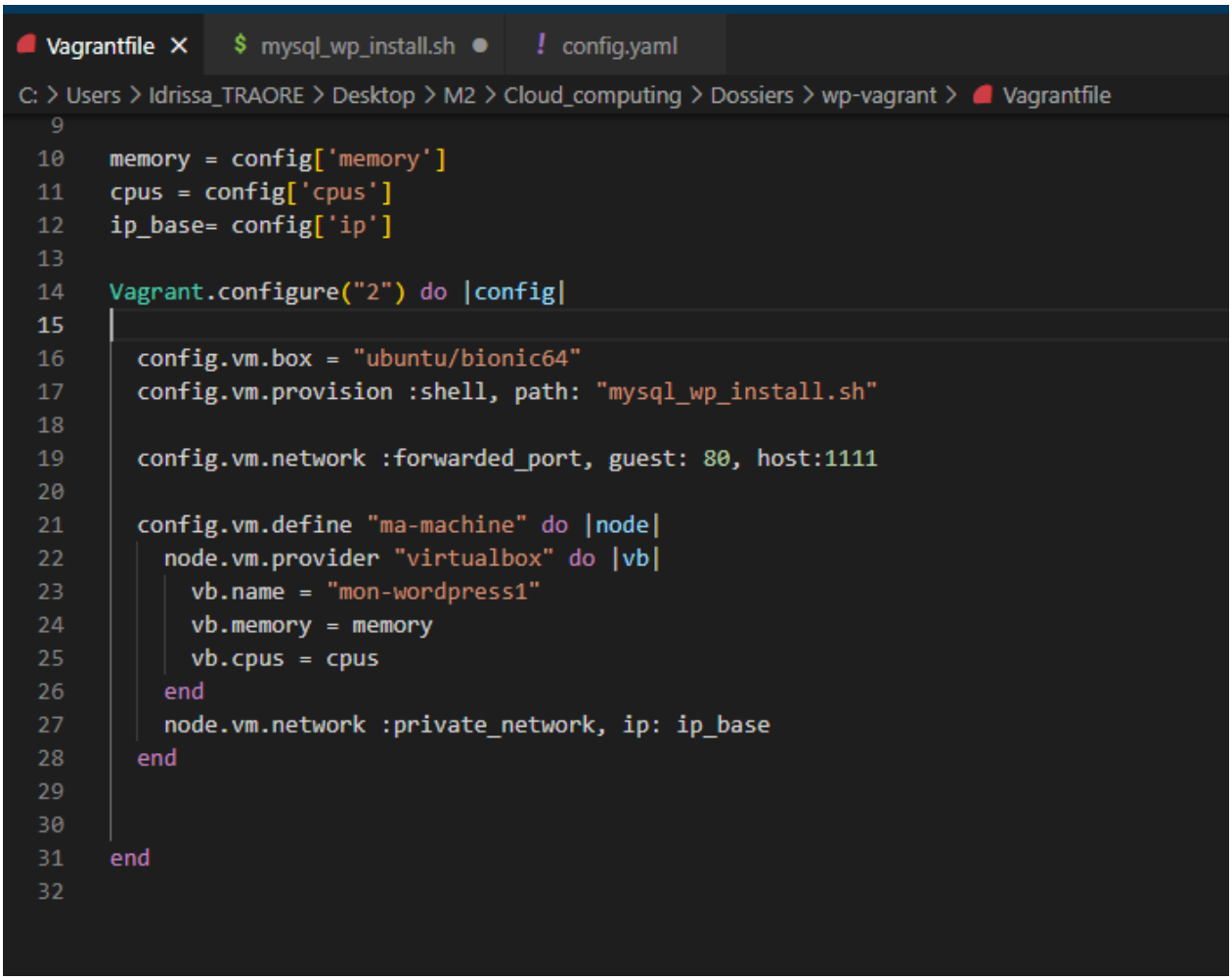
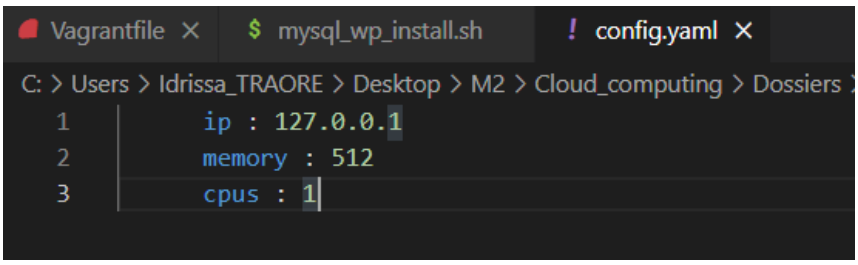
Mini-projet Cloud computing 2022

Partie 1 : Déploiement avec vagant

Tout d'abord, j'ai créé mon fichier « Vagrantfile » a l'aide de la commande « vagrant init » puis « vagrant up » et j'ai renseigné les informations nécessaires du fichier « config. yaml » (ip, memory, cpus)





