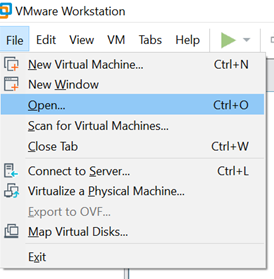
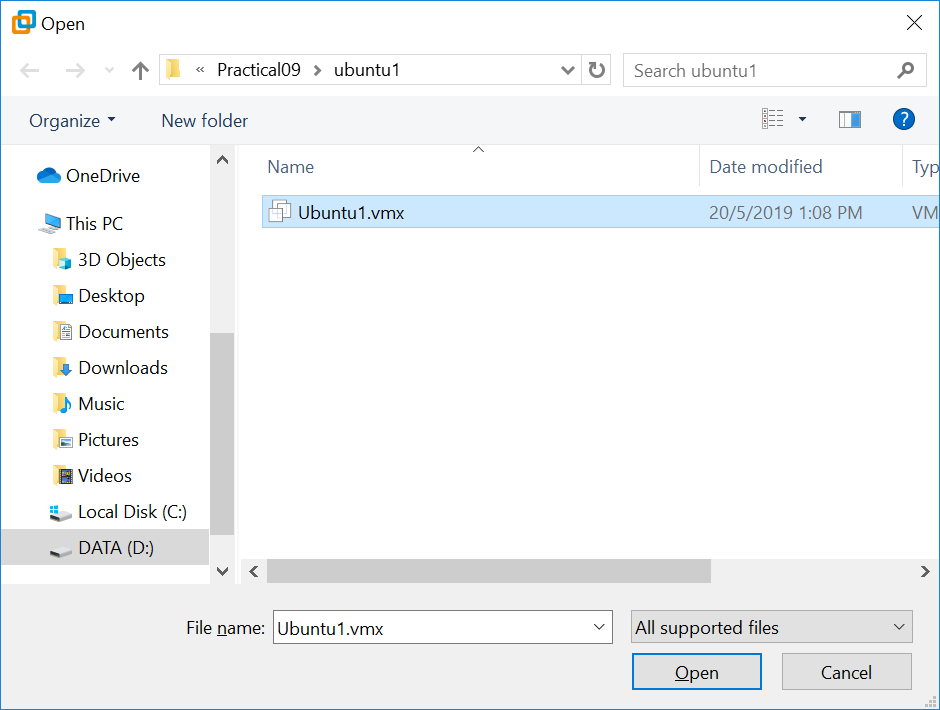
**Practical 09   
Linux Quick Tour**

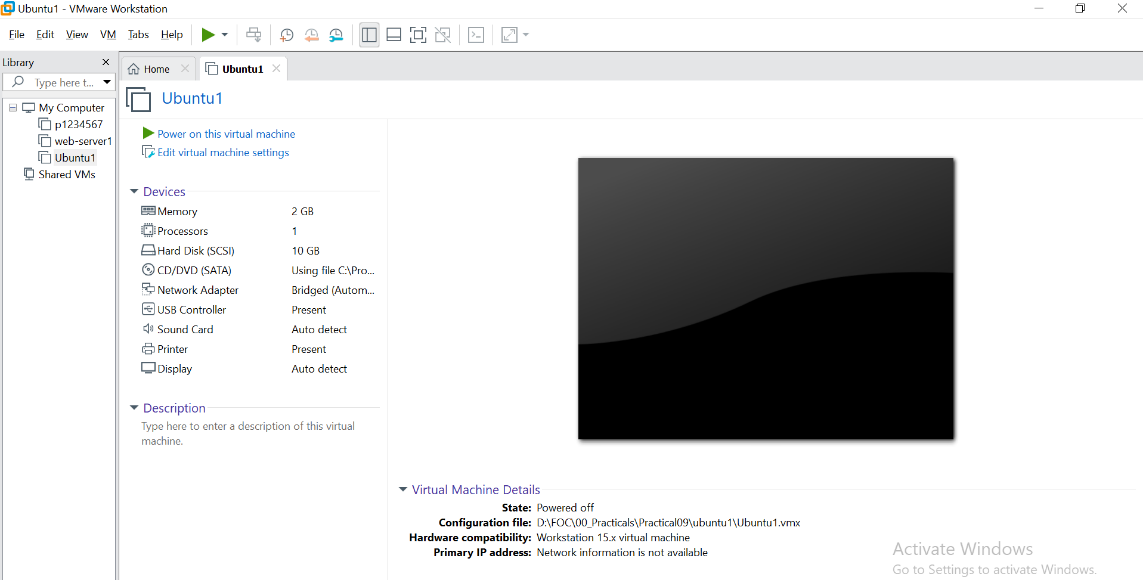
1. Logging in, switching user (su), remote login (ssh with GUI)
2. Managing Terminals
3. Getting Help
4. **Open the Ubuntu image (in WMware Workstation Pro)**
5. Download the Ubuntu image from BB (Learning Resources -> Topic 6: Overview of the Linux Operating System -> Practical 09 Linux Quick Tour -> **ubuntu1.7z**)
6. Unzip the file (ubuntu1.7z) to a working folder (e.g. “ubuntu-image”) in your laptop.
7. Start VMWare Workstation Pro.
8. Select File > Open...



