  
 jWS  
 jeba@jeba  
 dd.txt  
 jeba@jeba  
 jeba@jeba

```
> this  
jeba@je  
jeba@je  
jeba@je  
jeba@je  
binary
```

```
jeba@jeba-VirtualBox:~$ cat /etc/crontab
tar: data.tar: Error opening archive: No such file or directory
tar: Remove existing files before unpacking
rmn/
/rmn/
/rmn/hd/
jeba@jeba-VirtualBox:~$ cd /mnt
bin data
boot dd
cd /mnt dev
jeba@jeba-VirtualBox:~$ rmn/000755
rmn/000755
0000000000000000
```



```
jeba@jeba-VirtualBox:~/jebs ls
dd.txt.gz 55.txt.bz2
jeba@jeba-VirtualBox:~/jebs cat >aa.txt
hello world
^C
jeba@jeba-VirtualBox:~/jebs cat >bb.txt
this is Linux^C
jeba@jeba-VirtualBox:~/jebs diff aa.txt bb.txt
1d0
< hello world
jeba@jeba-VirtualBox:~/jebs cat >bb.txt
this is Linux
^C
jeba@jeba-VirtualBox:~/jebs diff aa.txt bb.txt
1c1
< hello world
^C
jeba@jeba-VirtualBox:~/jebs ls Linux
jeba@jeba-VirtualBox:~/jebs gzip aa.txt
jeba@jeba-VirtualBox:~/jebs gzip bb.txt
jeba@jeba-VirtualBox:~/jebs diff aa.txt.gz bb.txt.gz
```



```
sys 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=99436k,nr_inodes=421669,node=755)
tmpfs on /dev/pts type tmpfs (rw,nosuid,nodev,noexec,relatime,size=102436k,node=755)
tmpfs on /run type tmpfs (rw,nosuid,nodev,noexec,relatime,size=102436k,node=755)
devpts on /dev/pts type devpts (rw,nosuid,nodev,noexec,relatime)
securityfs on /sys/kernel/security type securityfs (rw,nosuid,nodev,noexec,relatime)
pts on /dev/pts type pts (rw,nosuid,nodev,noexec,relatime,size=1024k)
pts on /run/lock type tmpfs (rw,nosuid,nodev,noexec,node=755)
pts on /sys/fs/cgroup type tmpfs (ro,nosuid,nodev,noexec,relatime,nr_inodes=128)
group on /sys/fs/cgroup/systemd type cgroup (rw,nosuid,nodev,noexec,relatime,release_agent=/lib/systemd/systemd-cgroups-agent,name=systemd,nr_inodes=128)
core on /sys/fs/pstore type pstore (rw,nosuid,nodev,noexec,relatime)
group on /sys/fs/cgroup/cpuset type cgroup (rw,nosuid,nodev,noexec,relatime,cpuset,nr_inodes=128)
group on /sys/fs/cgroup/net_cls,net_prio type cgroup (rw,nosuid,nodev,noexec,relatime,net_cls,net_prio,nr_inodes=128)
group on /sys/fs/cgroup/pids type cgroup (rw,nosuid,nodev,noexec,relatime,pids,nr_inodes=128)
group on /sys/fs/cgroup/freezer type cgroup (rw,nosuid,nodev,noexec,relatime,freezer,nr_inodes=128)
group on /sys/fs/cgroup/cpu,cpuacct type cgroup (rw,nosuid,nodev,noexec,relatime,cpu,cpuacct,nr_inodes=128)
group on /sys/fs/cgroup/devices type cgroup (rw,nosuid,nodev,noexec,relatime,devices,nr_inodes=128)
group on /sys/fs/cgroup/memory type cgroup (rw,nosuid,nodev,noexec,relatime,memory,nr_inodes=128)
group on /sys/fs/cgroup/btlk type cgroup (rw,nosuid,nodev,noexec,relatime,btlk,nr_inodes=128)
group on /sys/fs/cgroup/perf_event type cgroup (rw,nosuid,nodev,noexec,relatime,perf_event,nr_inodes=128)
group on /sys/fs/cgroup/hugetlb type cgroup (rw,nosuid,nodev,noexec,relatime,hugetlb,nr_inodes=128)
group on /sys/fs/cgroup/blkio type cgroup (rw,nosuid,nodev,noexec,relatime,blkio,nr_inodes=128)
group on /proc/sys/fs/binfmt_misc type autofs (rw,relatime,fd=32,pgrp=1,timeout=0,minproc=5,maxproto=5,direct)
tmpfs on /dev/hugepages type hugetlbfs (rw,relatime)
```

```
jeba@jeba-VirtualBox:~$ ls
Desktop Downloads Music Public Videos
Documents Examples Desktop j1 Pictures Templates
jeba@jeba-VirtualBox:~$ cd jeb
jeba@jeba-VirtualBox:~/jeb$ cat .gg.txt
cat: .gg.txt: No such file or directory
jeba@jeba-VirtualBox:~/jeb$ cat gg.txt
cat: gg.txt: No such file or directory
jeba@jeba-VirtualBox:~/jeb$ cat >gg.txt
Welcome
Linux
jeba@jeba-VirtualBox:~/jeb$ touch dd.txt
jeba@jeba-VirtualBox:~/jeb$ ls
dd.txt gg.txt
jeba@jeba-VirtualBox:~/jeb$ cp gg.txt dd.txt
jeba@jeba-VirtualBox:~/jeb$ cat gg.txt
Welcome
Linux
jeba@jeba-VirtualBox:~/jeb$ cat dd.txt
Welcome
Linux
jeba@jeba-VirtualBox:~/jeb$
```

```
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$
```