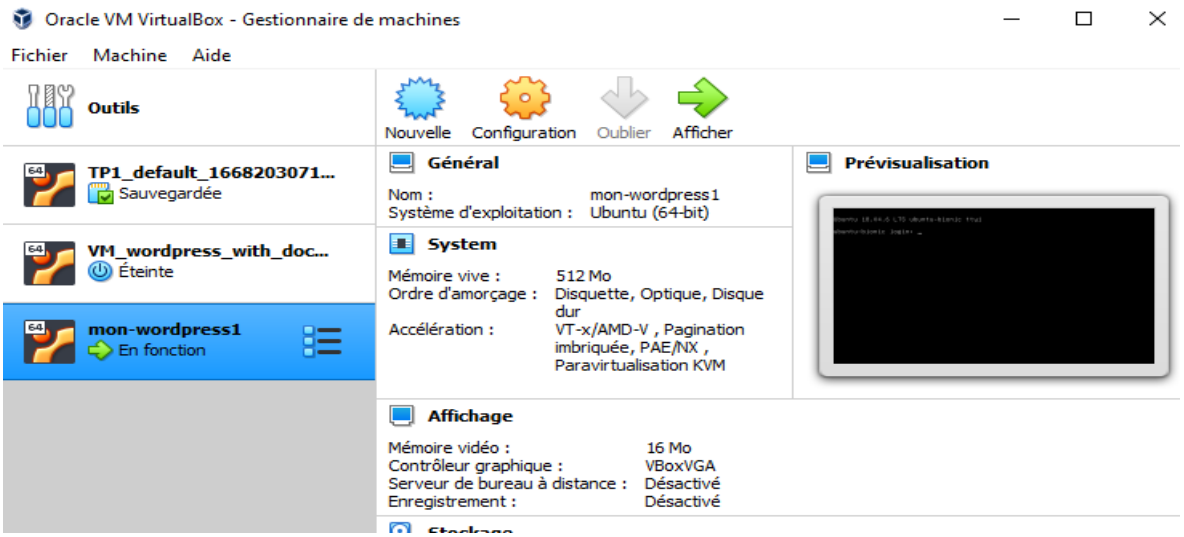
Je démarre avec « Vagrant up »

```
C:\Users\Idrissa_TRAORE\Desktop\M2\Cloud_computing\Dossiers\wp-vagrant
λ vagrant up
Bringing machine 'ma-machine' up with 'virtualbox' provider...
==> ma-machine: You assigned a static IP ending in ".1" to this machine.
==> ma-machine: This is very often used by the router and can cause the
==> ma-machine: network to not work properly. If the network doesn't work
==> ma-machine: properly, try changing this IP.
==> ma-machine: You assigned a static IP ending in ".1" to this machine.
==> ma-machine: This is very often used by the router and can cause the
==> ma-machine: network to not work properly. If the network doesn't work
==> ma-machine: properly, try changing this IP.
==> ma-machine: Checking if box 'ubuntu/bionic64' version '20221117.0.0' is up to d
ate...
==> ma-machine: Setting the name of the VM: mon-wordpress1
==> ma-machine: Fixed port collision for 22 => 2222. Now on port 2201.
==> ma-machine: Clearing any previously set network interfaces...
==> ma-machine: Preparing network interfaces based on configuration...
    ma-machine: Adapter 1: nat
    ma-machine: Adapter 2: hostonly
==> ma-machine: Forwarding ports...
    ma-machine: 80 (guest) => 1111 (host) (adapter 1)
    ma-machine: 22 (guest) => 2201 (host) (adapter 1)
==> ma-machine: Running 'pre-boot' VM customizations...
==> ma-machine: Booting VM...
==> ma-machine: Waiting for machine to boot. This may take a few minutes...
    ma-machine: SSH address: 127.0.0.1:2201
    ma-machine: SSH username: vagrant
    ma-machine: SSH auth method: private key
```

