 <p><i>We Make You Shine</i></p>	LKPD (Lembar Kerja Peserta Didik)	
	PROGRAM KEAHLIAN	TEKNIK JARINGAN KOMPUTER & TELEKOMUNIKASI
	MATA PELAJARAN	ASJ
	DOMAIN	Konfigurasi Database & CMS Server
KELAS	XI -TKJ 1	
NO PRESENSI & NAMA	15. Intan Dwi Anggreini	
URAIAN	<div data-bbox="451 873 970 916"> <p>➤ Konfigurasi Database Server</p> </div> <div data-bbox="497 920 1490 1104"> <ol style="list-style-type: none"> 1) Download kemudian ekstrak WordPress 5.5.1 dan phpmyadmin 4.9.5. 2) Kirim ekstrasi WordPress 5.5.1 dan phpmyadmin 4.9.5 dari laptop client ke debian server dengan FTP 3) Install php dengan mengetikkan perintah apt-get install php7.3 php7.3-mysql. Jika ada pertanyaan “y/n” ketik “y” kemudian klik enter. </div> <div data-bbox="497 1137 1465 1471" style="background-color: black; color: white; padding: 10px;"> <pre> root@smkn1kediri:/# apt install php7.3 php7.3-mysql Reading package lists... Done Building dependency tree Reading state information... Done The following additional packages will be installed: libapache2-mod-php7.3 libsodium23 php-common php7.3-cli php7.3-common php7.3-json php7.3-opcache php7.3-readline psmisc Suggested packages: php-pear The following NEW packages will be installed: libapache2-mod-php7.3 libsodium23 php-common php7.3 php7.3-cli php7.3-common php7.3-json php7.3-mysql php7.3-opcache php7.3-readline psmisc 0 upgraded, 11 newly installed, 0 to remove and 0 not upgraded. Need to get 0 B/4,418 kB of archives. After this operation, 19.0 MB of additional disk space will be used. Do you want to continue? [Y/n] y </pre> </div>	
	<div data-bbox="545 1509 1442 1583"> <p>Instalasi PHP sudah berhasil jika muncul tulisan 0 upgrade, 0 newly installed, 0 to remove and 0 not upgrade.</p> </div> <div data-bbox="497 1619 1485 1693"> <p>4) Install php php-mysql php-json php-mbstring php-zip php-gd php-xml php-curl dengan mengetikkan perintah seperti dibawah ini.</p> </div> <div data-bbox="488 1688 1474 1962" style="background-color: black; color: white; padding: 10px;"> <pre> root@smkn1kediri:/# apt install php-mysql php-json php-mbstring php-zip php-gd php-xml php-curl Reading package lists... Done Building dependency tree Reading state information... Done The following additional packages will be installed: libxslt1.1 libzip4 php7.3-curl php7.3-gd php7.3-mbstring php7.3-xml php7.3-zip The following NEW packages will be installed: libxslt1.1 libzip4 php-curl php-gd php-json php-mbstring php-mysql php-xml php-zip php7.3-curl php7.3-gd php7.3-mbstring php7.3-xml php7.3-zip 0 upgraded, 14 newly installed, 0 to remove and 0 not upgraded. Need to get 0 B/1,036 kB of archives. After this operation, 3,220 kB of additional disk space will be used. Do you want to continue? [Y/n] y_ </pre> </div>	

Instalasi php php-mysql php-jason php-mbstring php-zip php-gd php-xml php-curl sudah berhasil jika muncul tulisan **0 upgrade, 0 newly installed, 0 to remove and 0 not upgrade.**

