MAKALAH PENGANTAR TELEKOMUNIKASI

UBUNTU SERVER WITH WORDPRESS OR HTML BY PUTTY (SSH)



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Oleh:

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Dosen Pembimbing :

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SISTEM KOMPUTER I B FAKULTAS ILMU KOMUTER UNIVERSITAS SRIWIJAYA 2020/2021

SOFTWARE YANG DIBUTUHKAN:

- 1. Putty.
- 2. VirtualBox.
- 3. VirtualBox Extension
- 4. OS Linux Ubuntu server 20.04

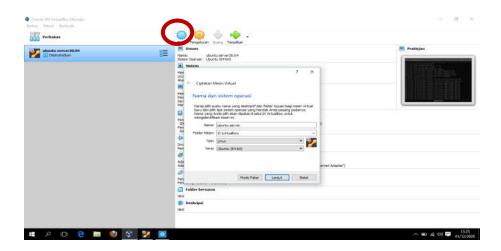
PROSES PENGERJAAN:

1. Download dan Install Software yang Diperlukan

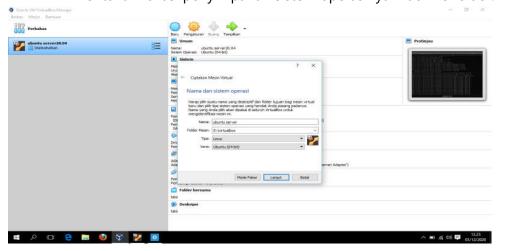
- A. Mendownload Aplikasi yang di atas,
- B. Install aplikasi Putty, VirtualBox, dan VirtualBox Extension.

2. Membuat Virtual Machine (VM) dan Menginstall Ubuntu Server pada VirtualBox

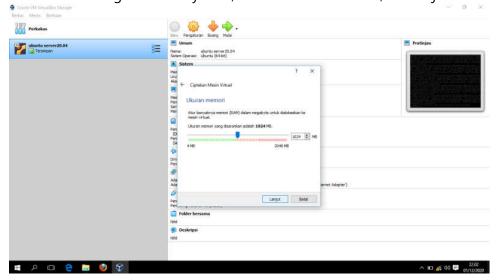
- A. Jalankan VirtualBox. Tampilannya akan seperti gambar dibawah
- B. Membuat Virtual Machine (VM) baru.
 - Langkah pertama untuk membuat VM, silahkan klik "New".



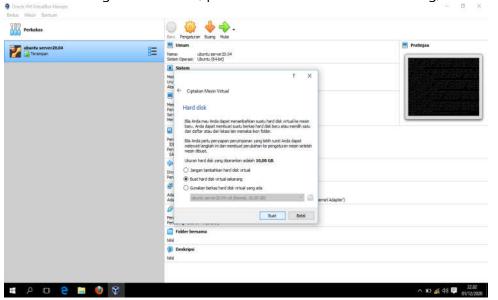
- > Isi kolom name Ubuntu Server pada bagiancreate virtual machine.
- Tentukan lokasi penyimpanan sistem operasinya machine folder.



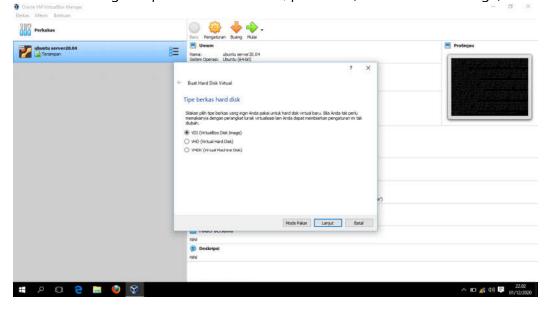
> Lalu dibagian memory size , tentukan ukuran RAM, klik lanjut



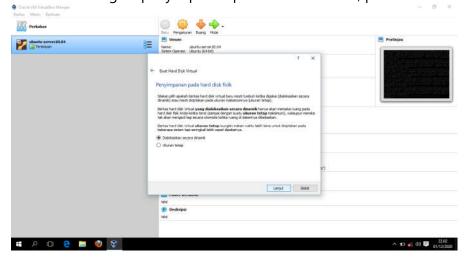
> Pada bagian Hard disk , pilih buat hard disk virtual sekarang, klik buat.