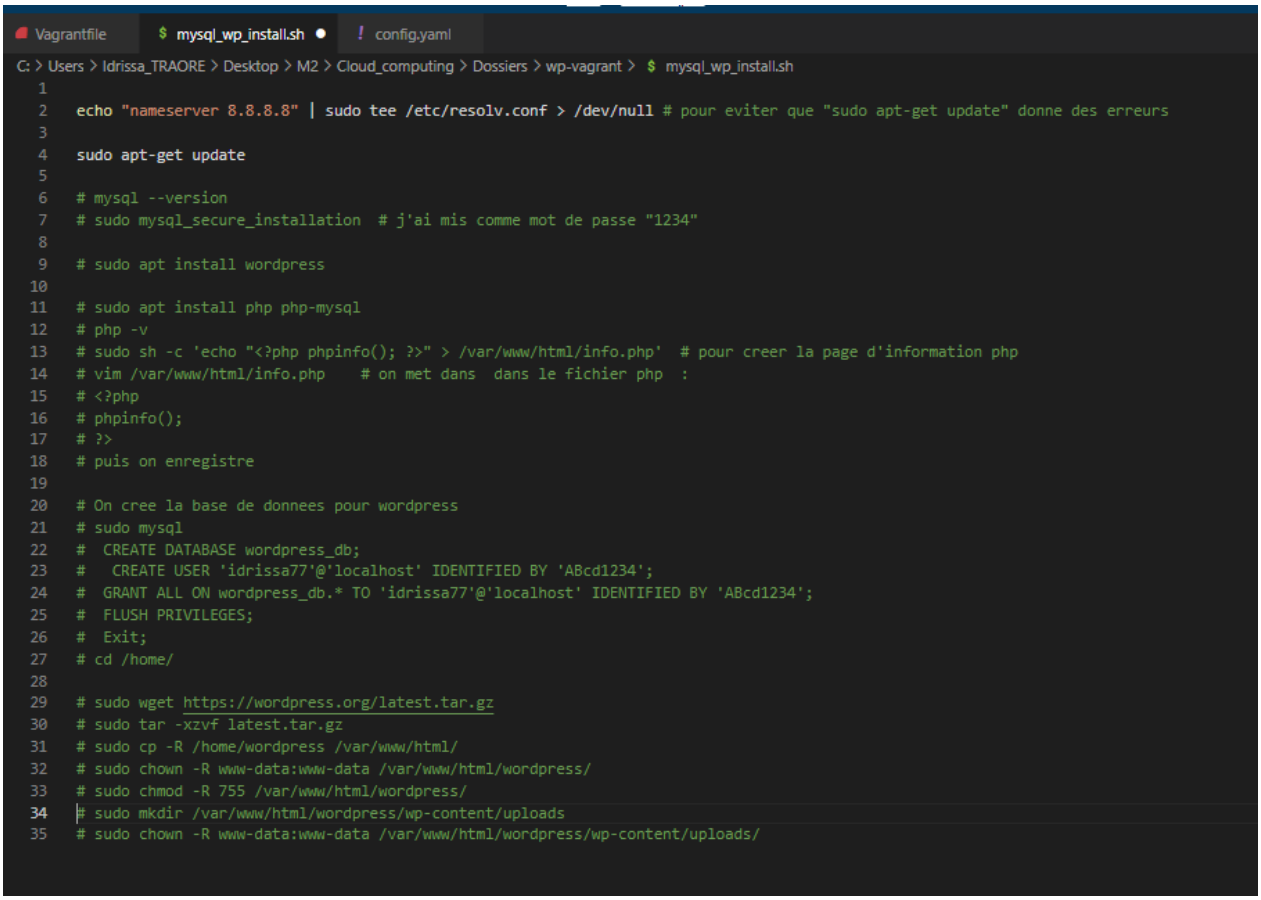
```
    ma-machine:
    ma-machine: Guest Additions Version: 5.2.42
    ma-machine: VirtualBox Version: 6.1
==> ma-machine: Configuring and enabling network interfaces...
==> ma-machine: Mounting shared folders...
    ma-machine: /vagrant => C:/Users/Idrissa_TRAORE/Desktop/M2/Cloud_computing/Dossiers/wp-vagrant
==> ma-machine: Running provisioner: shell...
    ma-machine: Running: C:/Users/IDRISS~1/AppData/Local/Temp/vagrant-shell20221123-9172-1q4vbz5.sh
    ma-machine: Get:1 http://security.ubuntu.com/ubuntu bionic-security InRelease [88.7 kB]
    ma-machine: Hit:2 http://archive.ubuntu.com/ubuntu bionic InRelease
    ma-machine: Get:3 http://archive.ubuntu.com/ubuntu bionic-updates InRelease [88.7 kB]
    ma-machine: Get:4 http://security.ubuntu.com/ubuntu bionic-security/main amd64 Packages [2470 kB]
    ma-machine: Get:5 http://archive.ubuntu.com/ubuntu bionic-backports InRelease [83.3 kB]
    ma-machine: Get:6 http://archive.ubuntu.com/ubuntu bionic/universe amd64 Packages [8570 kB]
    ma-machine: Get:7 http://archive.ubuntu.com/ubuntu bionic/universe Translation-en [4941 kB]
    ma-machine: Get:8 http://security.ubuntu.com/ubuntu bionic-security/main Translation-en [428 kB]
    ma-machine: Get:9 http://archive.ubuntu.com/ubuntu bionic/multiverse amd64 Packages [151 kB]
    ma-machine: Get:10 http://archive.ubuntu.com/ubuntu bionic/multiverse Translation-en [108 kB]
    ma-machine: Get:11 http://archive.ubuntu.com/ubuntu bionic-updates/main amd64 Packages [2807 kB]
    ma-machine: Get:12 http://security.ubuntu.com/ubuntu bionic-security/restricted amd64 Packages [983 kB]
    ma-machine: Get:13 http://archive.ubuntu.com/ubuntu bionic-updates/main Translation-en [516 kB]
    ma-machine: Get:14 http://archive.ubuntu.com/ubuntu bionic-updates/restricted amd64 Packages [1013 kB]
    ma-machine: Get:15 http://archive.ubuntu.com/ubuntu bionic-updates/restricted Translation-en [140 kB]
    ma-machine: Get:16 http://archive.ubuntu.com/ubuntu bionic-updates/universe amd64 Packages [1858 kB]
    ma-machine: Get:17 http://archive.ubuntu.com/ubuntu bionic-updates/universe Translation-en [402 kB]
    ma-machine: Get:18 http://archive.ubuntu.com/ubuntu bionic-updates/multiverse amd64 Packages [24.9 kB]
    ma-machine: Get:19 http://archive.ubuntu.com/ubuntu bionic-updates/multiverse Translation-en [6012 B]
    ma-machine: Get:20 http://archive.ubuntu.com/ubuntu bionic-backports/main amd64 Packages [53.3 kB]
    ma-machine: Get:21 http://archive.ubuntu.com/ubuntu bionic-backports/main Translation-en [14.6 kB]
    ma-machine: Get:22 http://archive.ubuntu.com/ubuntu bionic-backports/universe amd64 Packages [18.1 kB]
    ma-machine: Get:23 http://archive.ubuntu.com/ubuntu bionic-backports/universe Translation-en [8668 B]
    ma-machine: Get:24 http://security.ubuntu.com/ubuntu bionic-security/restricted Translation-en [136 kB]
    ma-machine: Get:25 http://security.ubuntu.com/ubuntu bionic-security/universe amd64 Packages [1245 kB]
    ma-machine: Get:26 http://security.ubuntu.com/ubuntu bionic-security/universe Translation-en [286 kB]
    ma-machine: Get:27 http://security.ubuntu.com/ubuntu bionic-security/multiverse amd64 Packages [19.0 kB]
    ma-machine: Get:28 http://security.ubuntu.com/ubuntu bionic-security/multiverse Translation-en [3836 B]
    ma-machine: Fetched 26.5 MB in 16s (1644 kB/s)
    ma-machine: Reading package lists...

C:\Users\Idrissa_TRAORE\Desktop\M2\Cloud_computing\Dossiers\wp-vagrant
λ
```