5) Install MariaDB dengan memasukkan command seperti dibawah ini :

```
root@smknikediri:/# apt install mariadb-server
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  galera-3 gawk libaio1 libcgilite-perl libcgilite-pm-perl libconfig-inifiles-perl libdbd-mysql-perl
  libdbi-perl libencode-locale-perl libfcgi-perl libhtml-parser-perl libhtml-tagset-perl
  libhtml-template-perl libhttp-date-perl libhttp-message-perl libio-html-perl
  liblwp-mediatypes-perl libmpfr6 libreadline5 libsigsegv2 libsnappy1v5 libterm-readkey-perl
  libtimedate-perl liburi-perl mariadb-client-10.3 mariadb-client-core-10.3 mariadb-server-10.3
  mariadb-server-core-10.3 rsync socat
Suggested packages:
  gawk-doc libclone-perl libmldbm-perl libnet-daemon-perl libsql-statement-perl libdata-dump-perl
  libipc-sharedcache-perl libwww-perl mailx mariadb-test netcat-openbsd tinyca openssh-server
The following NEW packages will be installed:
  galera-3 gawk libaio1 libcgilite-fast-perl libcgilite-pm-perl libconfig-inifiles-perl libdbd-mysql-perl
  libdbi-perl libencode-locale-perl libfcgi-perl libhtml-parser-perl libhtml-tagset-perl
  libhtml-template-perl libhttp-date-perl libhttp-message-perl libio-html-perl
  liblwp-mediatypes-perl libmpfr6 libreadline5 libsigsegv2 libsnappy1v5 libterm-readkey-perl
  libtimedate-perl liburi-perl mariadb-client-10.3 mariadb-client-core-10.3 mariadb-server
  mariadb-server-10.3 mariadb-server-core-10.3 rsync socat
0 upgraded, 31 newly installed, 0 to remove and 0 not upgraded.
Need to get 0 B/22.2 MB of archives.
After this operation, 170 MB of additional disk space will be used.
Do you want to continue? [Y/n] y_
```

6) Lakukan konfigurasi secure mariadb dengan masukkan perintah "mysql_secure_installation".

- Enter current password for root (Ketik enter).

```
root@smknikediri:/# mysql_secure_installation

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): _
```

- Set root password (yes), kemudian masukkan password yg akan kita pakai pada mysql untuk user root.
- Remove anonymous user? (yes)

```
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? (yes)

```
Disallow root login remotely? [Y/n] y
... Success!

By default, MariaDB comes with a database named 'test' that anyone can
access. This is also intended only for testing, and should be removed
before moving into a production environment.
```

- Remove test database and access? (yes)

```
Remove test database and access to it? [Y/n] y
- Dropping test database...
... Success!
- Removing privileges on test database...
... Success!

Reloading the privilege tables will ensure that all changes made so far
will take effect immediately.
```

- Reload privilege table now? (yes)

```
Reload privilege tables now? [Y/n] y
... Success!

Cleaning up...

All done! If you've completed all of the above steps, your MariaDB
installation should now be secure.

Thanks for using MariaDB!
root@smkn1kediri:/# _
```

- 7) Membuat database dan user untuk database, untuk masuk ke console mysql masukkan perintah **"mysql -u root -p"**.
 - Enter password:
(Masukkan password root yg digunakan ketika proses instalasi mysql).

```
root@smkn1kediri:/# mysql -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 42
Server version: 10.3.34-MariaDB-0+deb10u1 Debian 10

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
```

- Untuk membuat database ketik command "create database wordpress (nama database)"

```
MariaDB [(none)]> create database wordpress;
Query OK, 1 row affected (0.001 sec)
```

- Membuat user admin dan user biasa untuk akses database:
 - a) User admin
Membuat user utama :

```
MariaDB [(none)]> create user 'admin'@'localhost' identified by '12345';
Query OK, 0 rows affected (0.001 sec)
```

Setting privileg user utama :

```
MariaDB [(none)]> grant all privileges on *.* to 'admin'@'localhost';
Query OK, 0 rows affected (0.000 sec)
```

- b) User biasa
Membuat user biasa:

```
MariaDB [(none)]> create user 'intan'@'localhost' identified by '12345';
Query OK, 0 rows affected (0.001 sec)
```

Setting privileg user biasa:

```
MariaDB [(none)]> grant all privileges on wordpress.sql to 'intan'@'localhost';
Query OK, 0 rows affected (0.001 sec)
```

- Setelah itu ketik command "flush privilege"

```
MariaDB [(none)]> flush privileges;
Query OK, 0 rows affected (0.000 sec)
```

- Selanjutnya mengganti konfigurasi root, masukkan command seperti dibawah ini :

```

MariaDB [(none)]> alter user 'root'@'localhost' identified via mysql_native_password;
Query OK, 0 rows affected (0.000 sec)

MariaDB [(none)]> alter user 'root'@'localhost' identified by '12345';
Query OK, 0 rows affected (0.000 sec)

```

- Masukkan command "Quit" untuk mengakhiri konfigurasi pada console mysql.

8) Konfigurasi akses website pada database dan cms (content management system) wordpress

a. Situs website database

- Copy file "000-default.conf" dengan nama "database.conf".
- Lalu edit file database.conf :
 - Hilangkan pagar dan ubah line "#ServerName www.example.com" dengan "ServerName domain_server".
 - Pada line "DocumentRoot /var/www/" ubah sesuai **letak penyimpanan file phpmyadmin** (/var/www/database). Lalu dibawah nya tambah kan line seperti dibawah ini:


```

<Directory /var/www/database>
    Options Indexes FollowSymLinks
    AllowOverride none
    Require all granted
</Directory>

```
 - Kemudian simpan file.