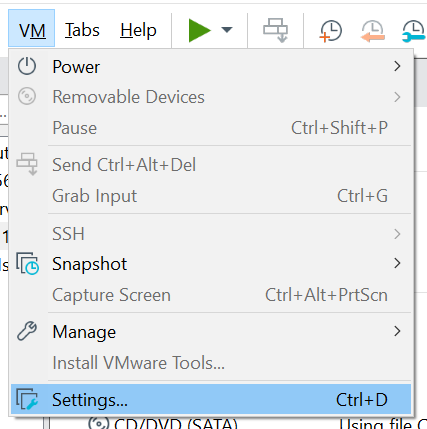
1. Select *Ubuntu1.vmx* (pre-built image in the working folder in step 2) and click “Open”.



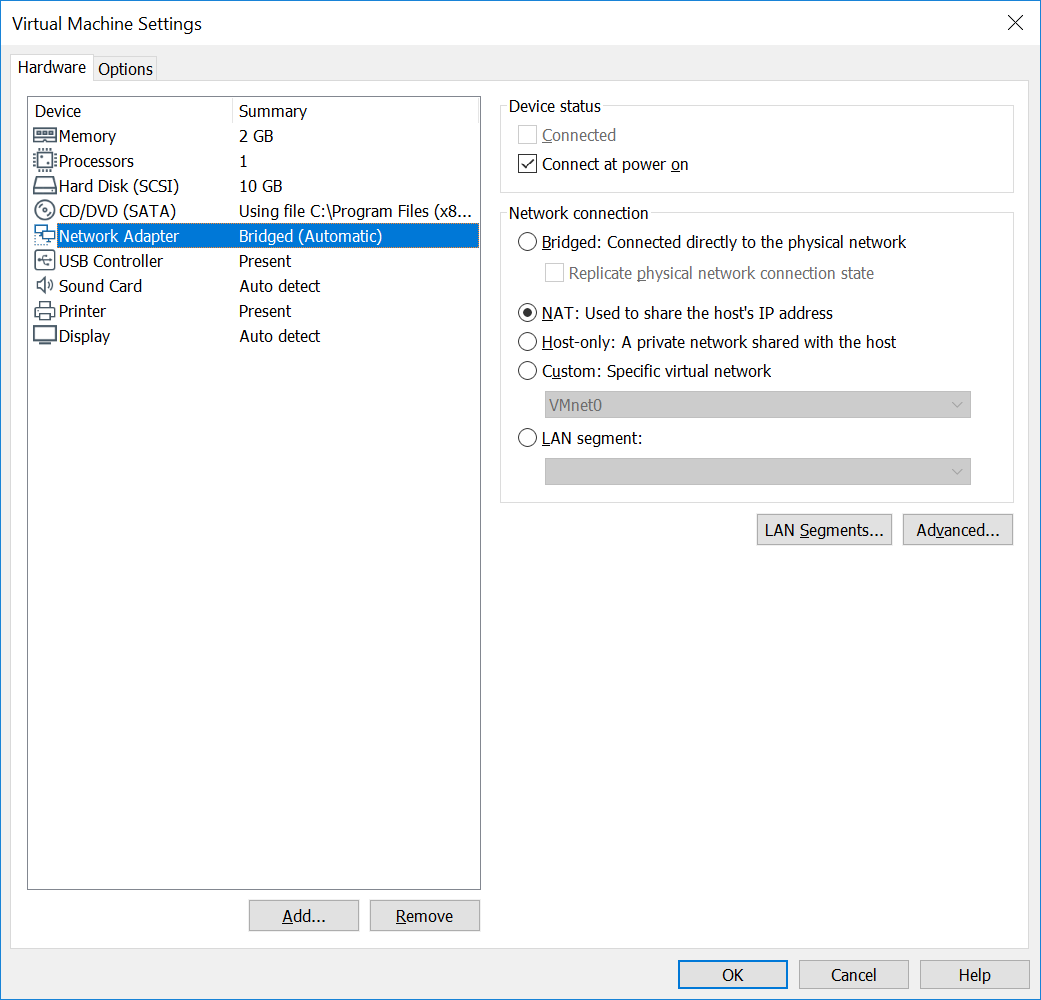
1. Now you have a virtual machine named Ubuntu1.



