

PERTEMUAN II

PRAKTIKUM CLOUD COMPUTING

Pengenalan VMware Workstation dan Linux OS

- Membuat Layanan hosting
 - -apache
 - MySQL
 - PHP
- 1) Pengenalan VMware Workstation

Virtual OS

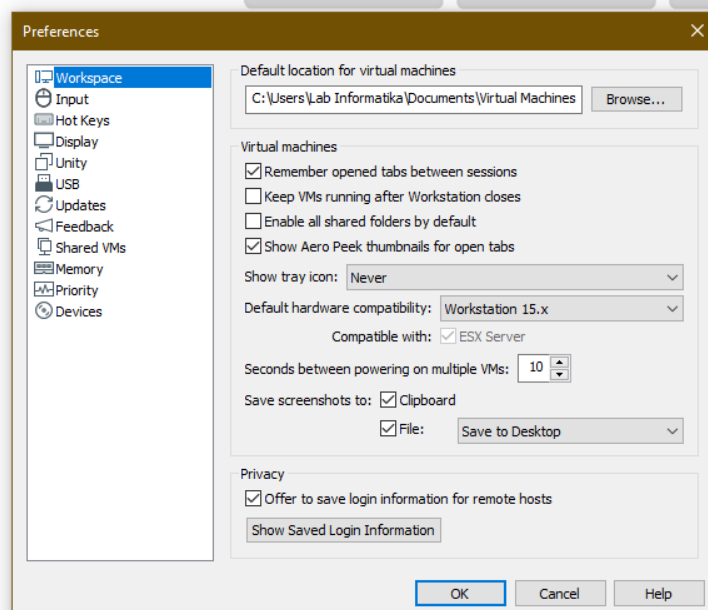
Aplikasi VMware Workstation

Os pada omputer

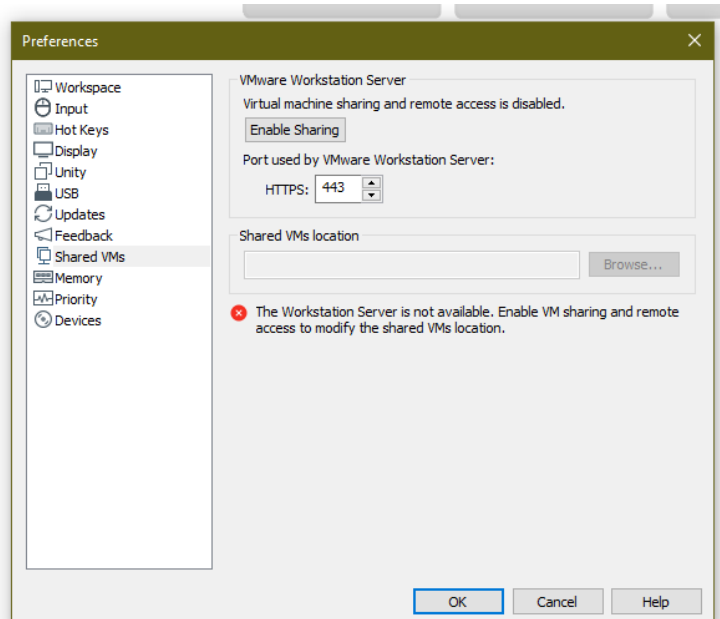
Hard Fisik Komputer

Digunakan untuk virtualisasi SO

- Manfaat Fasilitas Swapping
(Masalah Kurang RAM)

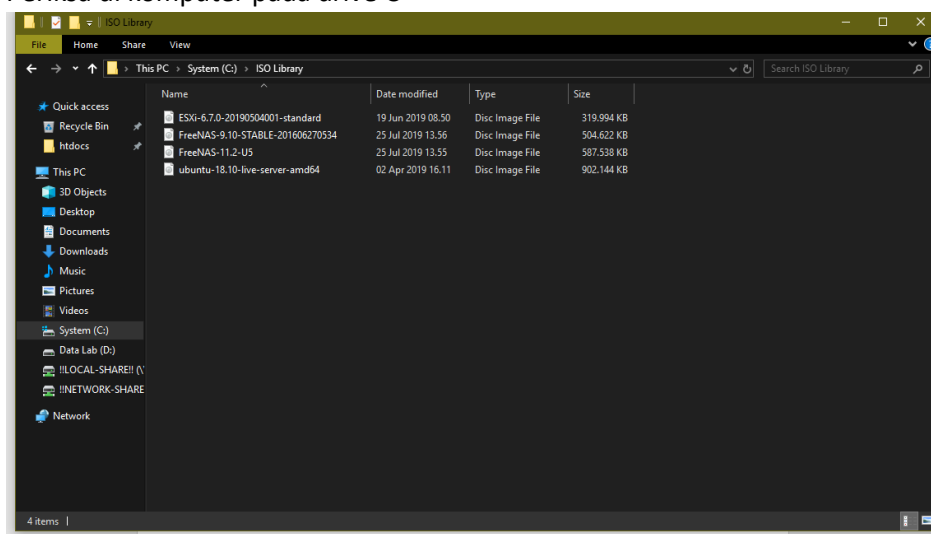


- Memperbaiki Konflik Port pada XAMPP



2) Linux

- Linux OS
- Periksa di komputer pada drive C

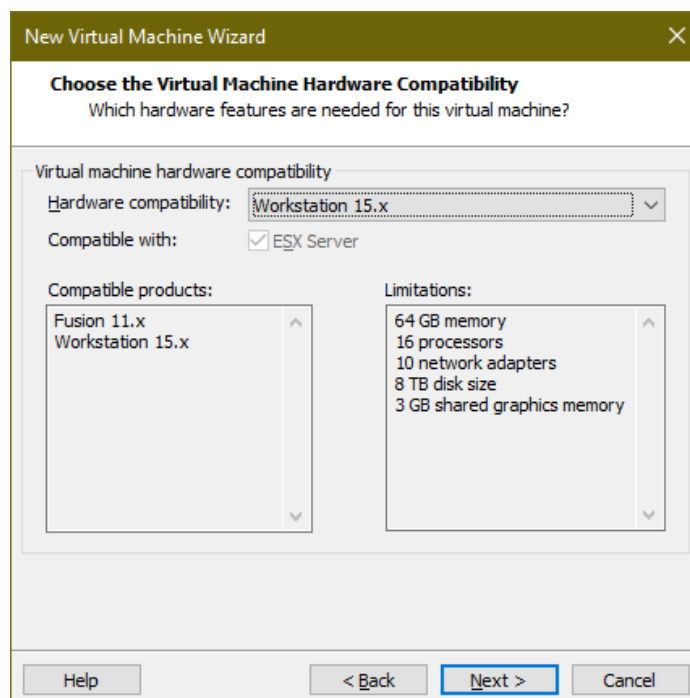


Parameter Pembuatan VM

1. Pilih custom



2. Disesuaikan dengan OS yang digunakan



- Pilih berkas SO untuk VM yang akan dibuat
Informasi kompatibilitas Esay Instal akan muncul

The screenshot shows the 'New Virtual Machine Wizard' window, specifically the 'Guest Operating System Installation' step. The window has a title bar with 'New Virtual Machine Wizard' and a close button. Below the title bar, the section is titled 'Guest Operating System Installation' with a subtitle: 'A virtual machine is like a physical computer; it needs an operating system. How will you install the guest operating system?'. The main area is labeled 'Install from:' and contains three radio button options. The first option is 'Installer disc:', with a dropdown menu showing 'DVD RW Drive (E:)'. The second option is 'Installer disc image file (iso):', which is selected. It has a dropdown menu showing 'C:\ISO Library\ubuntu-18.10-live-server-amd64.iso' and a 'Browse...' button. Below this, there is an information icon and text: 'Ubuntu 64-bit Server 18.10 detected. This operating system will use Easy Install. (What's this?)'. The third option is 'I will install the operating system later.', with a subtitle: 'The virtual machine will be created with a blank hard disk.' At the bottom of the window, there are four buttons: 'Help', '< Back', 'Next >', and 'Cancel'. The 'Next >' button is highlighted with a blue border.

- Isikan semua format yang ada, lalu next

The screenshot shows the 'New Virtual Machine Wizard' window, specifically the 'Easy Install Information' step. The window has a title bar with 'New Virtual Machine Wizard' and a close button. Below the title bar, the section is titled 'Easy Install Information' with a subtitle: 'This is used to install Ubuntu 64-bit.' The main area is labeled 'Personalize Linux' and contains four input fields: 'Full name:' with the value 'oktaviani', 'User name:' with the value 'via', 'Password:' with masked characters '.....', and 'Confirm:' with masked characters '.....'. At the bottom of the window, there are four buttons: 'Help', '< Back', 'Next >', and 'Cancel'. The 'Next >' button is highlighted with a blue border.