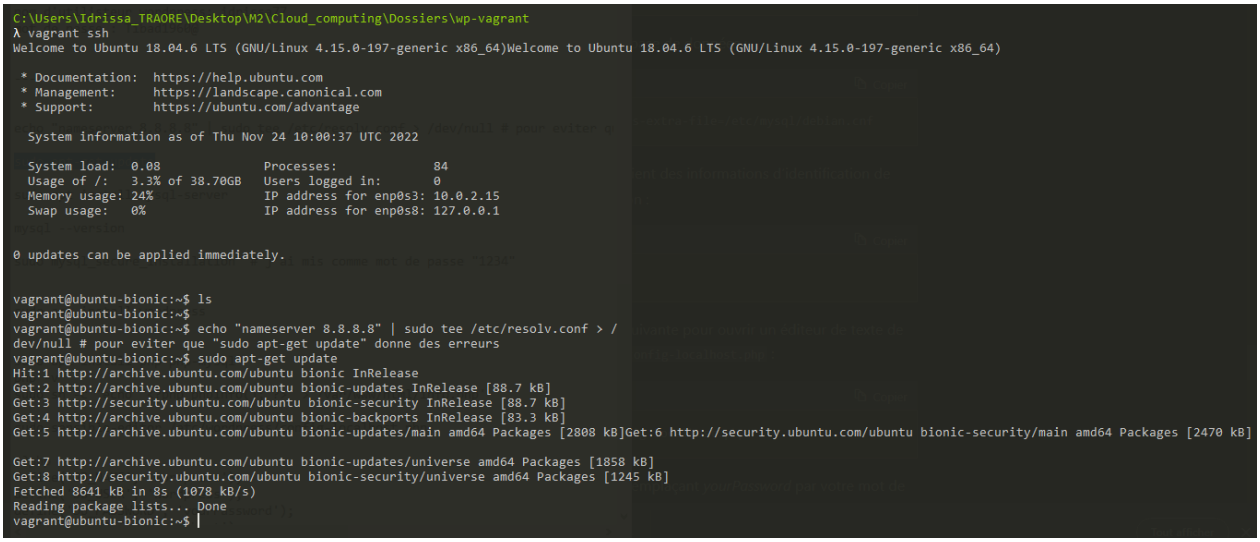
Ce qui m’a donné la machine virtuelle « mon-wordpress1 »



Ensuite j'ai créé un fichier mysql_wp_install.sh dans lequel j'ai mis uniquement 2 commandes de lignes a exécuter et le reste en commentaires que j'exécuterai ligne par lignes après la connexion via la commande « vagrant ssh »



Je me suis connecte à la machine avec « vagrant ssh »