1. Select VM > Settings...



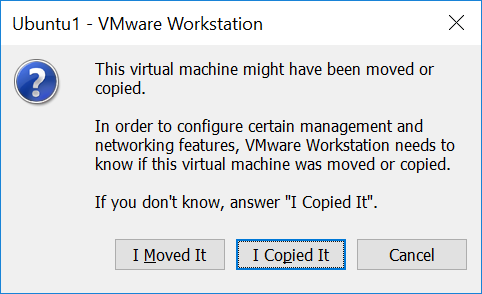
1. Select Network Adapter. Check on “NAT: Used to share the host’s IP address” and click “OK”.



1. **Logging in**

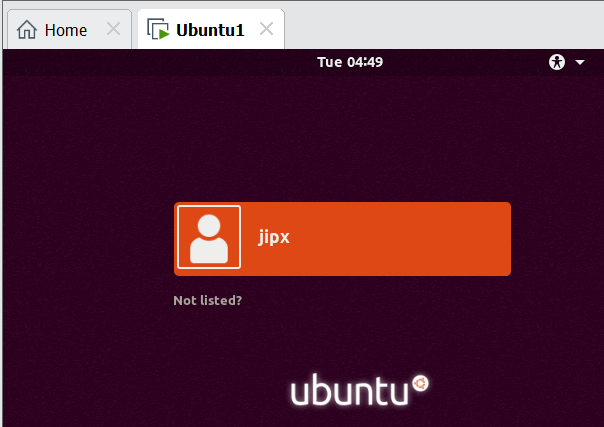


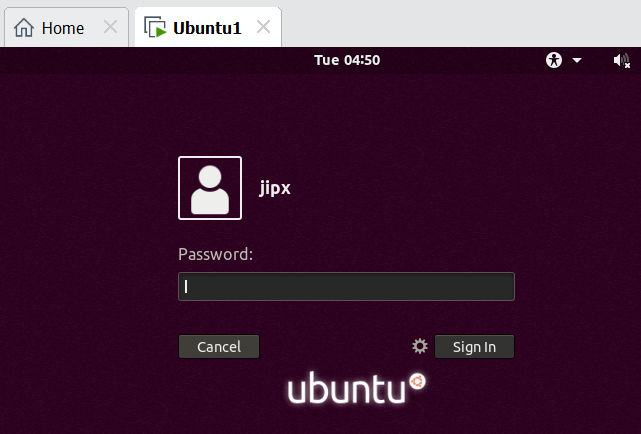
1. Click to start your virtual machine (Ubuntu1) and click “I Copied It”.