Lalu akan muncul, lalu SAVE

New Virtual Machine Wizard

Name the Virtual Machine
What name would you like to use for this virtual machine?

Virtual machine name:
Ubuntu 64-bit

Location:
D:\VM-123160087\Ubuntu LAMPP Browse...

The default location can be changed at Edit > Preferences.

< Back Next > Cancel

5. Gunakan parameter processor sebanyak 2 dan cores per prosessor 1

New Virtual Machine Wizard

Processor Configuration
Specify the number of processors for this virtual machine.

Processors

Number of processors: 2

Number of cores per processor: 1

Total processor cores: 2

Help < Back Next > Cancel

6. Gunakan RAM 1GB

The screenshot shows the 'New Virtual Machine Wizard' window, specifically the 'Memory for the Virtual Machine' step. The title bar says 'New Virtual Machine Wizard' with a close button. The subtitle is 'Memory for the Virtual Machine' and the question is 'How much memory would you like to use for this virtual machine?'. Below this, it says 'Specify the amount of memory allocated to this virtual machine. The memory size must be a multiple of 4 MB.' On the left is a vertical slider with memory values from 4 MB to 64 GB. A blue arrow points to the 1 GB mark. To the right of the slider, there is a text box labeled 'Memory for this virtual machine:' containing '1048' and a unit dropdown set to 'MB'. Further right, three horizontal bars indicate memory limits: a blue bar for 'Maximum recommended memory: 2 GB', a green bar for 'Recommended memory: 2 GB', and a yellow bar for 'Guest OS recommended minimum: 1 GB'. At the bottom are buttons for 'Help', '< Back', 'Next >', and 'Cancel'.

New Virtual Machine Wizard

Memory for the Virtual Machine
How much memory would you like to use for this virtual machine?

Specify the amount of memory allocated to this virtual machine. The memory size must be a multiple of 4 MB.

Memory for this virtual machine: 1048 MB

Maximum recommended memory: 2 GB
Recommended memory: 2 GB
Guest OS recommended minimum: 1 GB

Help < Back Next > Cancel

7. Pilih network mode network address translation (NAT)

The screenshot shows the 'New Virtual Machine Wizard' window, specifically the 'Network Type' step. The title bar says 'New Virtual Machine Wizard' with a close button. The subtitle is 'Network Type' and the question is 'What type of network do you want to add?'. Below this, there is a section titled 'Network connection' with four radio button options. The second option, 'Use network address translation (NAT)', is selected and highlighted with a dashed border. At the bottom are buttons for 'Help', '< Back', 'Next >', and 'Cancel'.

New Virtual Machine Wizard

Network Type
What type of network do you want to add?

Network connection

☐ Use bridged networking
Give the guest operating system direct access to an external Ethernet network. The guest must have its own IP address on the external network.

☒ Use network address translation (NAT)
Give the guest operating system access to the host computer's dial-up or external Ethernet network connection using the host's IP address.

☐ Use host-only networking
Connect the guest operating system to a private virtual network on the host computer.

☐ Do not use a network connection

Help < Back Next > Cancel

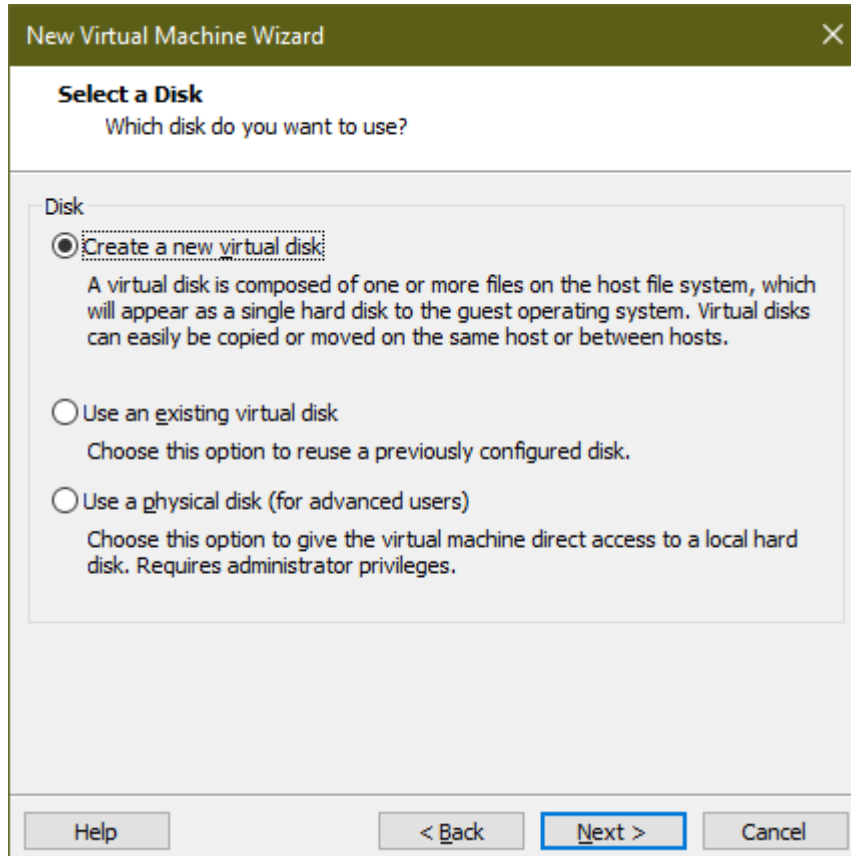
8. Pilih yang recommended

The screenshot shows the 'New Virtual Machine Wizard' dialog box. The title bar is green with a close button. The main title is 'Select I/O Controller Types' and the subtitle is 'Which SCSI controller type would you like to use?'. Below the subtitle, there is a section titled 'I/O controller types' containing a group box 'SCSI Controller:'. Inside this group box, there are three radio button options: 'BusLogic (Not available for 64-bit guests)', 'LSI Logic (Recommended)', and 'LSI Logic SAS'. The 'LSI Logic' option is selected. At the bottom of the dialog, there are four buttons: 'Help', '< Back', 'Next >', and 'Cancel'. The 'Next >' button is highlighted with a blue border.

9. Pilih yang SCSI

The screenshot shows the 'New Virtual Machine Wizard' dialog box. The title bar is green with a close button. The main title is 'Select a Disk Type' and the subtitle is 'What kind of disk do you want to create?'. Below the subtitle, there is a section titled 'Virtual disk type' containing a group box. Inside this group box, there are four radio button options: 'IDE', 'SCSI (Recommended)', 'SATA', and 'NVMe'. The 'SCSI' option is selected. At the bottom of the dialog, there are four buttons: 'Help', '< Back', 'Next >', and 'Cancel'. The 'Next >' button is highlighted with a blue border.

10. Pilih create new



The screenshot shows the 'New Virtual Machine Wizard' window, specifically the 'Select a Disk' step. The title bar is green with a close button. The main heading is 'Select a Disk' with the subtitle 'Which disk do you want to use?'. Below this, there's a 'Disk' section with three radio button options. The first option, 'Create a new virtual disk', is selected and has a description: 'A virtual disk is composed of one or more files on the host file system, which will appear as a single hard disk to the guest operating system. Virtual disks can easily be copied or moved on the same host or between hosts.' The second option is 'Use an existing virtual disk' with the description 'Choose this option to reuse a previously configured disk.' The third option is 'Use a physical disk (for advanced users)' with the description 'Choose this option to give the virtual machine direct access to a local hard disk. Requires administrator privileges.' At the bottom, there are four buttons: 'Help', '< Back', 'Next >', and 'Cancel'. The 'Next >' button is highlighted with a blue border.

New Virtual Machine Wizard

Select a Disk
Which disk do you want to use?