4) Archiving and backup, work directory using tar, gzip and bzip2 commands.

→ gzip filename.txt.  
bzip2 filename.txt

5) use diff command to create diff of two files,  
→ diff filename 1 filename 2

6) Use batch command to batch a file and analyze the batch using batch command again.

*[Faint handwritten notes and a signature are visible in the background.]*



Aim:- Use environment in which account you are logged in?

→ who command and who am

b) Display /etc/shadow file with cat command and understand the importance of shadow file. How it's different than password file

→ cat /etc/shadow

• Username upto 8 characters, case-sensitive, usually all lowercase. A direct match to the username in the /etc/passwd file.

• Password 13 character encrypted. A blank entry (eg:!) indicates a password is not required to login

```

jeba@jeba-VirtualBox:~$ who
jeba    tty7      2020-01-15 20:32 (:0)
jeba@jeba-VirtualBox:~$ whoami
jeba
jeba@jeba-VirtualBox:~$ who -l
LOGIN    tty1      2020-01-15 20:30      780 ld-tty1
jeba@jeba-VirtualBox:~$

```

```

jeba@jeba-VirtualBox:~$ w
 20:35:04 up 4 min, 1 user, load average: 0.70, 0.79, 0.38
USER      TTY      FROM          LOGIN@   IDLE   JCPU   PCPU   WHAT
jeba      tty7      :0             20:32    4:28   8.19s  0.33s  /sbin/upstart -
jeba@jeba-VirtualBox:~$ w -s
 20:35:14 up 4 min, 1 user, load average: 0.60, 0.77, 0.37
USER      TTY      FROM          IDLE      WHAT
jeba      tty7      :0             4:38     /sbin/upstart --user
jeba@jeba-VirtualBox:~$ w -h
jeba      tty7      :0             20:32    4:44   8.67s  0.33s  /sbin/upstart -
jeba@jeba-VirtualBox:~$ w -f
 20:36:12 up 5 min, 1 user, load average: 0.41, 0.69, 0.37
USER      TTY      LOGIN@   IDLE   JCPU   PCPU   WHAT
jeba      tty7      20:32    5:36   9.00s  0.33s  /sbin/upstart --user

```

```

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:::

```

```

jeba@jeba-VirtualBox:~$ sudo cat /etc/passwd
root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
games:x:5:60:games:/usr/games:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
www-data:x:33:33:www:/var/www:/usr/sbin/nologin
backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
list:x:38:38:mailing List Manager:/var/list:/usr/sbin/nologin

```