```

GNU nano 3.2 database.conf

<VirtualHost *:80>
    # The ServerName directive sets the request scheme, hostname and port that
    # the server uses to identify itself. This is used when creating
    # redirection URLs. In the context of virtual hosts, the ServerName
    # specifies what hostname must appear in the request's Host: header to
    # match this virtual host. For the default virtual host (this file) this
    # value is not decisive as it is used as a last resort host regardless.
    # However, you must set it for any further virtual host explicitly.
    ServerName database.smeksa.com

    ServerAdmin webmaster@localhost
    DocumentRoot /var/www/database

    <Directory /var/www/database>
        Options Indexes FollowSymLinks
        AllowOverride none
        Require all granted
    </Directory>

    # Available loglevels: trace8, ..., trace1, debug, info, notice, warn,
    # error, crit, alert, emerg.
    # It is also possible to configure the loglevel for particular
    # modules, e.g.
    #LogLevel info ssl:warn

    ErrorLog ${APACHE_LOG_DIR}/error.log
    CustomLog ${APACHE_LOG_DIR}/access.log combined

    # For most configuration files from conf-available/, which are
    # enabled or disabled at a global level, it is possible to
    # include a line for only one particular virtual host. For example the
    # following line enables the CGI configuration for this host only
    #
    #Include conf-enabled/cgi.conf

    [ Wrote 37 lines ]
    ^G Get Help  ^O Write Out  ^W Where Is   ^K Cut Text   ^J Justify    ^C Cur Pos    M-U Undo
    ^X Exit      ^R Read File  ^N Replace    ^U Uncut Text ^T To Spell   ^_ Go To Line  M-E Redo

```

- Selanjutnya aktifkan database.conf degan command "a2ensite database.conf"

```

root@smkn1kedin: /etc/apache2/sites-available# a2ensite database.conf
Site database already enabled
root@smkn1kedin: /etc/apache2/sites-available# a2ensite info.conf

```

b. Situs website CMS wordpress

- Copy file "000-default.conf" dengan nama "info.conf".

- Lalu edit file info.conf :

```
GNU nano 3.2 /etc/apache2/sites-available/info.conf

<VirtualHost *:80>
# The ServerName directive sets the request scheme, hostname and port that
# the server uses to identify itself. This is used when creating
# redirection URLs. In the context of virtual hosts, the ServerName
# specifies what hostname must appear in the request's Host: header to
# match this virtual host. For the default virtual host (this file) this
# value is not decisive as it is used as a last resort host regardless.
# However, you must set it for any further virtual host explicitly.
ServerName info.smeksa.com

ServerAdmin webmaster@localhost
DocumentRoot /var/www/info

# Available loglevels: trace8, ..., trace1, debug, info, notice, warn,
# error, crit, alert, emerg.
# It is also possible to configure the loglevel for particular
# modules, e.g.
#LogLevel info ssl:warn

ErrorLog ${APACHE_LOG_DIR}/error.log
CustomLog ${APACHE_LOG_DIR}/access.log combined

# For most configuration files from conf-available/, which are
# enabled or disabled at a global level, it is possible to
# include a line for only one particular virtual host. For example the
# following line enables the CGI configuration for this host only
# after it has been globally disabled with "a2disconf".
#Include conf-available/serve-cgi-bin.conf
</VirtualHost>