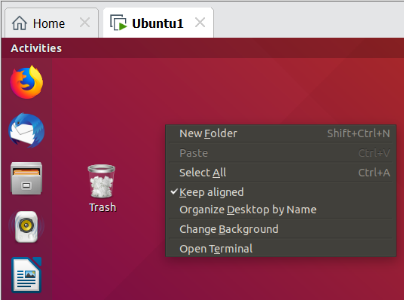
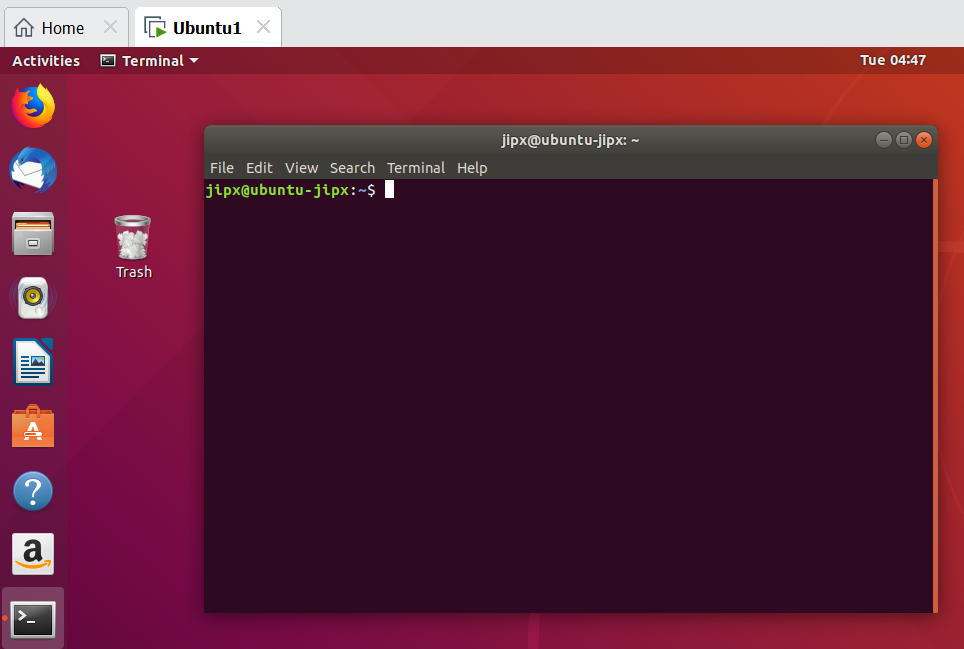


1. Login to your virtual machine (Ubuntu1).

user name: **jipx**  
pwd: **ubuntu**





1. Open terminal by right clicking the desktop and select Open Terminal or by using [Control]-[Alt]-[T].
2. type $ lsb\_release -a to show the version of Ubuntu installed.

|  |  |
| --- | --- |
| Release version | No LSB modules are available.  Distributor ID: Ubuntu  Description: Ubuntu 18.04.2 LTS  Release: 18.04  Codename: bionic |

|  |
| --- |
| If you get a “permission denied” error or any other similar error, then you are probably using a non-root user. You should either use the root user or use sudo to run the commands. So just append “sudo” to each command and enter your sudo password when prompt:  sudo lsb-release -a |

1. Type the command who and hit the enter key to show who is/are logged on.

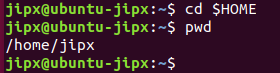
|  |  |
| --- | --- |
| who is/are logged on | jipx |

1. Find out your home directory: /home/<your-username>/

Type echo $HOME

|  |  |
| --- | --- |
| home directory | /home/jipx |

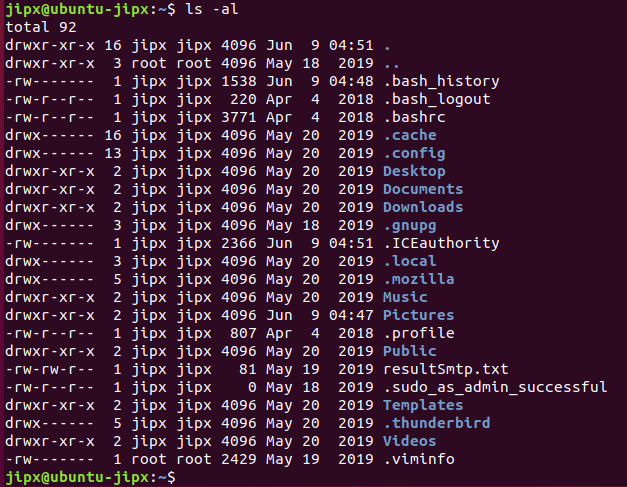
1. Type pwd command to check your working directory. Make sure you are at your home directory.



1. List files in your home directory. Use the -l and -a options to display a long format listing of all files.

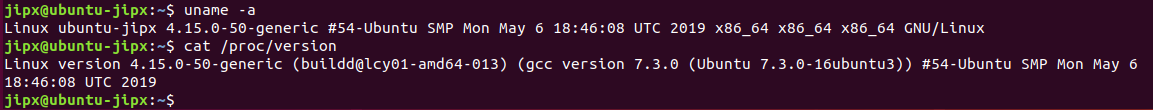
Type ls -al

You should see something similar to the following:



|  |  |
| --- | --- |
| The first field (**d**rwx------ or **-**rw------- in this case) tells us whether the file is a directory (**d**) or a regular file (**-**) | |
| **Number of directories** | **17** |
| **Number of files** | **7** |

1. Find the information and fill in the table below.

Type uname -a

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Kernel Name  (-s) | Hostname  (-n) | Kernel release  (-r) | Machine Architecture  (-m) | Processor Architecture  (-p) | Operating System Architecture  (-o) |
| Linux | ubuntu-jipx | 4.15.0-50-generic | x86\_64 | x86\_64 | GNU/Linux |

1. **Trying more commands**
2. In a terminal, type ifconfig or ip addr to view the IP address of your system. [The command will only work if you are the root user.]