Disk

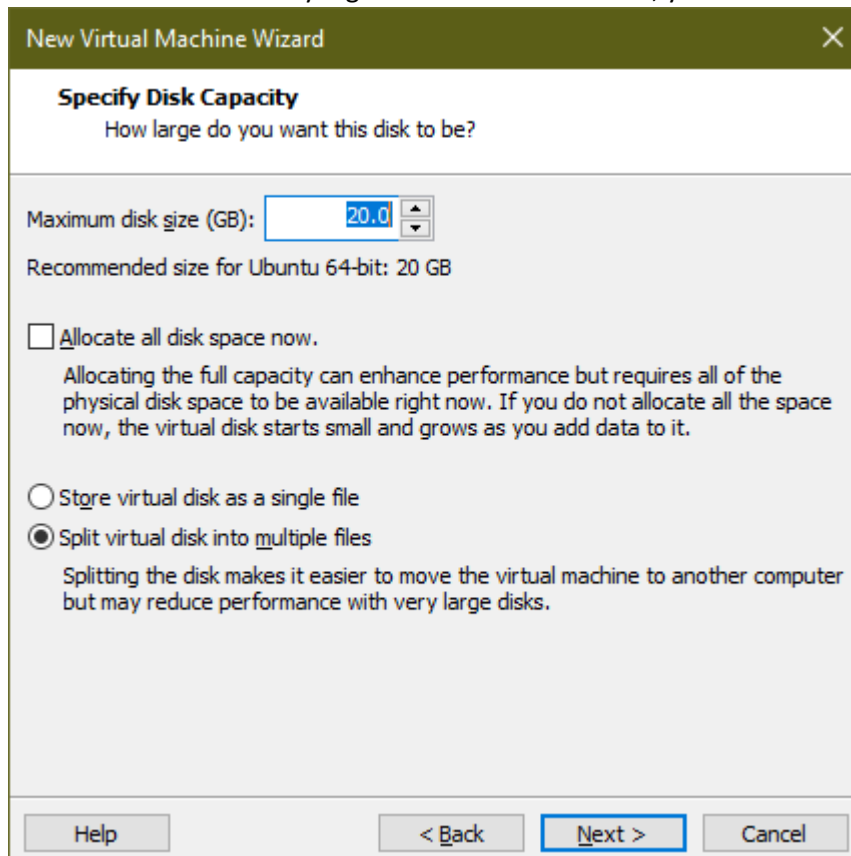
☒ Create a new virtual disk
A virtual disk is composed of one or more files on the host file system, which will appear as a single hard disk to the guest operating system. Virtual disks can easily be copied or moved on the same host or between hosts.

☐ Use an existing virtual disk
Choose this option to reuse a previously configured disk.

☐ Use a physical disk (for advanced users)
Choose this option to give the virtual machine direct access to a local hard disk. Requires administrator privileges.

Help < Back Next > Cancel

11. Gunakan ukuran default yang disarankan oleh Ubuntu, yaitu 20 GB



The screenshot shows the 'New Virtual Machine Wizard' window, specifically the 'Specify Disk Capacity' step. The title bar is green with a close button. The main heading is 'Specify Disk Capacity' with the subtitle 'How large do you want this disk to be?'. Below this, there's a text input field for 'Maximum disk size (GB):' with the value '20.0' entered. Below the input field, it says 'Recommended size for Ubuntu 64-bit: 20 GB'. There are three radio button options. The first is 'Allocate all disk space now.' with a description: 'Allocating the full capacity can enhance performance but requires all of the physical disk space to be available right now. If you do not allocate all the space now, the virtual disk starts small and grows as you add data to it.' The second is 'Store virtual disk as a single file'. The third is 'Split virtual disk into multiple files' which is selected and has a description: 'Splitting the disk makes it easier to move the virtual machine to another computer but may reduce performance with very large disks.' At the bottom, there are four buttons: 'Help', '< Back', 'Next >', and 'Cancel'. The 'Next >' button is highlighted with a blue border.

New Virtual Machine Wizard

Specify Disk Capacity
How large do you want this disk to be?

Maximum disk size (GB): 20.0
Recommended size for Ubuntu 64-bit: 20 GB

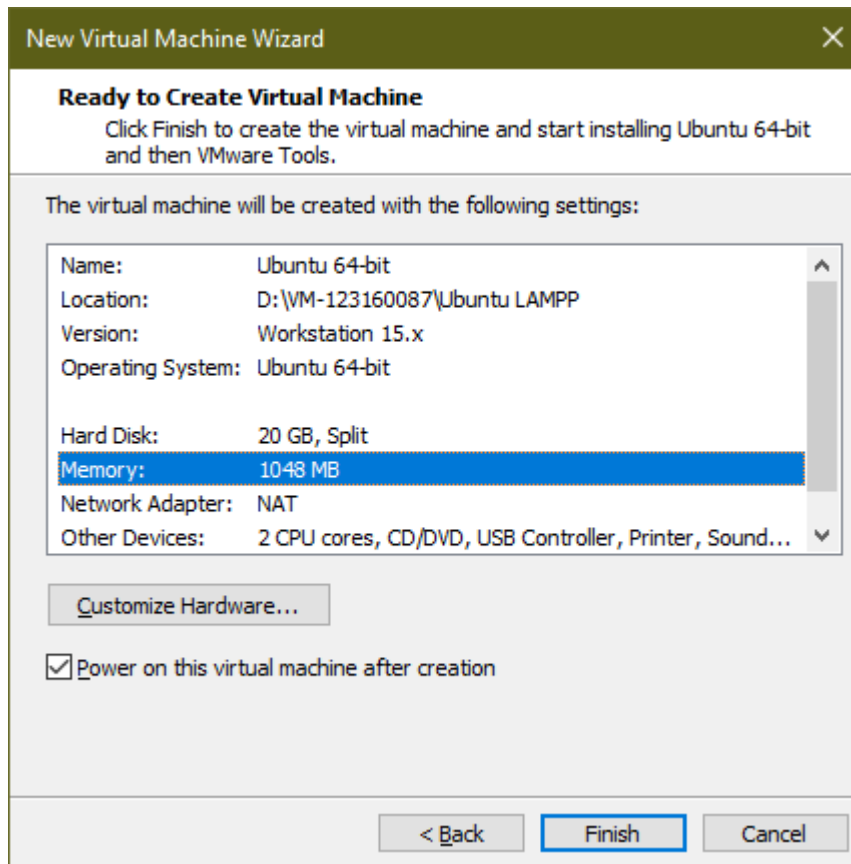
☐ Allocate all disk space now.
Allocating the full capacity can enhance performance but requires all of the physical disk space to be available right now. If you do not allocate all the space now, the virtual disk starts small and grows as you add data to it.

☐ Store virtual disk as a single file

☒ Split virtual disk into multiple files
Splitting the disk makes it easier to move the virtual machine to another computer but may reduce performance with very large disks.