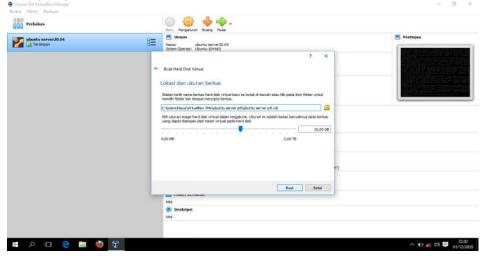
Pada bagian tipe berkas Hard disk , pilih **VDI** (VirtualBox Disk Image). Lalu **lanjut**.



> Pada bagian penyimpanan pada hard disk fisik, pilih Dialokasikan secara dinamik. klik lanjut.

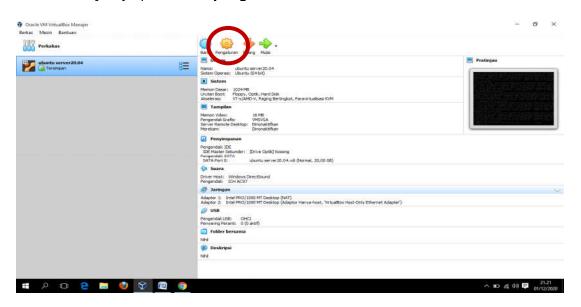


> Selanjutnya , tentukan lokasi dan ukuran virtual hardisk . Jika sudah pilih **buat**.

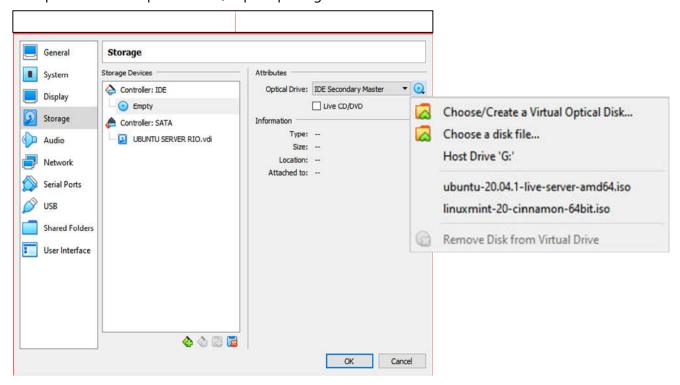


Setelah selesai membuat Virtual Machine (VM) selanjutnya ialah menginstall Ubuntu Server pada Virtual Machine yang telah dibuat barusan.

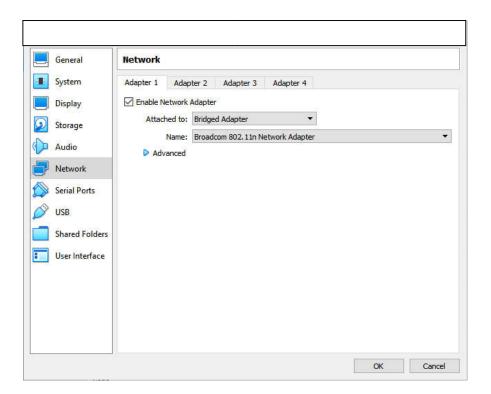
> Selanjutnya pilih menu **pengaturan/ Ctrl + S**.



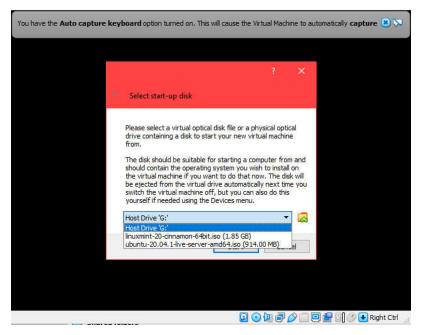
- > Pada menu tab **Storage**.
- > pilih icon Add optical drive, seperti pada gambar di bawah



- > Pilih menu tab **Network**.
- Lalu kalian atur settingan Network Adapter. Seperti pada gambar di bawah :
- ➤ klik OK



- Langsung mulai proses Virtualisasinya.
- > start-up disk atau pilihan untuk melakukan booting. Arahkan pointer mouse ke icon folder laluklik pada icon tersebut dan pilih start-up disknya berupa Ubuntu Server 20.04.