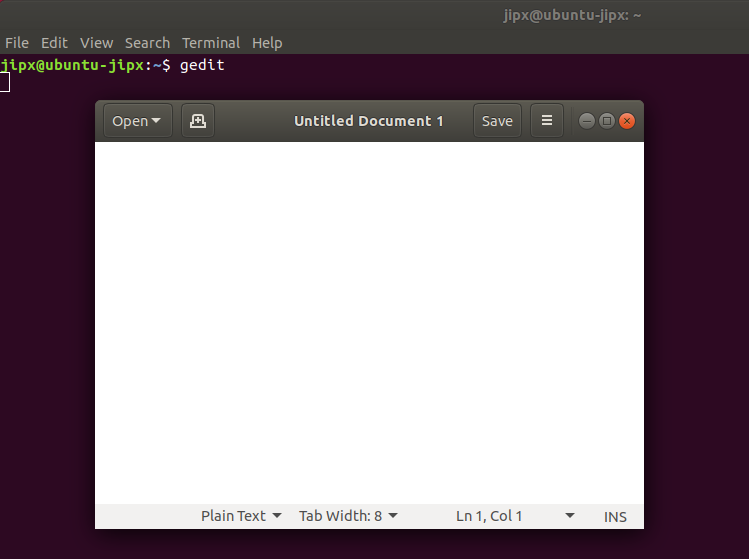
* You should see at least 2 devices namely lo (loopback) & eth0/ens33 (first NIC card)

What is the IP address of your system? \_\_192.168.73.128\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Type the command who -a to find out the following:

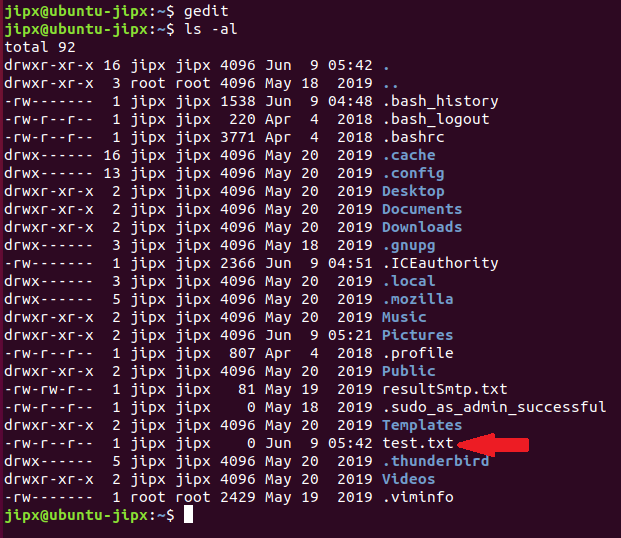
|  |  |
| --- | --- |
| 1. Time of last system boot | system boot 2021-07-07 03:14 |
| 2. Current run level of the system | 5 |
| 3. List of logged in users | jipx |