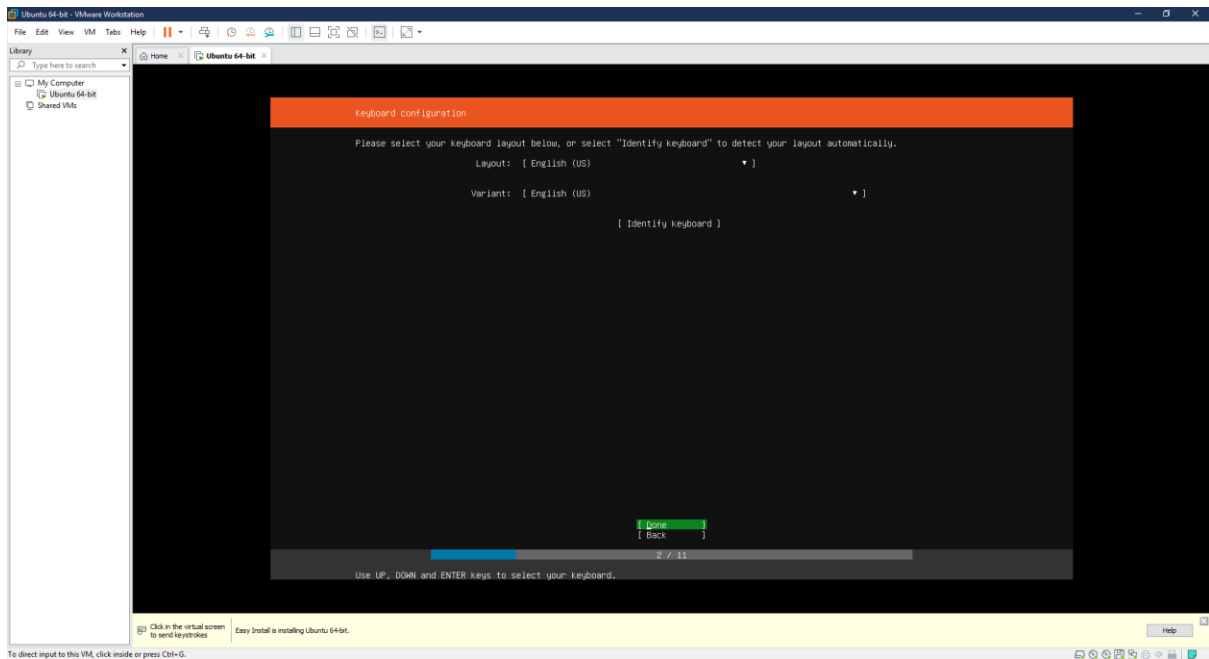
Help < Back Next > Cancel

12. Pilih NEXT

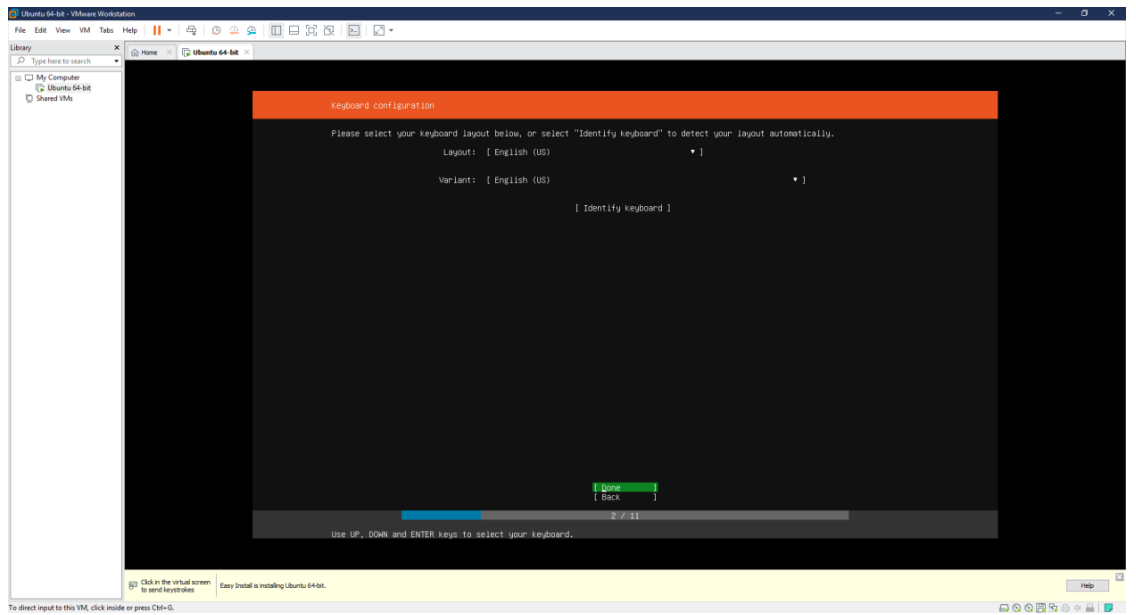


PROSES INSTALASI UBUNTU SERVER

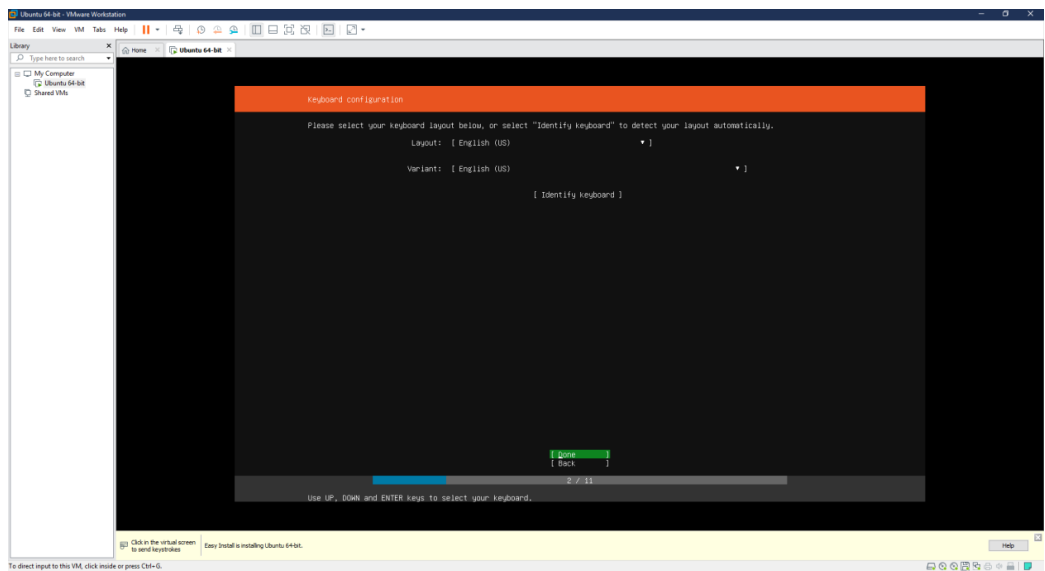
1.



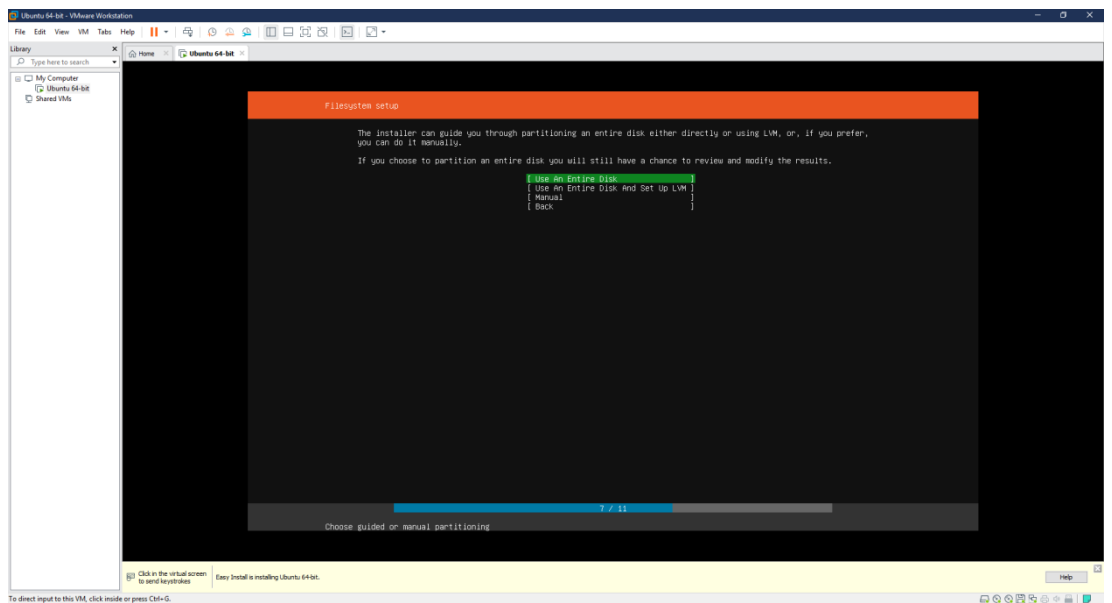
2.



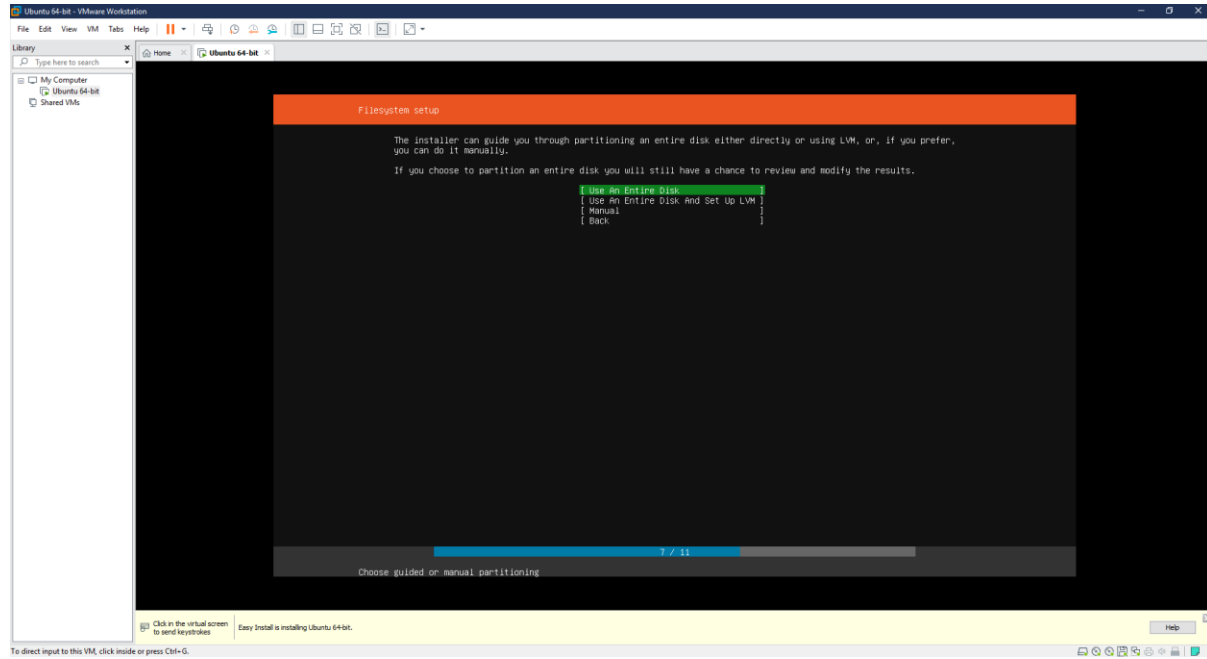
3.