J’installe MySQL server

```
vagrant@ubuntu-bionic:~$ sudo apt install mysql-server
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  libaio1 libcgi-fast-perl libcgi-pm-perl libencode-locale-perl libevent-core-2.1-6 libfcgi-perl libhtml-parser-perl libhtml-tagset-perl libhtml-template-perl
  libhttp-date-perl libhttp-message-perl libio-html-perl liblwp-mediatypes-perl libtimedate-perl liburi-perl mysql-client-5.7 mysql-client-core-5.7 mysql-common
  mysql-server-5.7 mysql-server-core-5.7
Suggested packages:
  libdata-dump-perl libipc-sharedcache-perl libwww-perl mailx tinyca
The following NEW packages will be installed:
  libaio1 libcgi-fast-perl libcgi-pm-perl libencode-locale-perl libevent-core-2.1-6 libfcgi-perl libhtml-parser-perl libhtml-tagset-perl libhtml-template-perl
  libhttp-date-perl libhttp-message-perl libio-html-perl liblwp-mediatypes-perl libtimedate-perl liburi-perl mysql-client-5.7 mysql-client-core-5.7 mysql-common
  mysql-server mysql-server-5.7 mysql-server-core-5.7
0 upgraded, 21 newly installed, 0 to remove and 1 not upgraded.
Need to get 20.1 MB of archives.
After this operation, 157 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://archive.ubuntu.com/ubuntu bionic/main amd64 mysql-common all 5.8+1.0.4 [7308 B]
Get:2 http://archive.ubuntu.com/ubuntu bionic-updates/main amd64 libaio1 amd64 0.3.110-5ubuntu0.1 [6476 B]
Get:3 http://archive.ubuntu.com/ubuntu bionic-updates/main amd64 mysql-client-core-5.7 amd64 5.7.40-0ubuntu0.18.04.1 [6755 kB]
Get:4 http://archive.ubuntu.com/ubuntu bionic-updates/main amd64 mysql-client-5.7 amd64 5.7.40-0ubuntu0.18.04.1 [2028 kB]
Get:5 http://archive.ubuntu.com/ubuntu bionic-updates/main amd64 mysql-server-core-5.7 amd64 5.7.40-0ubuntu0.18.04.1 [7542 kB]
53% [5 mysql-server-core-5.7 3652 kB/7542 kB 48%]                                                                                    518 kB/s 14s
```

Je vérifie la version MySQL installée

```
vagrant@ubuntu-bionic:~$ mysql --version
mysql  Ver 14.14 Distrib 5.7.40, for Linux (x86_64) using  EditLine wrapper
vagrant@ubuntu-bionic:~$
```

Afin de mieux sécuriser l’installation de MySQL, notamment en définissant un mot de passe racine, on utilise « mysql_secure_installation ». Mon mot de passe entré est : 1234

```
vagrant@ubuntu-bionic:~$ sudo mysql_secure_installation

Securing the MySQL server deployment.

Connecting to MySQL using a blank password.

VALIDATE PASSWORD PLUGIN can be used to test passwords
and improve security. It checks the strength of password
and allows the users to set only those passwords which are
secure enough. Would you like to setup VALIDATE PASSWORD plugin?

Press y|Y for Yes, any other key for No: y
```

```
Estimated strength of the password: 25
Do you wish to continue with the password provided?(Press y|Y for Yes, any other key for No) : y
By default, a MySQL installation has an anonymous user,
allowing anyone to log into MySQL 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? (Press y|Y for Yes, any other key for No) : 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? (Press y|Y for Yes, any other key for No) : y
Success.

By default, MySQL 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 to it? (Press y|Y for Yes, any other key for No) : 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 tables now? (Press y|Y for Yes, any other key for No) : y
Success.

All done!
```