- Pada bagian pemilihan bahasa ,
- pilih **English**. Tekan atas , bawah , lalu **Enter** , pada keyboard untuk memilih
- > Selanjutnya akan muncul tampilan seperti dibawa ini, pada bagian ini silahkan isi semua kolom dengan data-data pribadi anda seperti username dan password yang akan digunaka untuk login ubuntu servernya, jika sudah klik "Done".



Tunggu prosesnya sampai muncul tulisan "reboot" dan klik tulisannya. Tunggu sampai laptop meminta user dan password untuk login.Lihat gambar dibawah ini untuk tampilannya.

Selanjutya tinggal memasukkan perintah perintah yang digunakan untuk menginstall ssh, webserver, wordpress, dan perintah untuk mensetting database pada wordpressnya.

```
Installation complete!

Finished install

running '/snap/bin/subiquity.subiquity-configure-apt

/snap/subiquity/1956/usr/bin/python3 true'
curtin command apt-config
curtin command in-target
running 'curtin curthooks'
curtin command curthooks'
curtin command curthooks

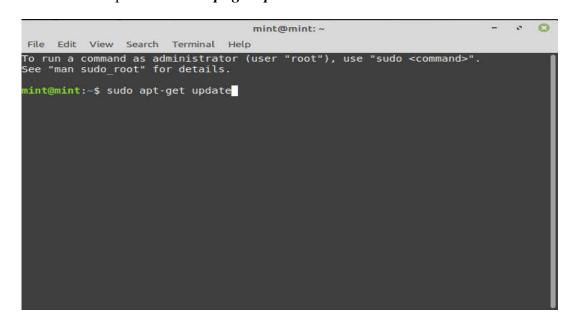
configuring apt configuring apt
installing missing packages
configuring raid (mdadm) service
configuring raid (mdadm) service
installing kernel
setting up swap
apply networking config
writing etc/fstab
configuring multipath
updating packages on target system
configuring multipath
configuring farget system bootloader
installing srub to target devices
finalizing installation
running 'curtin hook'
curtin command hook
executing late commands
final system configuration
configuring cloud-init
restoring and installing security updates

[ View full log ]

[ Reboot ]
```

3. Menginstall SSH Server serta Remote danKonfigurasi SSH Server di Terminal atau Putty

- > Setelah selesai penginstalan OS berbasis Linux.
- Lalu ketik perintah sudo apt-get update dan klik enter



Ketik perintah ifconfig untuk menampilkan alamat IP Linux

- ➤ Pasang SSH Server pada
- > Ketikk perintah sudo apt install openssh-server

```
TX packets 264 bytes 23686 (23.6 KB)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

nurul@ubuntu: $\square$ sudo apt instal openssh-server

\(\text{E: Invalid operation instal}\)

nurul@ubuntu: $\square$ sudo apt install openssh-server

Reading package lists... Done

Building dependency tree

Reading state information... Done

openssh-server is already the newest version (1:8.2p1-4ubuntu0.1).

O upgraded, 0 newly installed, 0 to remove and 0 not upgraded.

nurul@ubuntu: $\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\square\squar
```

- > Ketik perintah sudo systemctl status ssh.
- > Ketik perintah sshuser@ip.

> SSH-Keygen dengancaramengetikkanperintah*ssh-keygen -t rsa> enter > enter >*

```
System information as of Tue 01 Dec 2020 07:49:41 AM UTC
  System load:
                     0.03
                                              Processes:
                                                                               107
  Usage of /:
                     20.5% of 18.57GB
                                              Users logged in:
  Memory usage: 20%
                                              IPv4 address for enp0s3: 10.0.2.15
                                              IPv4 address for enp0s8: 192.168.56.101
  Swap usage:
O updates can be installed immediately.
  of these updates are security updates.
Last login: Tue Dec  1 07:34:01 2020
nurul@ubuntu:~$ sudo systemctl restart ssh
[sudo] password for nurul:
nurul@ubuntu:~$ ssh-keygen -t rsa
Generating public/private rsa key pair.
Enter file in which to save the key (/home/nurul/.ssh/id_rsa):
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/nurul/.ssh/id_rsa
Your public key has been saved in /home/nurul/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:oYs+oeRYxEc4HzZrFOav9BWtT+YwF/SFOOQ1iWuC2vg nurul@ubuntu
The key's randomart image is:
  ---[RSA 3072]--
             .0..0++
   0 = 0.
               .0000.
   o =..+ ++.+00
. o .o S Oo .
     . . . . .
            Ε
    --[SHA256]--
nurul@ubuntu:~$
```