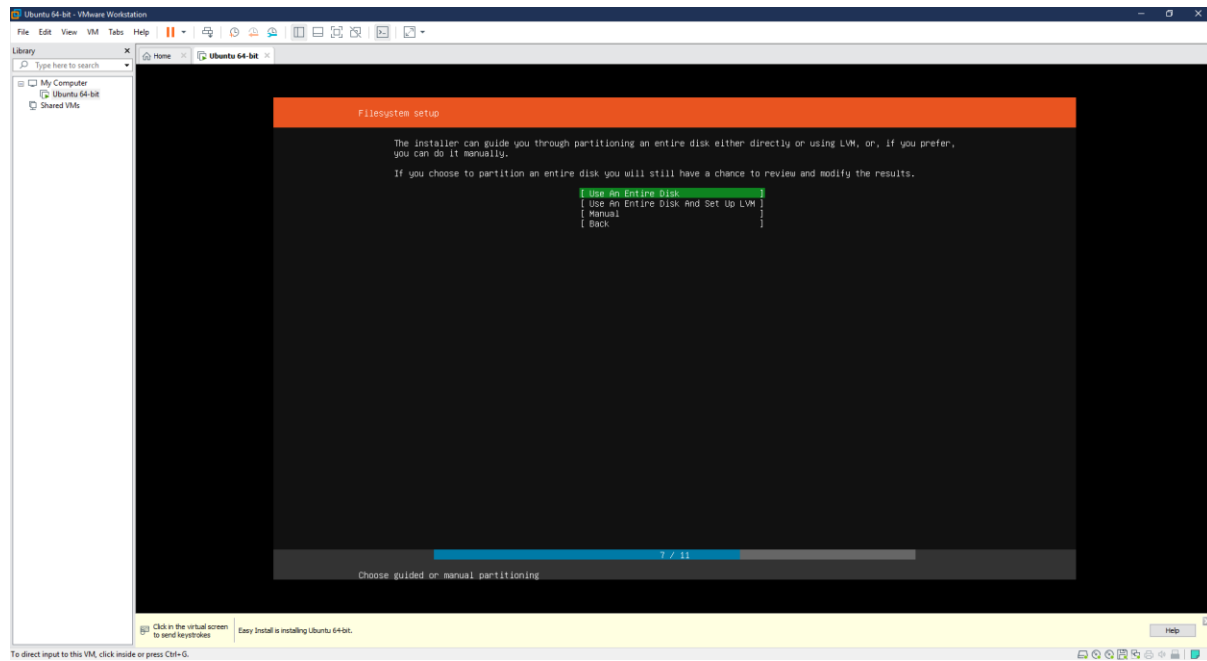
4.



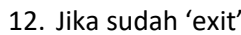
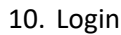
5.



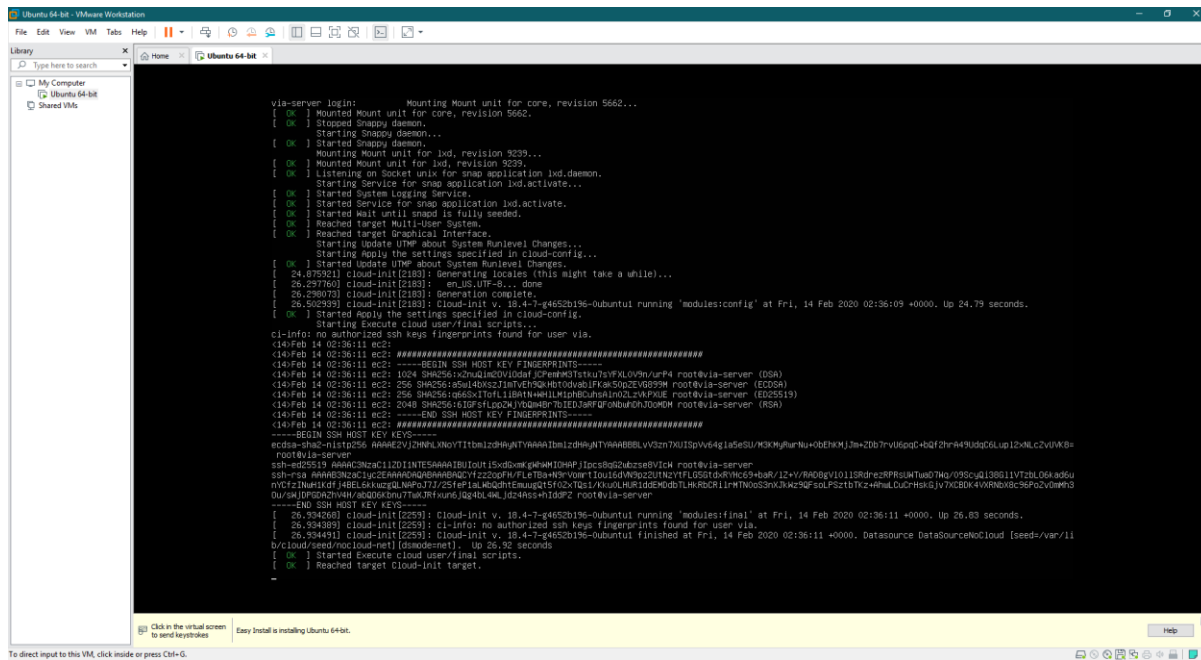
6.



7.