On procède à l'installation de PHP avec « sudo apt install php php-mysql »

```
vagrant@ubuntu-bionic:~$ sudo apt install php php-mysql
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  apache2 apache2-bin apache2-data apache2-utils libapache2-mod-php7.2 libapr1 libaprutil1 libaprutil1-dbd-sqlite3 libaprutil1-ldap liblua5.2-0 libsodium23 php-common
  php7.2 php7.2-cli php7.2-common php7.2-json php7.2-mysql php7.2-opcache php7.2-readline ssl-cert
Suggested packages:
  www-browser apache2-doc apache2-suexec-pristine | apache2-suexec-custom php-pear openssl-blacklist
The following NEW packages will be installed:
  apache2 apache2-bin apache2-data apache2-utils libapache2-mod-php7.2 libapr1 libaprutil1 libaprutil1-dbd-sqlite3 libaprutil1-ldap liblua5.2-0 libsodium23 php
  php-common php-mysql php7.2 php7.2-cli php7.2-common php7.2-json php7.2-mysql php7.2-opcache php7.2-readline ssl-cert
0 upgraded, 22 newly installed, 0 to remove and 1 not upgraded.
Need to get 5870 kB of archives.
After this operation, 25.0 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://archive.ubuntu.com/ubuntu bionic/main amd64 libapr1 amd64 1.6.3-2 [90.9 kB]
Get:2 http://archive.ubuntu.com/ubuntu bionic/main amd64 libaprutil1 amd64 1.6.1-2 [84.4 kB]
Get:3 http://archive.ubuntu.com/ubuntu bionic/main amd64 libaprutil1-dbd-sqlite3 amd64 1.6.1-2 [10.6 kB]
Get:4 http://archive.ubuntu.com/ubuntu bionic/main amd64 libaprutil1-ldap amd64 1.6.1-2 [8764 B]
Get:5 http://archive.ubuntu.com/ubuntu bionic/main amd64 liblua5.2-0 amd64 5.2.4-1.1build1 [108 kB]
Get:6 http://archive.ubuntu.com/ubuntu bionic-updates/main amd64 apache2-bin amd64 2.4.29-1ubuntu4.25 [1072 kB]
Get:7 http://archive.ubuntu.com/ubuntu bionic-updates/main amd64 apache2-utils amd64 2.4.29-1ubuntu4.25 [83.8 kB]
Get:8 http://archive.ubuntu.com/ubuntu bionic-updates/main amd64 apache2-data all 2.4.29-1ubuntu4.25 [160 kB]
Get:9 http://archive.ubuntu.com/ubuntu bionic-updates/main amd64 apache2 amd64 2.4.29-1ubuntu4.25 [95.1 kB]
Get:10 http://archive.ubuntu.com/ubuntu bionic/main amd64 php-common all 1:60ubuntu1 [12.1 kB]
Get:11 http://archive.ubuntu.com/ubuntu bionic-updates/main amd64 php7.2-common amd64 7.2.24-0ubuntu0.18.04.15 [891 kB]
Get:12 http://archive.ubuntu.com/ubuntu bionic-updates/main amd64 php7.2-json amd64 7.2.24-0ubuntu0.18.04.15 [18.9 kB]
Get:13 http://archive.ubuntu.com/ubuntu bionic-updates/main amd64 php7.2-opcache amd64 7.2.24-0ubuntu0.18.04.15 [165 kB]
Get:14 http://archive.ubuntu.com/ubuntu bionic-updates/main amd64 php7.2-readline amd64 7.2.24-0ubuntu0.18.04.15 [12.2 kB]
Get:15 http://archive.ubuntu.com/ubuntu bionic/main amd64 libsodium23 amd64 1.0.16-2 [143 kB]
Get:16 http://archive.ubuntu.com/ubuntu bionic-updates/main amd64 php7.2-cli amd64 7.2.24-0ubuntu0.18.04.15 [1412 kB]
54% [16 php7.2-cli 0 B/1412 kB 0%]
```

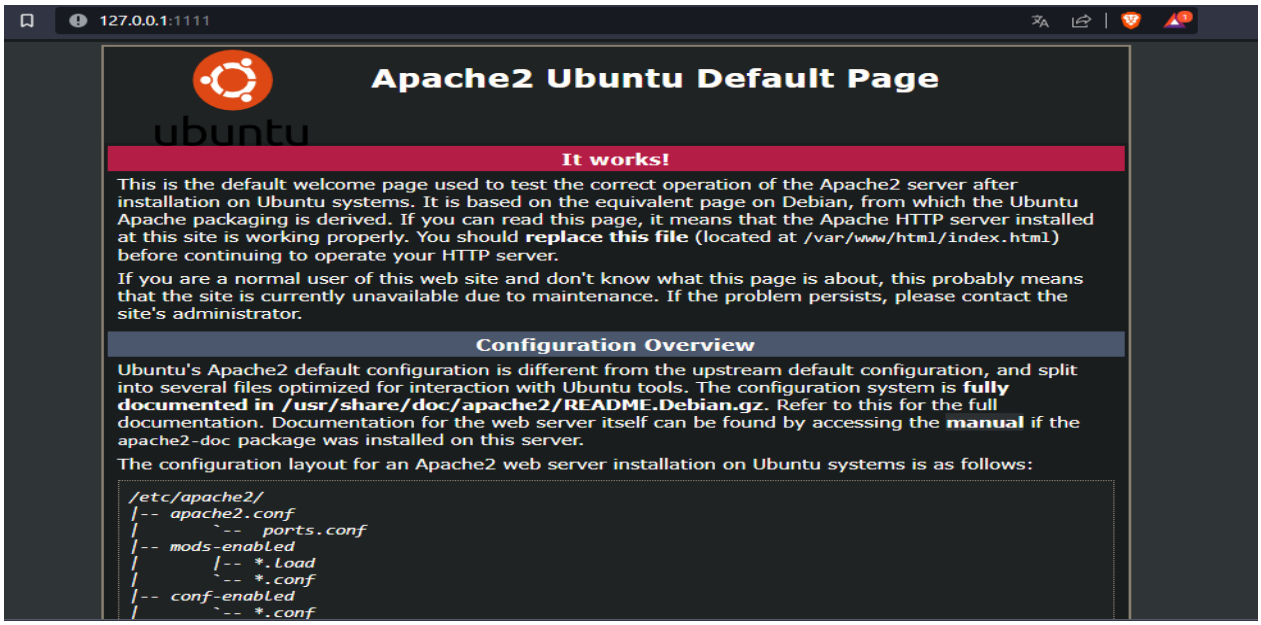
Puis nous vérifions la version installée via la commande « php -v »

```
vagrant@ubuntu-bionic:~$ php -v
PHP 7.2.24-0ubuntu0.18.04.15 (cli) (built: Nov  2 2022 09:09:52) ( NTS )
Copyright (c) 1997-2018 The PHP Group
Zend Engine v3.2.0, Copyright (c) 1998-2018 Zend Technologies
    with Zend OPcache v7.2.24-0ubuntu0.18.04.15, Copyright (c) 1999-2018, by Zend Technologies
vagrant@ubuntu-bionic:~$
```