# vim: syntax=apache ts=4 sw=4 sts=4 sr noet

[ Read 31 lines ]
^G Get Help  ^O Write Out  ^W Where Is   ^K Cut Text   ^J Justify    ^C Cur Pos    M-U Undo
^X Exit      ^R Read File  ^N Replace    ^U Uncut Text ^T To Spell   ^_ Go To Line  M-E Redo
```

- Hilangkan pagar dan ubah line "**#ServerName** www.example.com" dengan "**ServerName domain_server**".
- Pada line "**DocumentRoot /var/www/**" ubah sesuai **letak penyimpanan file phpmyadmin (/var/www/info)**. Lalu dibawah nya tambah kan line seperti dibawah ini:

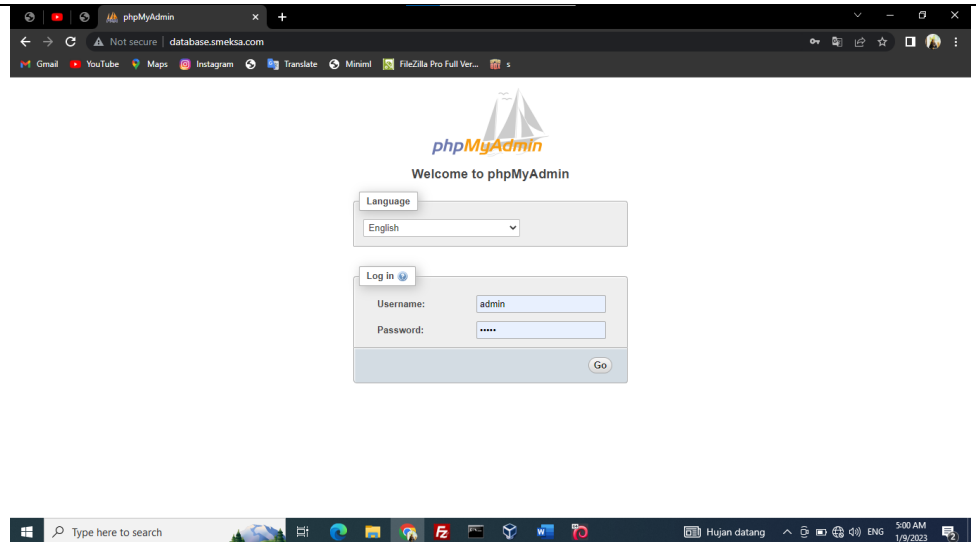

```
<Directory /var/www/database>
Options Indexes FollowSymLinks
AllowOverride none
Require all granted
</Directory>
```
- Kemudian simpan file.

- Kemudian aktifkan info.conf degan command "a2ensite info.conf"

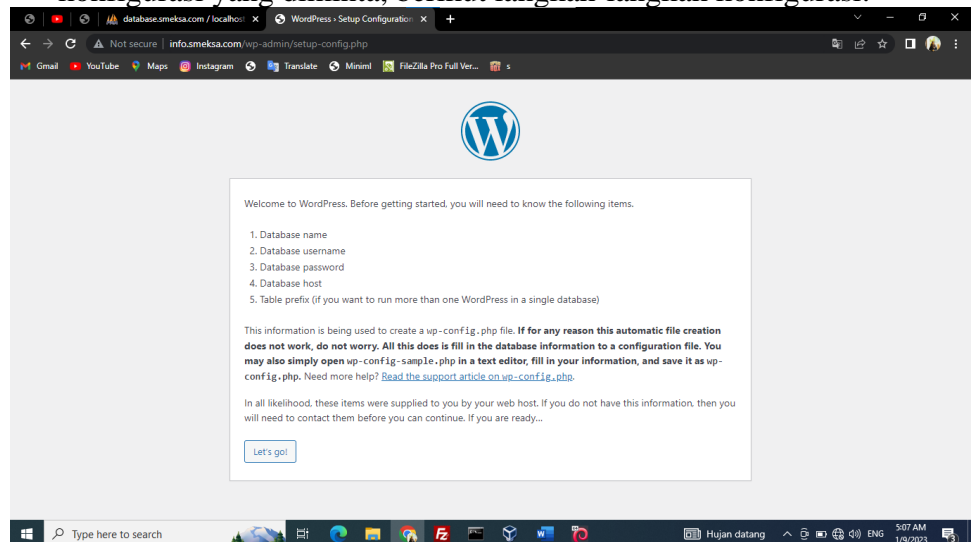
```
root@smkn1kediri:/etc/apache2/sites-available# a2ensite info.conf
Site info already enabled
```

- Lakukan restart apache2.

9) Kunjungi situs database (phpmyadmin) melalui laptop client.



10) Buka situs info (CMS wordpress) melalui client. Ketika halaman website muncul seperti dibawah ini, klik **“Lets’s go!”** maka lakukan perubahan konfigurasi yang diminta, berikut langkah-langkah konfigurasi:



a) Mengganti file konfigurasi wp-config-sample.php menjadi wp-config.php