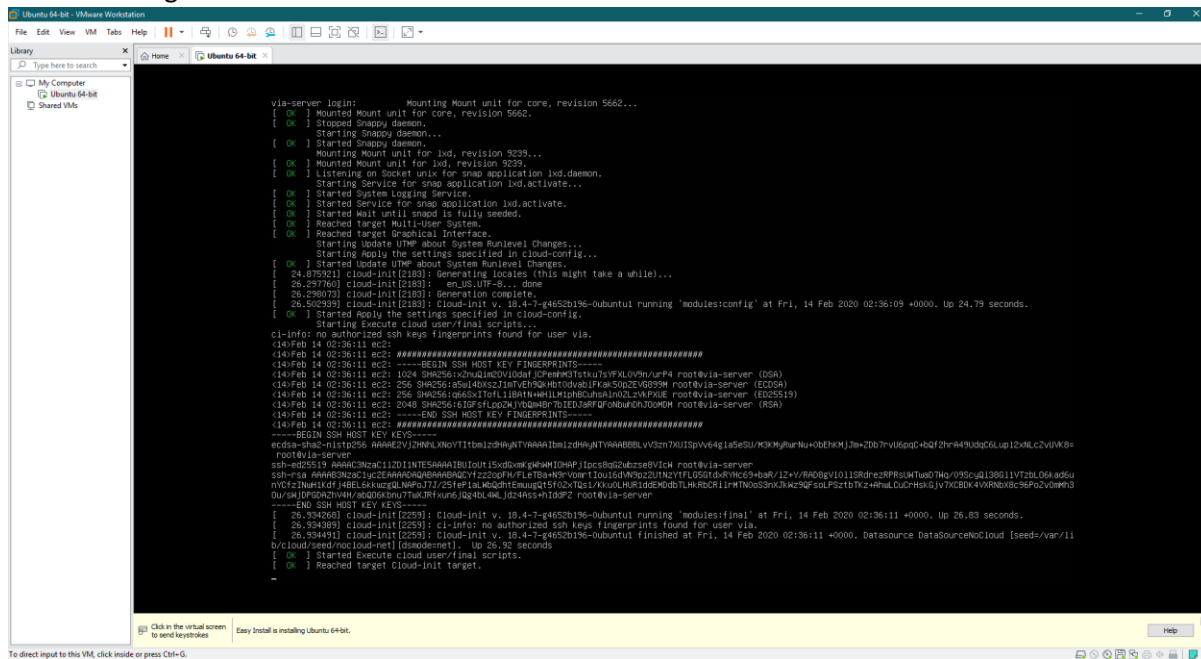
Ketikkan nano /etc/motd



13. SAVE = CTRL+O

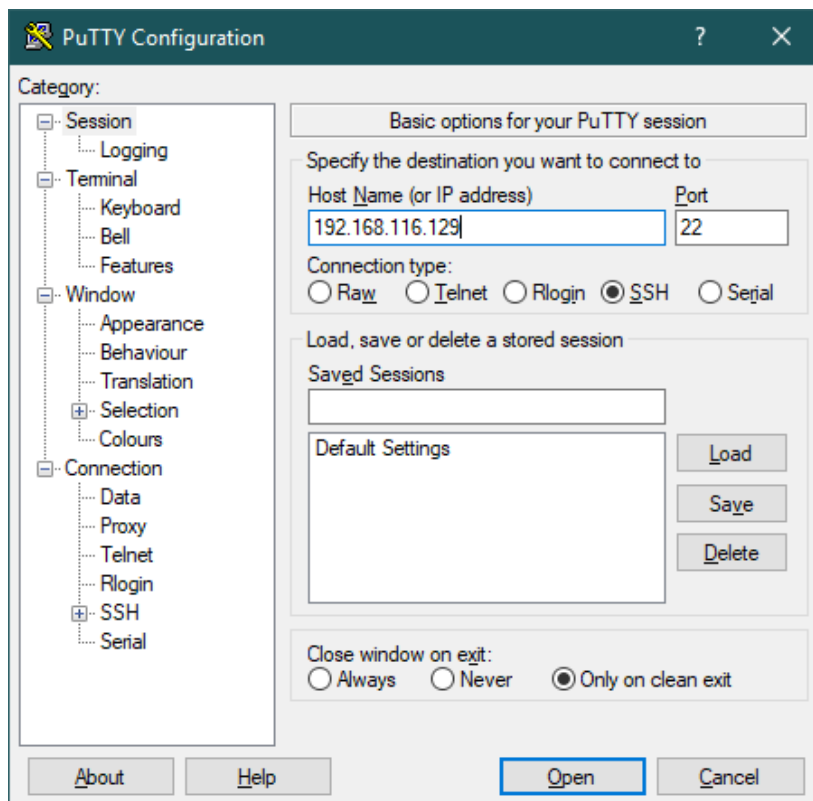
14. EXIT = CTRL-X

15. Setelah itu login kembali



Menggunakan Remote Terminal : PUTTY

- Cari tahu IP VM saat ini
- Masuk pada aplikasi 'PUTTY'



- Lalu login

```
via@via-server: ~  
  
System load: 0.12          Processes:           163  
Usage of /: 20.9% of 19.56GB Users logged in:       1  
Memory usage: 26%         IP address for ens33: 192.168.116.129  
Swap usage: 0%  
  
* Multipass 1.0 is out! Get Ubuntu VMs on demand on your Linux, Windows or  
  Mac. Supports cloud-init for fast, local, cloud devops simulation.  
  
  https://multipass.run/  
  
183 packages can be updated.  
106 updates are security updates.  
  
Your Ubuntu release is not supported anymore.  
For upgrade information, please visit:  
http://www.ubuntu.com/releaseendoflife  
  
New release '19.10' available.  
Run 'do-release-upgrade' to upgrade to it.  
  
Selamat Datang  
Last login: Fri Feb 14 02:51:32 2020  
via@via-server:~$
```

TUGAS TAMBAHAN

1.

```
via@via-server: ~  
System load: 0.12          Processes: 163  
Usage of /: 20.9% of 19.56GB Users logged in: 1  
Memory usage: 26%         IP address for ens33: 192.168.116.129  
Swap usage: 0%  
  
* Multipass 1.0 is out! Get Ubuntu VMs on demand on your Linux, Windows or  
  Mac. Supports cloud-init for fast, local, cloud devops simulation.  
  
  https://multipass.run/  
  
183 packages can be updated.  
106 updates are security updates.  
  
Your Ubuntu release is not supported anymore.  
For upgrade information, please visit:  
http://www.ubuntu.com/releaseendoflife  
  
New release '19.10' available.  
Run 'do-release-upgrade' to upgrade to it.  
  
Selamat Datang  
Last login: Fri Feb 14 02:51:32 2020  
via@via-server:~$ ls
```

Hasil = tidak ada

2.

```
via@via-server: ~  
Usage of /: 20.9% of 19.56GB Users logged in: 1  
Memory usage: 26%         IP address for ens33: 192.168.116.129  
Swap usage: 0%  
  
* Multipass 1.0 is out! Get Ubuntu VMs on demand on your Linux, Windows or  
  Mac. Supports cloud-init for fast, local, cloud devops simulation.  
  
  https://multipass.run/  
  
183 packages can be updated.  
106 updates are security updates.  
  
Your Ubuntu release is not supported anymore.  
For upgrade information, please visit:  
http://www.ubuntu.com/releaseendoflife  
  
New release '19.10' available.  
Run 'do-release-upgrade' to upgrade to it.  
  
Selamat Datang  
Last login: Fri Feb 14 02:51:32 2020  
via@via-server:~$ ls  
via@via-server:~$ mkdir pertemuan-2
```

Hasil = tidak ada

3.

```
via@via-server: ~  
* Multipass 1.0 is out! Get Ubuntu VMs on demand on your Linux, Windows or  
Mac. Supports cloud-init for fast, local, cloud devops simulation.  
  
https://multipass.run/  
  
183 packages can be updated.  
106 updates are security updates.  
  
Your Ubuntu release is not supported anymore.  
For upgrade information, please visit:  
http://www.ubuntu.com/releaseendoflife  
  
New release '19.10' available.  
Run 'do-release-upgrade' to upgrade to it.  
  
Selamat Datang  
Last login: Fri Feb 14 02:51:32 2020  
via@via-server:~$ ls  
via@via-server:~$ mkdir pertemuan-2  
via@via-server:~$ ls -l  
total 4  
drwxrwxr-x 2 via via 4096 Feb 14 02:59 pertemuan-2  
via@via-server:~$
```

4.

```
via@via-server: ~  
Mac. Supports cloud-init for fast, local, cloud devops simulation.  
  
https://multipass.run/  
  
183 packages can be updated.  
106 updates are security updates.  
  
Your Ubuntu release is not supported anymore.  
For upgrade information, please visit:  
http://www.ubuntu.com/releaseendoflife  
  
New release '19.10' available.  
Run 'do-release-upgrade' to upgrade to it.  
  
Selamat Datang  
Last login: Fri Feb 14 02:51:32 2020  
via@via-server:~$ ls  
via@via-server:~$ mkdir pertemuan-2  
via@via-server:~$ ls -l  
total 4  
drwxrwxr-x 2 via via 4096 Feb 14 02:59 pertemuan-2  
via@via-server:~$ cp -r pertemuan-2 pertemuan-1  
via@via-server:~$
```

Hasil = tidak ada

5.

```
via@via-server: ~  
https://multipass.run/  
  
183 packages can be updated.  
106 updates are security updates.  
  
Your Ubuntu release is not supported anymore.  
For upgrade information, please visit:  
http://www.ubuntu.com/releaseendoflife  
  
New release '19.10' available.  
Run 'do-release-upgrade' to upgrade to it.  
  
Selamat Datang  
Last login: Fri Feb 14 02:51:32 2020  
via@via-server:~$ ls  
via@via-server:~$ mkdir pertemuan-2  
via@via-server:~$ ls -l  
total 4  
drwxrwxr-x 2 via via 4096 Feb 14 02:59 pertemuan-2  
via@via-server:~$ cp -r pertemuan-2 pertemuan-1  
via@via-server:~$ ls  
pertemuan-1  pertemuan-2  
via@via-server:~$
```

Hasil =

6.

```
via@via-server: ~  
183 packages can be updated.  
106 updates are security updates.  
  
Your Ubuntu release is not supported anymore.  
For upgrade information, please visit:  
http://www.ubuntu.com/releaseendoflife  
  
New release '19.10' available.  
Run 'do-release-upgrade' to upgrade to it.  
  
Selamat Datang  
Last login: Fri Feb 14 02:51:32 2020  
via@via-server:~$ ls  
via@via-server:~$ mkdir pertemuan-2  
via@via-server:~$ ls -l  
total 4  
drwxrwxr-x 2 via via 4096 Feb 14 02:59 pertemuan-2  
via@via-server:~$ cp -r pertemuan-2 pertemuan-1  
via@via-server:~$ ls  
pertemuan-1  pertemuan-2  
via@via-server:~$ mv pertemuan-2 "pertemuan2 LAMPP"  
via@via-server:~$
```

Hasil = tidak ada

7.

```
via@via-server: ~
106 updates are security updates.

Your Ubuntu release is not supported anymore.
For upgrade information, please visit:
http://www.ubuntu.com/releaseendoflife

New release '19.10' available.
Run 'do-release-upgrade' to upgrade to it.

Selamat Datang
Last login: Fri Feb 14 02:51:32 2020
via@via-server:~$ ls
via@via-server:~$ mkdir pertemuan-2
via@via-server:~$ ls -l
total 4
drwxrwxr-x 2 via via 4096 Feb 14 02:59 pertemuan-2
via@via-server:~$ cp -r pertemuan-2 pertemuan-1
via@via-server:~$ ls
pertemuan-1  pertemuan-2
via@via-server:~$ mv pertemuan-2 "pertemuan2 LAMPP"
via@via-server:~$ ls
pertemuan-1  'pertemuan2 LAMPP'
via@via-server:~$
```

Hasil =

8.