- ➤ Ketik perintah ssh-copy-id nurul@192.168.56.101>masukkan password.
- Konfigurasi SSH selesai.

```
nurul@ubuntt: ** ssh-copy-id nurul@192.168.56.101
/usr/bin/ssh-copy-id: INFO: Source of key(s) to be installed: "/home/nurul/.ssh/id_rsa.pub"
/usr/bin/ssh-copy-id: INFO: attempting to log in with the new key(s), to filter out any that are alr eady installed
/usr/bin/ssh-copy-id: INFO: 1 key(s) remain to be installed -- if you are prompted now it is to inst all the new keys nurul@192.168.56.101's password:

Number of key(s) added: 1

Now try logging into the machine, with: "ssh 'nurul@192.168.56.101'"
and check to make sure that only the key(s) you wanted were added.

nurul@ubuntu:~$ _

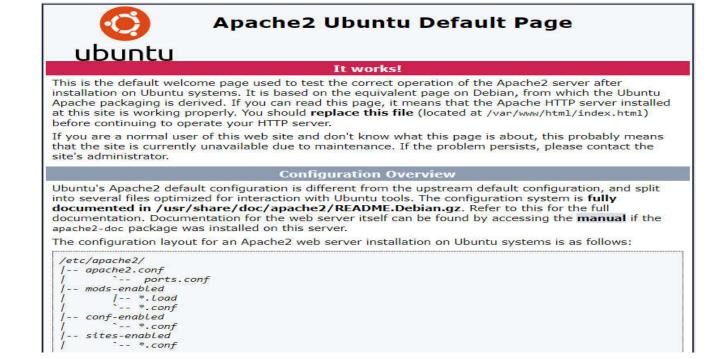
nurul@ubuntu:**
```

4. Menginstal Apache, Maria DB / MySQL, dan PHP serta Membuat HTML Sederhana

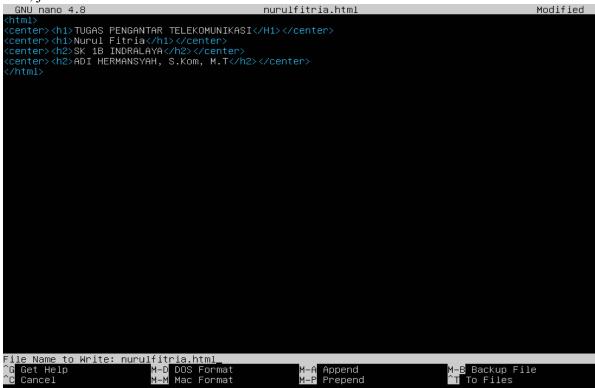
- Menginstall Web Server Apache2.
- ➤ Ketik printah sudo apt install apache2 -y

```
Reading package lists... Done
Building dependency tree
Reading state information... Done
apache2 is already the newest version (2.4.41-4ubuntu3.1).
0 upgraded, 0 newly installed, 0 to remove and 25 not upgraded.
```

- Lalu cek menggunakan browser.
- > Jika Web Serve sudah aktif, maka akan muncul tampilan seperti gambar dibawah ini.



- > Selanjutnya coba Kembali lagi ke terminal dan mencoba untukmembuat file HTML pada Web Server . Dengan cara mengetik *cd /var/www/html/ >sudo nano namafilebaru.html > enter*. Maka akan menjadi seperti gambar di bawah.
- ➤ Setelah itu muncul tampilan seperti text editor dari terminalya, disana tempat kita mengedit dan menulis program. Kali ini karena ekstensionya ".html" jadi ketikkan program HTML di sana, jika sudah lalu klik tombol *CTRL* + *X* > *Y* > *ENTER*.