```
root@smknikediri:/# cd /var/www/info
root@smknikediri:/var/www/info# ls
index.php      wp-admin      wp-content     wp-load.php    wp-signup.php
license.txt    wp-blog-header.php wp-cron.php    wp-login.php   wp-trackback.php
readme.html   wp-comments-post.php wp-includes    wp-mail.php    xmlrpc.php
wp-activate.php wp-config-sample.php wp-links-opml.php wp-settings.php
root@smknikediri:/var/www/info# cp wp-config-sample.php wp-config.php
root@smknikediri:/var/www/info# ls
index.php      wp-admin      wp-config-sample.php wp-links-opml.php wp-settings.php
license.txt    wp-blog-header.php wp-content          wp-load.php       wp-signup.php
readme.html   wp-comments-post.php wp-cron.php        wp-login.php      wp-trackback.php
wp-activate.php wp-config.php   wp-includes        wp-mail.php       xmlrpc.php
root@smknikediri:/var/www/info#
```

b) Kemudian lakukan beberapa konfigurasi pada wp-config.php:

- Masukkan nama database pada line **“define ('DB_NAME', 'database_name_here');”** menjadi **“define ('DB_NAME', 'wordpress');”**
- Masukkan nama user untuk akses database pada line **define ('DB_USER', 'username_here');** menjadi **define ('DB_USER', 'admin');**, gunakan user yang full akses.

- Masukkan password database pada line **define ('DB_PASSWORD', 'password_here');** menjadi **define ('DB_PASSWORD', '12345');**;
- Simpan konfigurasi.

```
GNU nano 3.2 /var/www/info/wp-config.php Modified
*
* @package WordPress
*/

// ** Database settings - You can get this info from your web host ** //
/** The name of the database for WordPress */
define( 'DB_NAME', 'wordpress' );

/** Database username */
define( 'DB_USER', 'admin' );

/** Database password */
define( 'DB_PASSWORD', '12345' );

/** Database hostname */
define( 'DB_HOST', 'localhost' );

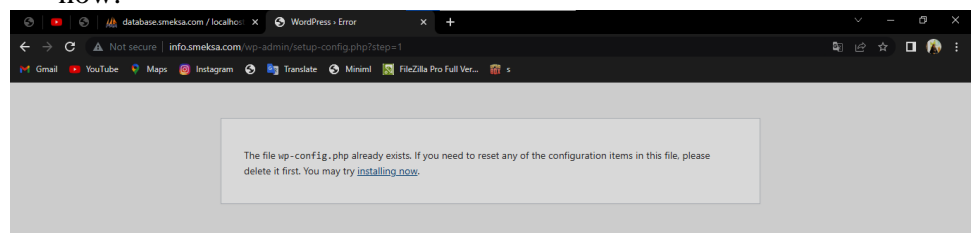
/** Database charset to use in creating database tables. */
define( 'DB_CHARSET', 'utf8' );

/** The database collate type. Don't change this if in doubt. */
define( 'DB_COLLATE', '' );

/**#@+
 * Authentication unique keys and salts.
 *
 * Change these to different unique phrases! You can generate these using
 * the {@link https://api.wordpress.org/secret-key/1.1/salt/ WordPress.org secret-key service}.
 *
 * You can change these at any point in time to invalidate all existing cookies.
 * This will force all users to have to log in again.
 */

