I have installed Ubuntu (Linux OS) on windows computer as a dual boot --- both windows OS and Ubuntu OS can be loaded at start. Such installations of Linux are much more powerful for computation over virtual machine. Below I describe Ubuntu (Linux OS) installation and setup. #is comment for human not for computer.

Step1_Install_Ubuntu_5-16-21(done)
Ref is used as abbreviation for word Reference
lines preceded by # are comments for human not computable code

#######Install Ubuntu (linux OS) on Windows laptop/computer for dual boot#######
On Ubuntu (linux OS), Windows OS or Apple Mac OS laptop/computer#######
Ref : https://www.how2shout.com/how-to/how-to-install-ubuntu-from-usb-stick-on-windows-10-pc.html
Advantage of using Ubuntu over Windows is that its free & is coding friendly like Mac OS
Download Ubuntu iso LTS (long term support) file example ubuntu-20.04.2.0-desktop-amd64.iso
or the latest file from https://ubuntu.com/
Create a bootable using free software rufus-3.1.exe on your windows computer follow prompts and use
default settings Ref : https://thetechhacker.com/2020/02/17/use-rufus-to-create-a-bootable-usb-drive/
Press F11 to enter boot menu (or Del/F12/Esc or other F* key as per your compputer model) and
with arrow on keyboard select "USB boot" and hit enter.
Click "Install Ubuntu" to install Ubuntu. Select "Install Ubuntu in dual boot with windows".
Delect "download updates during installation". Follow prompts and use default settings for other steps.
Restart computer and Press F11 to enter boot menu (or Del/F12/Esc or other F* key as per computer model)
and with arrow on keyboard set boot order to Ubuntu first.
Ubuntu first time login setup Ubuntu user profile and select yes for prompt to install security
software "Livepatch".
Privacy preserences for Ubuntu select "Do not allow sharing of data" OR select "Allow". Similar to Windows
and Mac OS, usage data is used by Ubuntu to fix bugs an improve OS performance, so this is not a red flag.
Press F11 to enter boot menu (or Del/F12/Esc or other F* key as per your compputer model) and
change "fast boot" to "diabled" to disable fast boot and hit enter. This ensured that Windows drivers mount
correctly so that files on Windows drive can be edited from Ubuntu OS.
Ref: Ubuntu browsers https://www.ubuntupit.com/best-ubuntu-web-browsers-which-one-is-right-for-you/
All done! Henceforth, computer will by default ask if it should load ubuntu or windows.
If "Grub" terminal opens type "exit" or "normal_exit" hit enter key to select which OS to load Windows

or Ubuntu. Ref :
https://www.gnu.org/software/grub/manual/grub/html_node/normal_005fexit.html

#######Creatng Desktop and Dock shortcuts on Ubuntu#######
Dock: Folders and software icons can be dragged, and dropped to the Dock to create a Dock shortcut
Dock: Right click software icon at "Show Applications" 9-dot icon > click "Add to favorites" to place on dock
Desktop: Folder desktop shortcut can be created by typing command with original path and to path.
Link expires after shutdown needs to be done everytime. Two examples shown below.
Example to create DATA drive Windows folder shortcut on Ubuntu Desktop
ln -s /media/shrad/DATA/ /home/shrad/Desktop
Exampel to create Windows Desktop folder shortcut on Ubuntu Desktop
ln -s /media/shrad/Windows/Users/shrad/Desktop/ /home/shrad/Desktop
Ref: https://www.youtube.com/watch?v=9qLc4WIL3L4
Desktop: Software icon copy desktop file of software from
Other Locations > Computer > usr > share > applications copy to Desktop.
Then right click on the copied icon on Desktop and click allow launching. This creates software shortcut.
Ref: https://ubuntuhandbook.org/index.php/2020/05/shortcut-desktop-ubuntu-20-04/
If drag drop, Ctrl+C, Ctrl+V doesn't work for copy paste function or double click to open doesn't work,
then right click mouse to click copy paste open. Likewise codes can be copied and pasted
to/from Terminal with these standard operations.