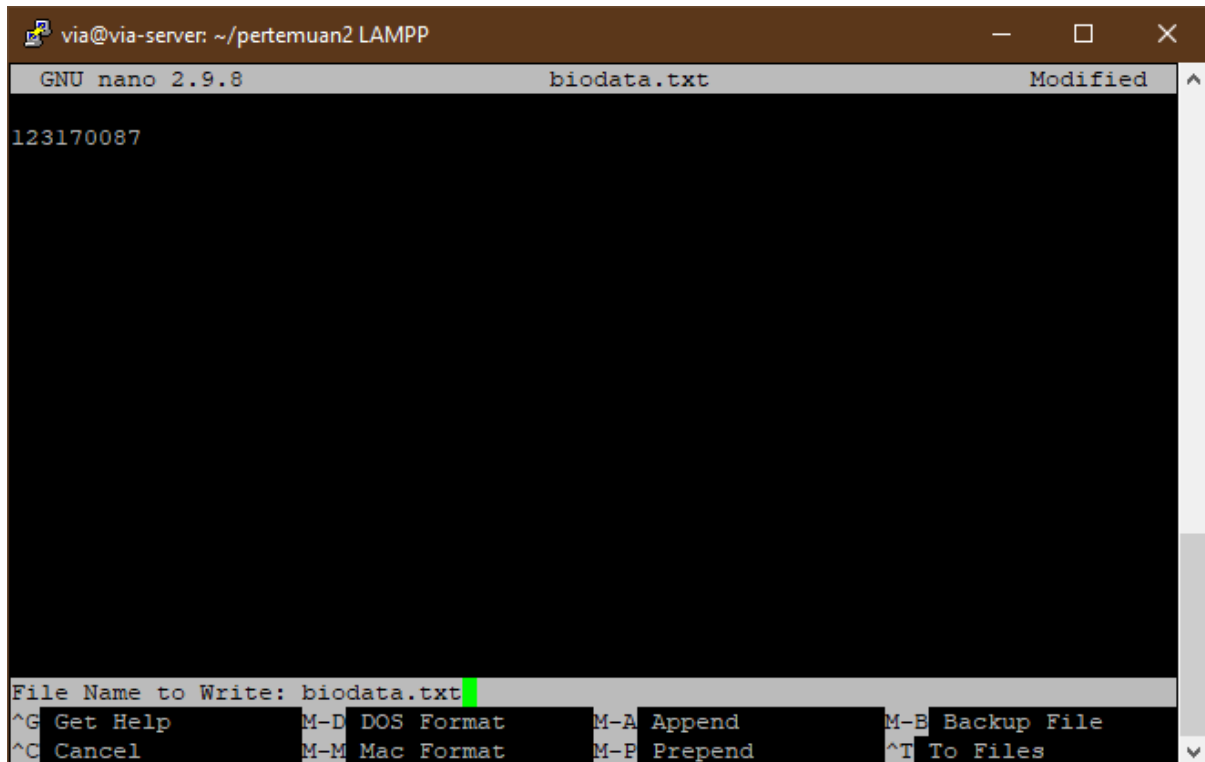
```
via@via-server: ~
Your Ubuntu release is not supported anymore.
For upgrade information, please visit:
http://www.ubuntu.com/releaseendoflife

New release '19.10' available.
Run 'do-release-upgrade' to upgrade to it.

Selamat Datang
Last login: Fri Feb 14 02:51:32 2020
via@via-server:~$ ls
via@via-server:~$ mkdir pertemuan-2
via@via-server:~$ ls -l
total 4
drwxrwxr-x 2 via via 4096 Feb 14 02:59 pertemuan-2
via@via-server:~$ cp -r pertemuan-2 pertemuan-1
via@via-server:~$ ls
pertemuan-1  pertemuan-2
via@via-server:~$ mv pertemuan-2 "pertemuan2 LAMPP"
via@via-server:~$ ls
pertemuan-1  'pertemuan2 LAMPP'
via@via-server:~$ cd "pertemuan 2"
>
```

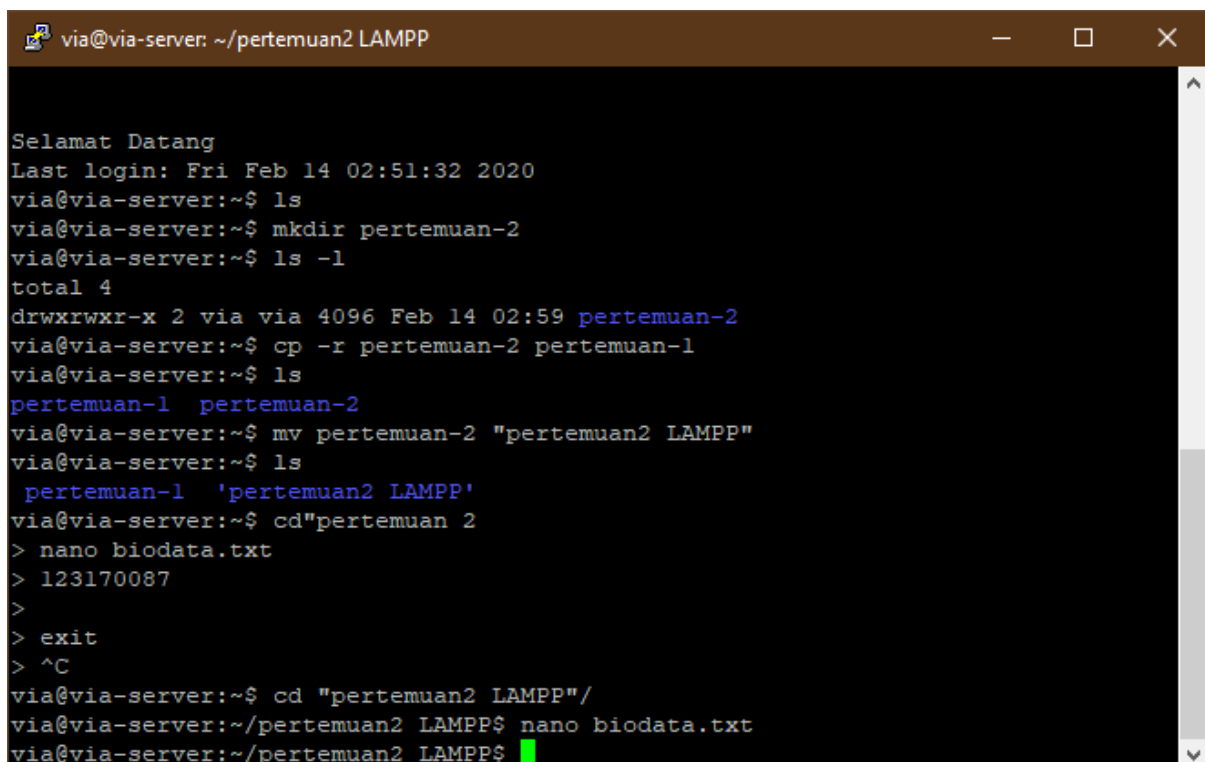
Hasil =

9. hasil setelah ctrl+o



```
via@via-server: ~/pertemuan2 LAMPP
GNU nano 2.9.8 biodata.txt Modified
123170087
File Name to Write: biodata.txt
^G Get Help      M-D DOS Format   M-A Append      M-B Backup File
^C Cancel        M-M Mac Format   M-E Prepend     ^T To Files
```