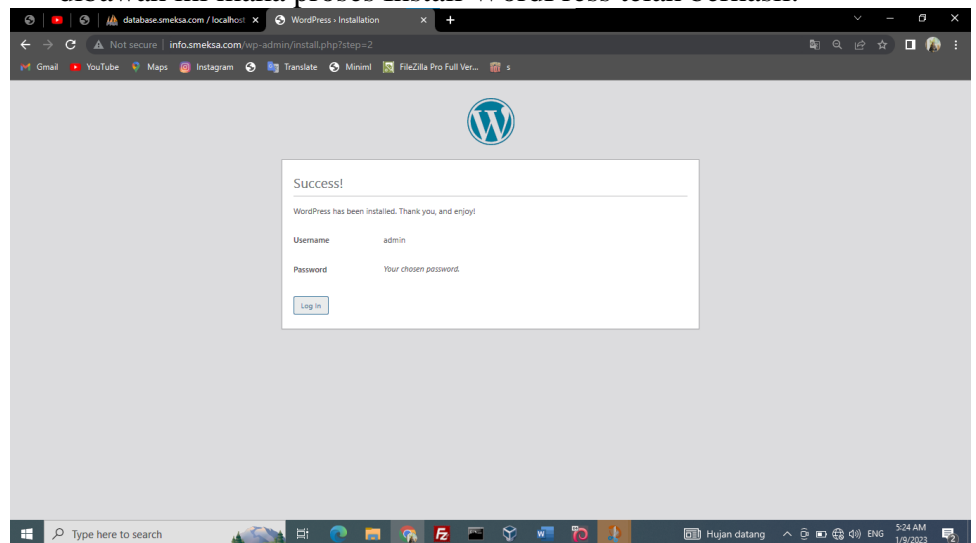
```

11) Buka kembali web wordpress/info kemudian refresh lalu klik installing now.

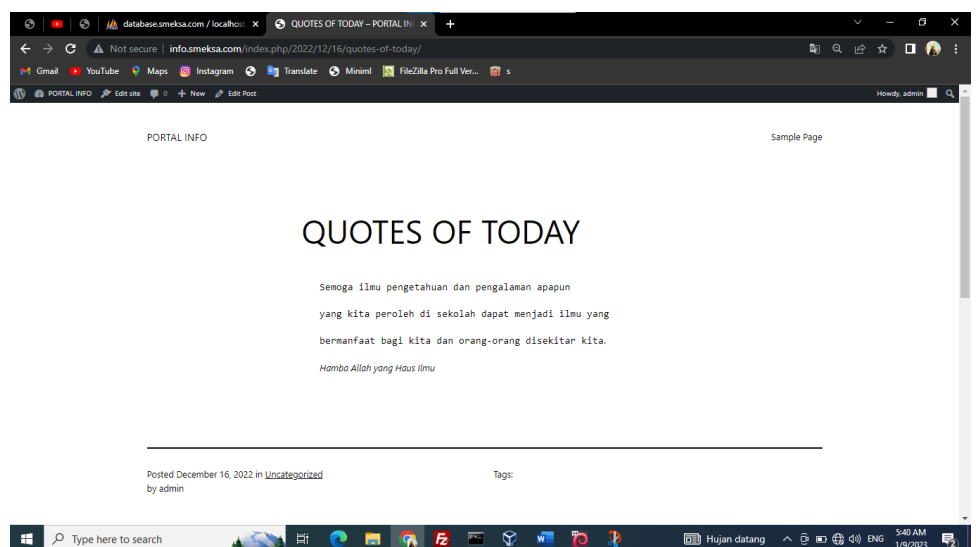
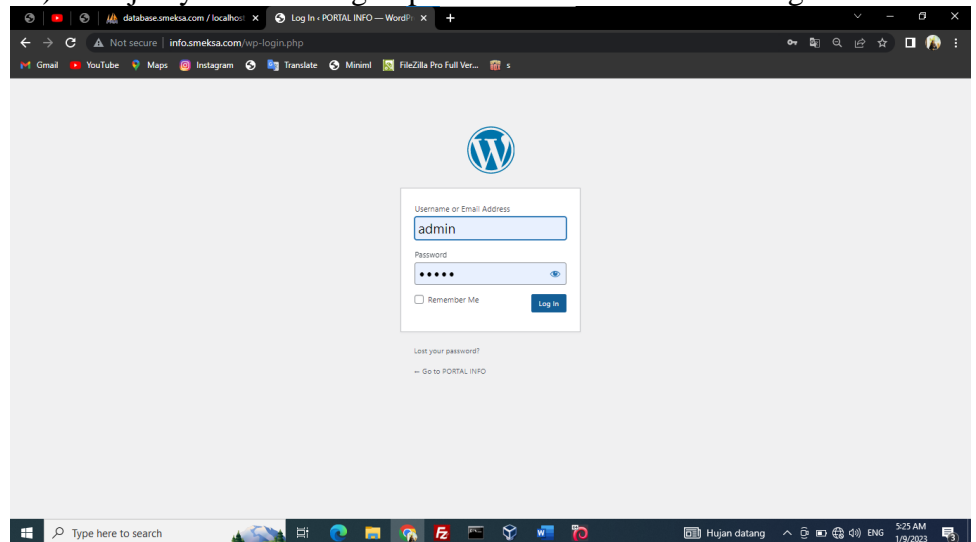


12) Setelah masuk pada halaman instalasi inputkan data seperti dibawah ini.

Jika sudah klik Install WordPress. Lalu apabila muncul halaman seperti dibawah ini maka proses Install WordPress telah berhasil.



13) Selanjutnya lakukan log in pada halaman WordPress dengan user admin.



KESAN

Semoga ilmu yang saya peroleh dari praktek ini dapat menjadi ilmu yang bermanfaat dan barokah untuk saya kedepannya.