#######Install general software on Ubuntu#######
Star computer and load Ubuntu
Similar to Mac OS, Ubuntu comes with a Dock for applications and folders. In Ubuntu the Dock
is on the left instead of bottom of the screen.
On the Dock there is an icon that looks like a square with 9 dots called "Show Applications",
click on this to find pre-installed application, such as music player (Rhythmbox), Shotwell (photo viewer),
Text editor gedit and default Video player (Videos). Type in magnifyinh glass icon to search for
other new Ubuntu applications.
Firefox browser is pre-installed on Ubuntu. Installed browser "Chromium" as an additional browser option.
Ref : Ubuntu browsers https://www.ubuntupit.com/best-ubuntu-web-browsers-which-one-is-right-for-you/
To access Folders, Drives and Files, click on "Folder" icon on Desktop or Dock of Ubuntu.
Then click +Other Locations to see additional drives. Accessing the drives during a session, mounts them
and creates an icon on the Dock for easy access for rest of the session.

#######Install ntfs-3g for Ubuntu to Windows file transfer (dual access)#######
# Windows drives (ntfs) are accessible from Ubuntu and vice-versa, and files can be created by both in drives.
# Update ntfs to ensure the above sharing is smooth.
# Ref: https://www.fosslinux.com/19265/how-to-share-and-transfer-files-between-linux-and-windows.htm
# Ref: https://vitux.com/how-to-install-and-configure-samba-on-ubuntu/
sudo apt-get update
sudo apt-get install ntfs-3g
# Every startup go to File sharing manager "Folder icon on dock" > Computer > Other Locations > click on all
# hard drives and external drives such as C Drive, D Drive to mount and access them from Dock menu.

#######(Optional) Install to create SharedFolder for Ubuntu to Windows file transfer (dual access)#######
# If Ubundu drive folders cannot be copied to Windows then use samba as follows
# Ref: https://ubuntu.com/tutorials/install-and-configure-samba#1-overview
sudo apt update
sudo apt install samba
whereis samba #displays location of installed samba
Now create a folder on Ubuntu Desktop "sambashare" for samba sharing with windows i.e. files or
folders created here in Ubuntu's Desktop will be accessible in Windows. Next command takes to
Desktop folder in Terminal
mkdir /home/shrad/Desktop/sambashare/
# This next command will open the conf file
sudo nano /etc/samba/smb.conf
# At the bottom of the conf file type the following
[sambashare]
comment = Samba on Ubuntu
path = /home/shrad/Desktop/sambashare/
read only = no
browsable = yes
# Press Ctrl+O (save) and Ctrl+X(exit).
# Restart Samba with new config and tell firewall that Samba sharing is allowed
sudo service smbd restart
sudo systemctl restart smbd.service
sudo ufw allow samba
# Specify password for samba use same username here shrad or username with which folder is to be shared
sudo smbpasswd -a shrad
# Next check ip address using command below. The number next to inet example inet 192.168.1.101

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is ip address needed for samba sharing
ifconfig
Now open the "folder" icon on the dock, its called file sharing manager, and
type the following address to access samba folder smb://192.168.1.101/sambashare
Alternatively, the folder is also accessible on Desktop of Ubuntu where it was created
In windows samba folder can be access by typing full address
\192.168.1.101\sambashare in "This PC"
called file sharing manager

#######Keeping Ubuntu system updated#######
# Ref:https://askubuntu.com/questions/94102/what-is-the-difference-between-apt-get-update-and-upgrade
# Update and Upgrade Ubuntu software/packages using the following commands on Terminal.
# This is equivalent of Mac or Windows updates and should be done regularly.
sudo apt-get update && sudo apt-get upgrade
sudo apt -y upgrade && sudo apt -y dist-upgrade

#######Learning typing commands (unix/commandline) in Terminal of Ubuntu Linux OS or Mac OS#######
Ref: https://stackoverflow.com/questions/8051145/what-are-the-differences-between-using-the-terminal-on-a-mac-vs-linux
Getting Started Tutorial(s) free
(Video) Tutorial Learn Commandline https://youtu.be/GFGImSdJNWk
(Video) Tutorial Learn as Beginner become advanced https://youtu.be/2PGnYjbYuUo
(Video) Tutorial Crash Course https://youtu.be/yz7nYlnXLfE
Written: https://www.learnenough.com/command-line-tutorial/basics
Written+Video: https://www.udemy.com/course/command-line/
Written+Video: https://www.udemy.com/course/linux-shell-scripting-free/
Written: https://www.tutorialspoint.com/unix/shell_scripting.htm
Written: https://www.w3resource.com/linux-system-administration/linux-commands-introduction.php
Written: https://linuxconfig.org/bash-scripting-tutorial-for-beginners
#Done