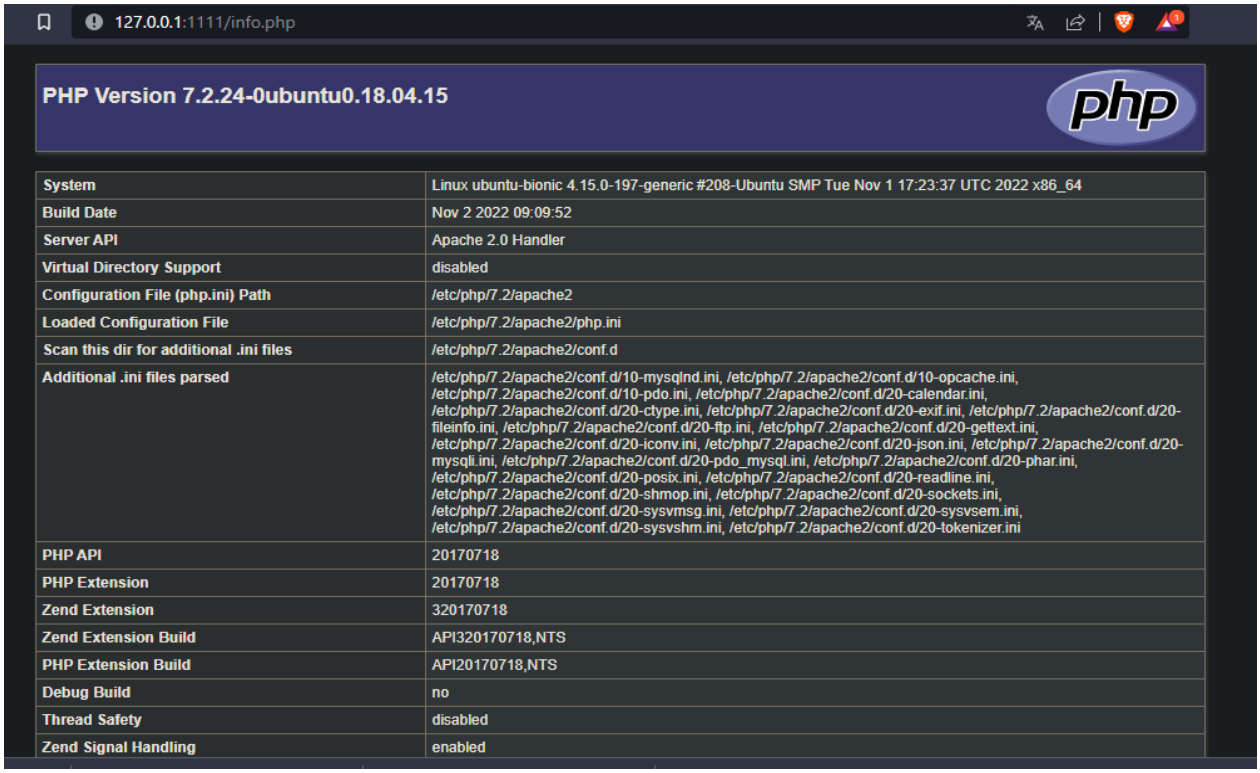
On crée une page d'informations PHP rapide pour l'afficher dans un navigateur

```
vagrant@ubuntu-bionic:~$ sudo sh -c 'echo "<?php phpinfo(); ?>" > /var/www/html/info.php'
```

On peut voir sur dans le navigateur les page apache en tapant http://127.0.0.1:1111



Et la page php en saisissant http://127.0.0.1:1111/info.php



System	Linux ubuntu-bionic 4.15.0-197-generic #208-Ubuntu SMP Tue Nov 1 17:23:37 UTC 2022 x86_64
Build Date	Nov 2 2022 09:09:52
Server API	Apache 2.0 Handler
Virtual Directory Support	disabled
Configuration File (php.ini) Path	/etc/php/7.2/apache2
Loaded Configuration File	/etc/php/7.2/apache2/php.ini
Scan this dir for additional .ini files	/etc/php/7.2/apache2/conf.d
Additional .ini files parsed	/etc/php/7.2/apache2/conf.d/10-mysqlnd.ini, /etc/php/7.2/apache2/conf.d/10-opcache.ini, /etc/php/7.2/apache2/conf.d/10-pdo.ini, /etc/php/7.2/apache2/conf.d/20-calendar.ini, /etc/php/7.2/apache2/conf.d/20-ctype.ini, /etc/php/7.2/apache2/conf.d/20-exif.ini, /etc/php/7.2/apache2/conf.d/20-fileinfo.ini, /etc/php/7.2/apache2/conf.d/20-ftp.ini, /etc/php/7.2/apache2/conf.d/20-gettext.ini, /etc/php/7.2/apache2/conf.d/20-iconv.ini, /etc/php/7.2/apache2/conf.d/20-json.ini, /etc/php/7.2/apache2/conf.d/20-mysqli.ini, /etc/php/7.2/apache2/conf.d/20-pdo_mysql.ini, /etc/php/7.2/apache2/conf.d/20-phar.ini, /etc/php/7.2/apache2/conf.d/20-posix.ini, /etc/php/7.2/apache2/conf.d/20-readline.ini, /etc/php/7.2/apache2/conf.d/20-shmop.ini, /etc/php/7.2/apache2/conf.d/20-sockets.ini, /etc/php/7.2/apache2/conf.d/20-sysvmsg.ini, /etc/php/7.2/apache2/conf.d/20-sysvsem.ini, /etc/php/7.2/apache2/conf.d/20-sysvshm.ini, /etc/php/7.2/apache2/conf.d/20-tokenizer.ini
PHP API	20170718
PHP Extension	20170718
Zend Extension	320170718
Zend Extension Build	API320170718,NTS
PHP Extension Build	API20170718,NTS
Debug Build	no
Thread Safety	disabled
Zend Signal Handling	enabled