Ctrl+x



```
via@via-server: ~/pertemuan2 LAMPP
Selamat Datang
Last login: Fri Feb 14 02:51:32 2020
via@via-server:~$ ls
via@via-server:~$ mkdir pertemuan-2
via@via-server:~$ ls -l
total 4
drwxrwxr-x 2 via via 4096 Feb 14 02:59 pertemuan-2
via@via-server:~$ cp -r pertemuan-2 pertemuan-1
via@via-server:~$ ls
pertemuan-1  pertemuan-2
via@via-server:~$ mv pertemuan-2 "pertemuan2 LAMPP"
via@via-server:~$ ls
pertemuan-1  'pertemuan2 LAMPP'
via@via-server:~$ cd "pertemuan 2"
> nano biodata.txt
> 123170087
>
> exit
> ^C
via@via-server:~$ cd "pertemuan2 LAMPP"/
via@via-server:~/pertemuan2 LAMPP$ nano biodata.txt
via@via-server:~/pertemuan2 LAMPP$
```

10.

```
via@via-server: ~/pertemuan2 LAMPP
Last login: Fri Feb 14 02:51:32 2020
via@via-server:~$ ls
via@via-server:~$ mkdir pertemuan-2
via@via-server:~$ ls -l
total 4
drwxrwxr-x 2 via via 4096 Feb 14 02:59 pertemuan-2
via@via-server:~$ cp -r pertemuan-2 pertemuan-1
via@via-server:~$ ls
pertemuan-1  pertemuan-2
via@via-server:~$ mv pertemuan-2 "pertemuan2 LAMPP"
via@via-server:~$ ls
pertemuan-1  'pertemuan2 LAMPP'
via@via-server:~$ cd "pertemuan 2"
> nano biodata.txt
> 123170087
>
> exit
> ^C
via@via-server:~$ cd "pertemuan2 LAMPP"/
via@via-server:~/pertemuan2 LAMPP$ nano biodata.txt
via@via-server:~/pertemuan2 LAMPP$ ls -l
total 4
-rw-rw-r-- 1 via via 10 Feb 14 03:11 biodata.txt
via@via-server:~/pertemuan2 LAMPP$
```

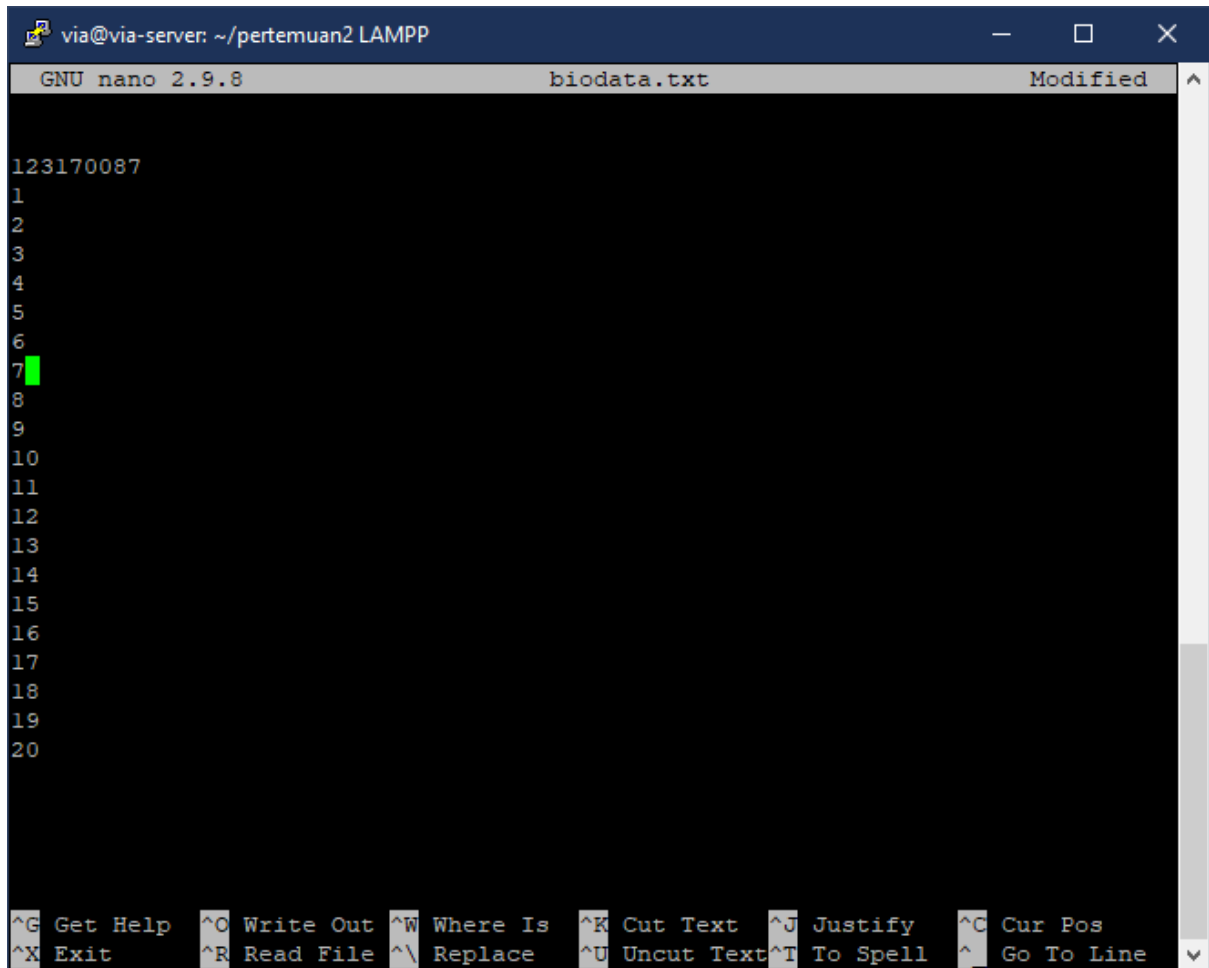
Hasil = penginputan nilai nim

11.

```
via@via-server: ~/pertemuan2 LAMPP
via@via-server:~$ mkdir pertemuan-2
via@via-server:~$ ls -l
total 4
drwxrwxr-x 2 via via 4096 Feb 14 02:59 pertemuan-2
via@via-server:~$ cp -r pertemuan-2 pertemuan-1
via@via-server:~$ ls
pertemuan-1  pertemuan-2
via@via-server:~$ mv pertemuan-2 "pertemuan2 LAMPP"
via@via-server:~$ ls
pertemuan-1  'pertemuan2 LAMPP'
via@via-server:~$ cd "pertemuan 2"
> nano biodata.txt
> 123170087
>
> exit
> ^C
via@via-server:~$ cd "pertemuan2 LAMPP"/
via@via-server:~/pertemuan2 LAMPP$ nano biodata.txt
via@via-server:~/pertemuan2 LAMPP$ ls -l
total 4
-rw-rw-r-- 1 via via 10 Feb 14 03:11 biodata.txt
via@via-server:~/pertemuan2 LAMPP$ cat biodata.txt
123170087
via@via-server:~/pertemuan2 LAMPP$
```

Hasil= pemanggilan nilai nim yang telah diinputkan sebelumnya

12. mengetikkan nim



```
via@via-server: ~/pertemuan2 LAMPP
GNU nano 2.9.8 biodata.txt Modified
123170087
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20

^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos
^X Exit ^R Read File ^\ Replace ^U Uncut Text ^T To Spell ^_ Go To Line
```

13. Penginputan angka

```
via@via-server: ~/pertemuan2 LAMPP
via@via-server:~/pertemuan2 LAMPP$ nano biodata.txt
via@via-server:~/pertemuan2 LAMPP$ ls -l
total 4
-rw-rw-r-- 1 via via 10 Feb 14 03:11 biodata.txt
via@via-server:~/pertemuan2 LAMPP$ cat biodata.txt
123170087
via@via-server:~/pertemuan2 LAMPP$ nano biodata.txt
via@via-server:~/pertemuan2 LAMPP$ cat biodata.txt

123170087
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
via@via-server:~/pertemuan2 LAMPP$
```

Hasil = memanggil semua angka yang telah di inputkan

```
via@via-server: ~/pertemuan2 LAMPP
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
via@via-server:~/pertemuan2 LAMPP$ tail biodata.txt
11
12
13
14
15
16
17
18
19
20
14. via@via-server:~/pertemuan2 LAMPP$
```

Hasil= memanggil 10 angka di akhir