Selanjutnya ialah mengecek kembali hasilpembuatan html pada browser dengan mngetikkan ip/namafile.html di browser. Disini saya membuat file html yang bernama nurulfitria.html. Jadi, saya membukanya dengan mengetikkan 192.168.56.101/nurulfitria.html. Jika berhasil, maka akan muncul gambar tampilan Website html yang barusan kalian buat. Untuk website yang saya buat menggunakan metode ini ialah sebagai berikut



TUGAS PENGANTAR TELEKOMUNIKASI

Nurul Fitria

SK 1B INDRALAYA

ADI HERMANSYAH, S.Kom, M.T

へ 知 (編 句)) ■ 01/12/

Selanjutnya ialah menginstall Databases pada linux. Pada percobaan kali ini saya menginstall Databases menggunakan MariaDB. Perintah yang dijalankan ialah sudo apt install mariadbserver mariadb-client -y> enter. Ketika selesai penginstallan, jalnkan perintah untuk memulai MariaDB nya dengan perintah sebagai berikut sudo systemctl start mariadb> enter. Kemudian cek apakah sudah berjalan atau belum dengan mengetikkan perintah berikut sudo systemctl status mariadb. Jika berjalan dengan baik maka akan tampil seperti gambar dibawah ini.

```
nurul@ubunti:"$ sudo apt install mariadb-server mariadb-client -y
Reading package lists... bone
Building dependency tree
Reading state information... bone
E: Unable to locate package mariadb-server
E: Unable to locate package mariadb-client
nurul@ubunti:"$ sudo systemctl start mariadb
Failed to start mariadb.service: Unit mariadb.service not found.
nurul@ubunti:"$ sudo apt-get updaate
E: Invalid operation updaate
Per: Invalid operation updaate
E: Invalid operation updaate
Err: I http://id.archive.ubuntu.com/ubuntu focal InRelease
Temporary failure resolving 'id.archive.ubuntu.com'
Err: 2 http://id.archive.ubuntu.com/ubuntu focal-updates InRelease
Temporary failure resolving 'id.archive.ubuntu.com'
Err: 3 http://id.archive.ubuntu.com/ubuntu focal-backports InRelease
Temporary failure resolving 'id.archive.ubuntu.com'
Et: 4 http://id.archive.ubuntu.com/ubuntu focal-security/main amd64 Packages [383 kB]
Get: 5 http://id.archive.ubuntu.com/ubuntu focal-security/main amd64 Packages [383 kB]
Get: 6 http://id.archive.ubuntu.com/ubuntu focal-security/main Translation-en [86.9 kB]
Ign: 6 http://id.archive.ubuntu.com/ubuntu focal-security/main mad64 Packages [75.5 kB]
Get: 8 http://id.archive.ubuntu.com/ubuntu focal-security/main Translation-en [86.75 kB]
Get: 8 http://id.archive.ubuntu.com/ubuntu focal-security/restricted amd64 Packages [75.5 kB]
Get: 8 http://id.archive.ubuntu.com/ubuntu focal-security/restricted Translation-en [12.1 kB]
Ign: 9 http://id.archive.ubu
```

➤ Ketik perintah sudomysql_secure_installation>enter. Pada perintah ini nanti akan muncul pertanyaan change the root password, remove anonymous users, disallow root login remotely, remove test database and access to it, dan reload privilege tables now. Semuapertanyaan tersebut diisi dengan opsi Y guna memperkuat keamanan Database MariaDB nya. Untuk gambarnya dapat dilihat dibawah.

```
NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB
SERVERS IN PRODUCTION USE! PLEASE READ EACH STEP CAREFULLY!

In order to log into MariaDB to secure it, we'll need the current
password for the root user. If you've just installed MariaDB, and
you haven't set the root password yet, the password will be blank,
so you should just press enter here.

Enter current password for root (enter for none):
OK, successfully used password, moving on...

Setting the root password ensures that nobody can log into the MariaDB
root user without the proper authorisation.

Set root password? [Y/n] y
New password:
Re-enter new password:
Ressword updated successfully!
Reloading privilege tables.
... Success!

By default, a MariaDB installation has an anonymous user, allowing anyone
to log into MariaDB without having to have a user account created for
them. This is intended only for testing, and to make the installation
go a bit smoother. You should remove them before moving into a
production environment.

Remove anonymous users? [Y/n] y
... Success!

Normally, root should only be allowed to connect from 'localhost'. This
ensures that someone cannot guess at the root password from the network.

Disallow root login remotely? [Y/n]
```