1. Use the command gedit



1. Save the file as *test.txt* and go to your terminal to check your new file.

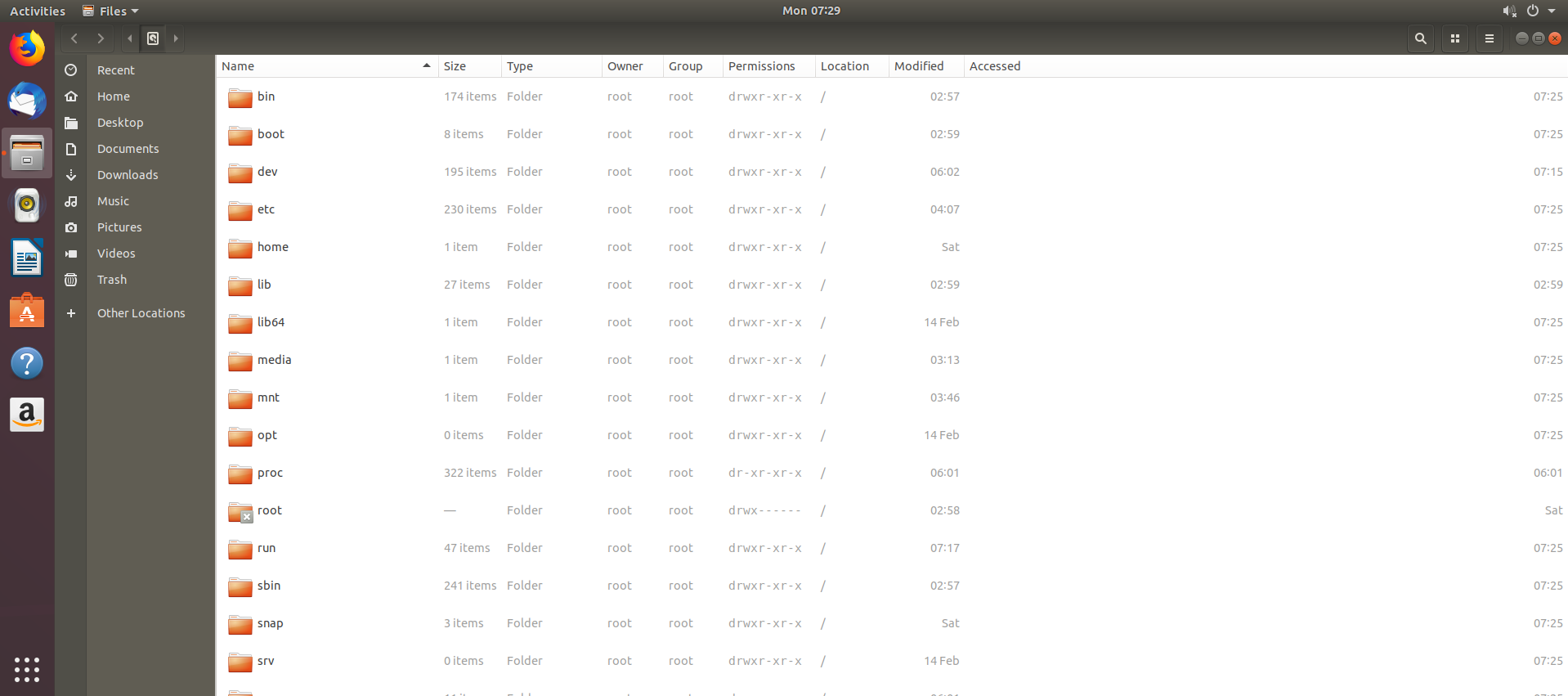
Type ls -al



To delete the file, type rm test.txt

1. **Exploring file structure**

Files > Other Locations > Computer



**Referring to the** [**Ubuntu help**](https://help.ubuntu.com/community/LinuxFilesystemTreeOverview) **to fill up the table below.**

|  |  |
| --- | --- |
| **Directory name** | **Functions** |
| /usr | the root directory for the whole structure. |
| /home | All the user home directories are held under this directory with the exception of the root home directory which is kept under /root directory. This directory holds users files, personal settings like .profile etc. |
| /bin | Contains the essential binaries for users and those utilities that are required in single user mode. Examples, include cat, ls, cp etc. |
| /boot  /lib | This contains the Kernel, Firmware and system related files. |
| /etc | The directory contain essential System configuration files including /etc/hosts, /etc/resolv.conf, nsswitch.conf, defaults and network configuration files. These are mostly host specific system and application configuration files. |
| **/run** | A temporary file system which hold temporary files which are cleared at system reboot. There is also a /var/tmp directory which holds temporary files too. the only difference between the two is that /var/tmp directory holds files that are protected at system reboot. In other words, /var/tmp files are not flushed upon a reboot. |
| **/root** | the [**superuser**](https://help.ubuntu.com/community/RootSudo)**'s** home directory, not in /home/ to allow for booting the system even if /home/ is not available. |

1. **Getting Help**

**man pages**

1. Type man ls to view the man pages for the ls command.
2. Use the spacebar and the b key to move forwards and backwards. (You can also use the PageUp and PageDown keys.)
3. Type /date to search for the word **date** in the man page.
4. Type n and p to go to the next and previous occurrences of the word **date**.
5. Type q to quit the man page.
6. Type man passwd to view the man pages for the passwd command. The chapter number is displayed at the top right corner.