Lalu ketik perintah apt install php -y.

```
Reading package lists... Done
Building dependency tree
Reading state information... Done
php is already the newest version (2:7.4+75).
0 upgraded, 0 newly installed, 0 to remove and 25 not upgraded.
```

➤ Ketik Perintah *sudo apt install wget -y* . jika sudah terinstall di linux , maka tampilannya akan seperti ini

```
Reading package lists... Done
Building dependency tree
Reading state information... Done
wget is already the newest version (1.20.3-lubuntul).
O upgraded, O newly installed, O to remove and 25 not upg<u>r</u>aded.
```

5. Menginstall dan MenjalankanWordpress

- ➤ Ketik perintah "https://wordpress.org/latest.zip"
- ➤ Kemudian tunggu proses downloadnya selesai.

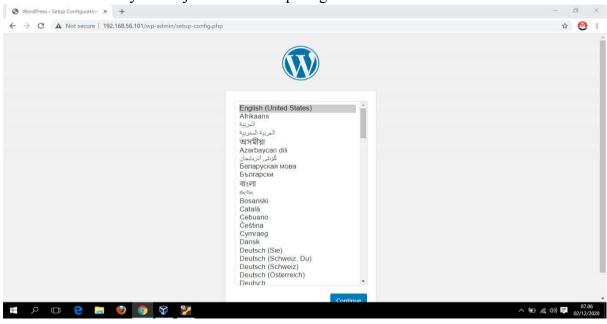
- > apt install unzip -y >enter.
- > unzip latest.zip >enter.
- Lalu ketik *ls >enter*.
- ➤ Ketik perintah *cd wordpress>enter*
- ➤ Ketik perintah *sudo cp -r */var/www/html/>enter* seperti gambar dibawah

```
Desktop Downloads Music numix-icon-theme-circle pt putty Videos
Documents latest.zip mykey.ppk Pictures Public Templates wordpress
:~$ cd wordpress
:~/wordpress$ sudo cp -r * /var/www/html/
:~/wordpress$ [
```

- > cd/var/www/html/>enter
- > sudo apt install php-mysql php-cgi php-gd -y >enter
- > sudosystemctl restart apache2>enter.
- > sudochown -R www-data:www-data/var/www/.

/var/www/html\$ sudo systemctl restart apache2
/var/www/html\$ sudo chown -R www-data:www-data /var/www/

Cek dengan mengetikkan Alamat IP semula yaitu 192.168.56.101 di browser kemudian klik enter. Jika websitenya bekerja maka akan seperti gambar dibawah

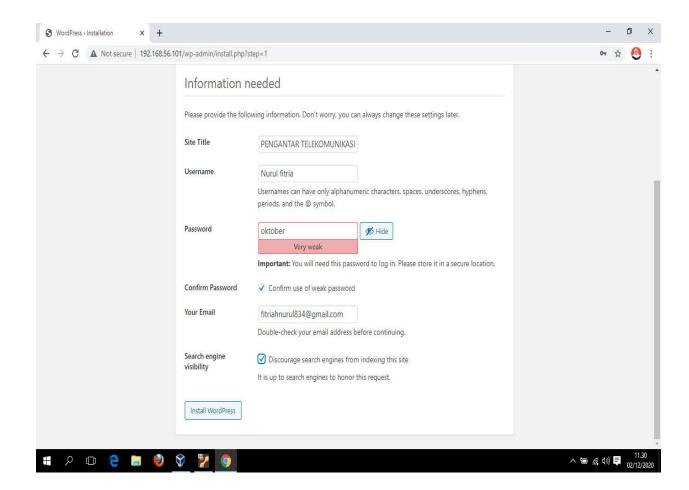


- cd /var/www/html/
- > sudo mysql -u root -p>enter
- create database nama database baru;>enter,
- > create database wordpress;> enter.
- > show databases;.
- > all priveleges on wordpress.* to "wordpress"@"%";
- Seperti gambar dibawah ini

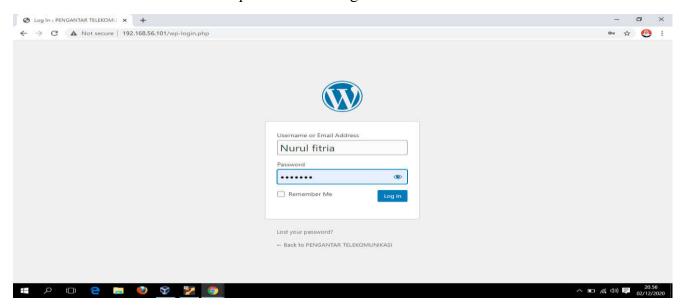
Lalu kembali ke browser lagi



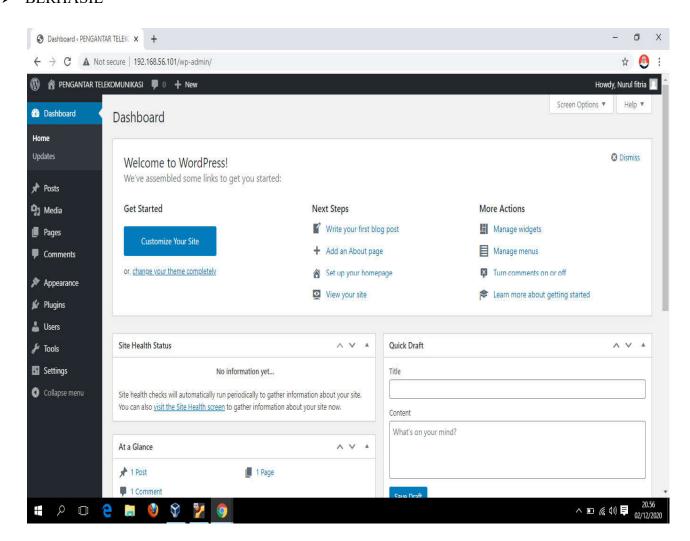
Kemudian setelah data-datanya selesai diisi, klik tombol sumbit. Pada laman selanjutnya klik tombol "Run an installation". Setelah itu akan dimasukkan data-data pribadi seperti gambar dibawah ini.



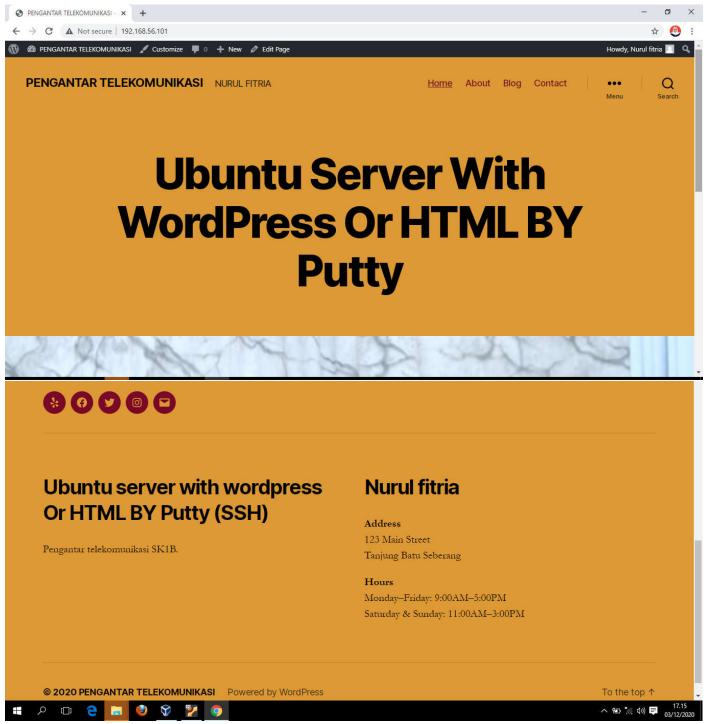
- ➤ Lalu"Install Wordpress".
- Ketik username dan pasword untuk login



- Silahkan konfigurasi homepage website pada bagian set up your homepae,.
- BERHASIL



INI MERUPAKAN TAMPILAN WEBSITE PRIBADI YANG SUDAH SEDIKIT SAYA KONFIGURASIKAN



LINK WORDPRESS: 191.168.56.101