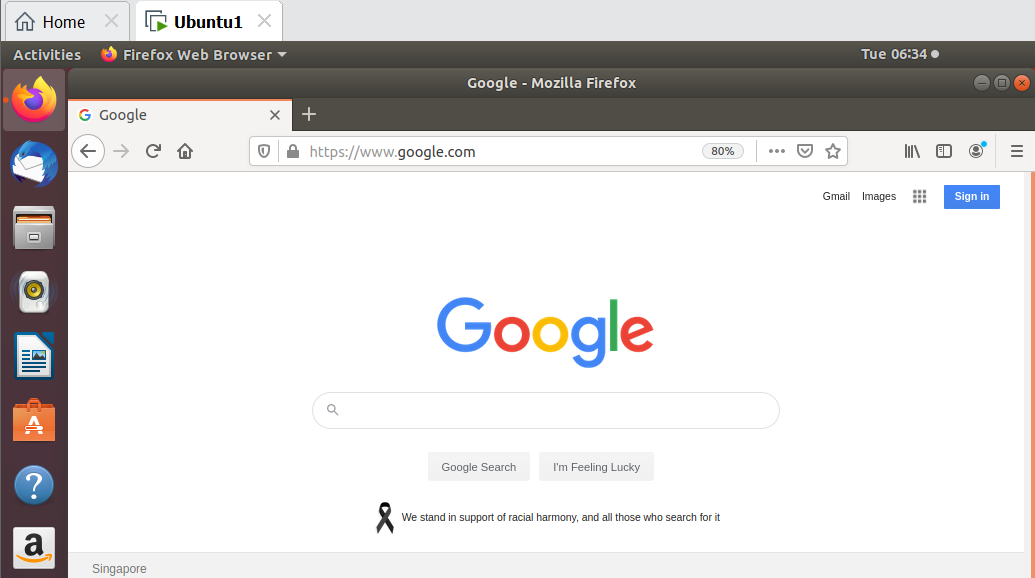
Question: What is the chapter no?

1. Type man 5 passwd to view the man pages for the “/etc/passwd” file in Chapter 5 (File Formats).
2. To search for man pages use man -k *query\_word*. Hence “**man -k passwd**”[[1]](#footnote-1) generate a list of commands associated with the word “passwd”.

**info pages**

1. Type info tar to view the info page of the command tar.
2. Press the tab key to get to the next “hyperlink”. Press the Enter key to jump to the link.
3. Type n and p to get the next or previous node.
4. Type/append to search for the word append.
5. Type qto quit info page.

1. **Surfing the Internet**



1. **Copy/paste and drag&drop not working in vmware machine with Ubuntu**

|  |
| --- |
| 1) sudo apt-get remove open-vm-tools  2) sudo apt-get install open-vm-tools-desktop  3) restart the guest operating system  source: <https://askubuntu.com/questions/691585/copy-paste-and-dragdrop-not-working-in-vmware-machine-with-ubuntu> |

1. **Create a root account/SUDO account using your student admin number p\*\*\*\*\*\*\***

(You can then use this user account to execute administrative commands without a need to logging in to your Ubuntu server as a root user.)

Create a new user account using the adduser command. Don’t forget to replace username with the user name that you want to create:

adduser p\*\*\*\*\*\*\*

Once you set the password the command will create a home directory for the user, copy several configuration files in the home directory and prompts you to set the new user’s information. If you want to leave all of this information blank just press ENTER to accept the defaults.

### [Add the new user to the](https://linuxize.com/post/how-to-create-a-sudo-user-on-ubuntu/" \l "3-add-the-new-user-to-the-sudo-group) [sudo group](https://linuxize.com/post/how-to-create-a-sudo-user-on-ubuntu/#3-add-the-new-user-to-the-sudo-group)

By default, on Ubuntu systems, members of the group sudo are granted with sudo access. To add the user you created to the sudo group use the usermod command:

usermod -aG sudo username

|  |
| --- |
| if you got permission deny error, use sudo  sudo usermod -aG sudo username |

## [Test the sudo ac](https://linuxize.com/post/how-to-create-a-sudo-user-on-ubuntu/#test-the-sudo-access)

Switch to the newly created user:

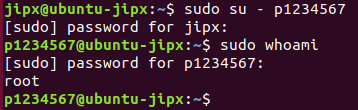
su - username

Use the sudo command to run the whoami command:

sudo whoami

If the user has sudo access, then the output of the above sudo whoami command will be root:

root



## [How to use sudo](https://linuxize.com/post/how-to-create-a-sudo-user-on-ubuntu/#how-to-use-sudo)

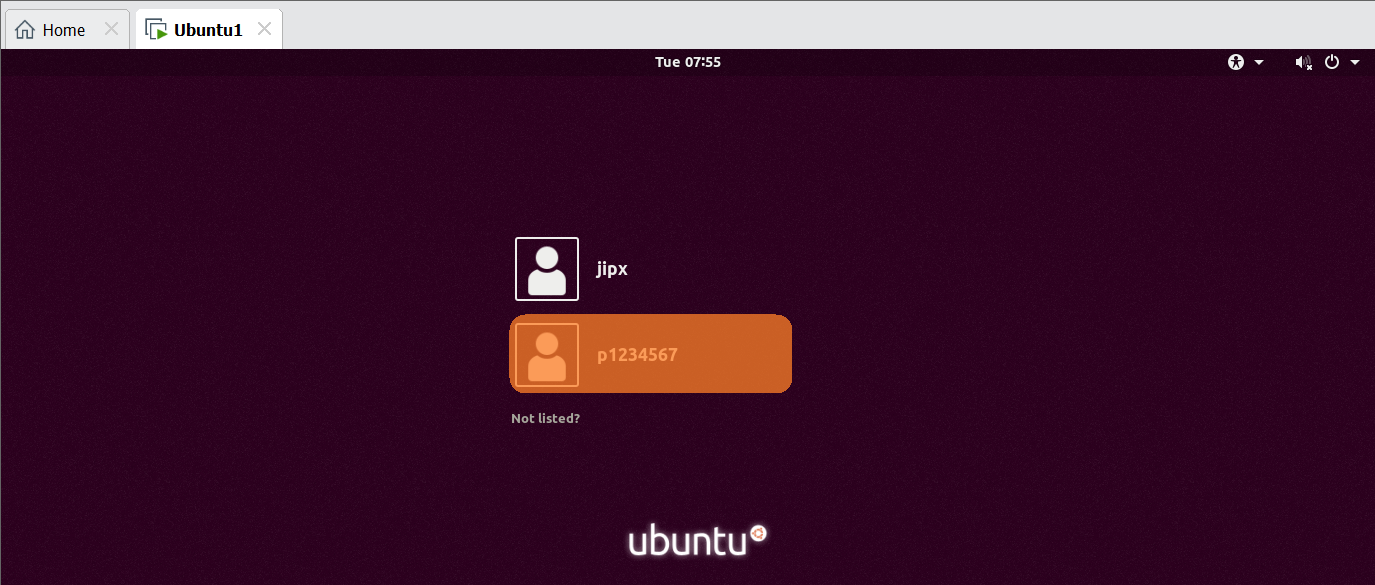
To use sudo, simply prefix the command with sudo and space:

sudo ls -l /root

The first time you use sudo in a session, you will be prompted to enter the user password:

[sudo] password for username:

## [Congratulations](https://linuxize.com/post/how-to-create-a-sudo-user-on-ubuntu/#conclusion)

You have learned how to create a user with sudo privileges. You can now log in to your Ubuntu server with this user account and use sudo to run administrative commands.

* 1. What have you learnt?

Today, I have learnt how to create a virtual machine in linux. In this virtual machine, I am also able to instruct operations such as rm which stands for remove files/folders in the system from the terminal. I also learnt many other commands such as ls, man, uname, who and many more. This made me realise how powerful an operating system linux was.

2. Difficulties encountered and how you solved the problems?

Some difficulties I encountered happened when I was trying to set up Ubuntu on my vmware. I was not able to find the ubuntu folder. Luckily, my friend pointed out to me that I needed to install 7.zip to unzip the unbuntu folder which then allowed me to set up my ubuntu onto my vmware. Overall, I had no difficulties in the terminal of Ubuntu. I understood most of the commands my teacher was trying to teach and even learnt the man command, which was really helpful as it provided a guide to what the command selected did.

*End of Practical*

1. In the event if you do not see a list but simply “passwd: Nothing appropriate”, use the command “**makewhatis** **-v”** to regenerate the man database. [↑](#footnote-ref-1)