Nous créons la base de données que nous utiliserons pour wordpress en servant des commandes *suivantes : sudo mysql*

CREATE DATABASE wordpress_db;

CREATE USER 'idrissa77'@'localhost' IDENTIFIED BY 'ABcd1234';

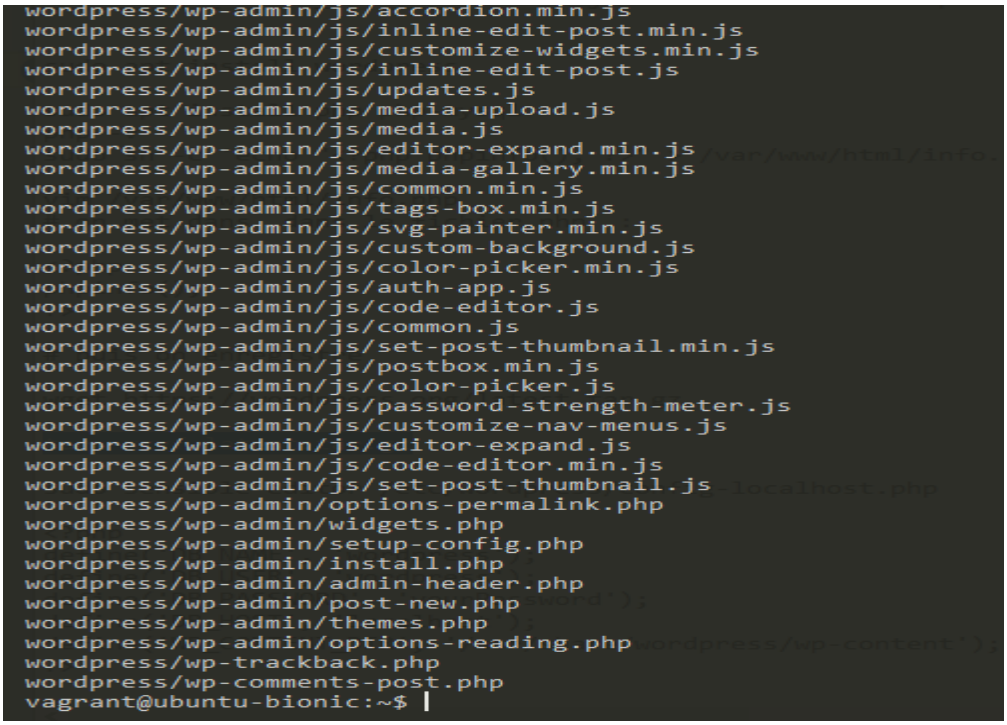
GRANT ALL ON wordpress_db. TO 'idrissa77'@'localhost' IDENTIFIED BY 'ABcd1234'; # pour accorder des privileges a l'utilisateur*

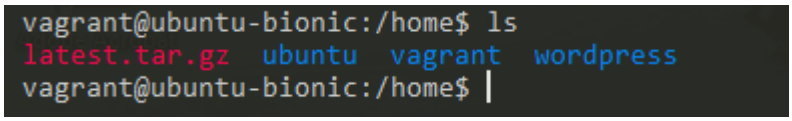
FLUSH PRIVILEGES;

Exit;

On se place de dossier bureau avec ‘cd /home/ ‘ puis télécharge WordPress avec la commande

‘sudo wget https://wordpress.org/latest.tar.gz’ et on l’extrait avec ’ sudo tar -xzvf latest.tar.gz’ (vu sur le site https://wordpress.org/support/article/how-to-install-wordpress/)





On copie le dossier WordPress vers le chemin ‘ /var/www/html/ ‘au moyen de

‘*sudo cp -R /home/wordpress /var/www/html/ ‘* .

Puis nous exécutons la commande ‘ *sudo chown -R www-data:www-data /var/www/html/wordpress/ ’*

Ensuite, on modifie les autorisations de fichier du dossier WordPress avec

‘*sudo chmod -R 755 /var/www/html/wordpress/*’ .

Par la suite, on crée le répertoire 'uploads' par la commande

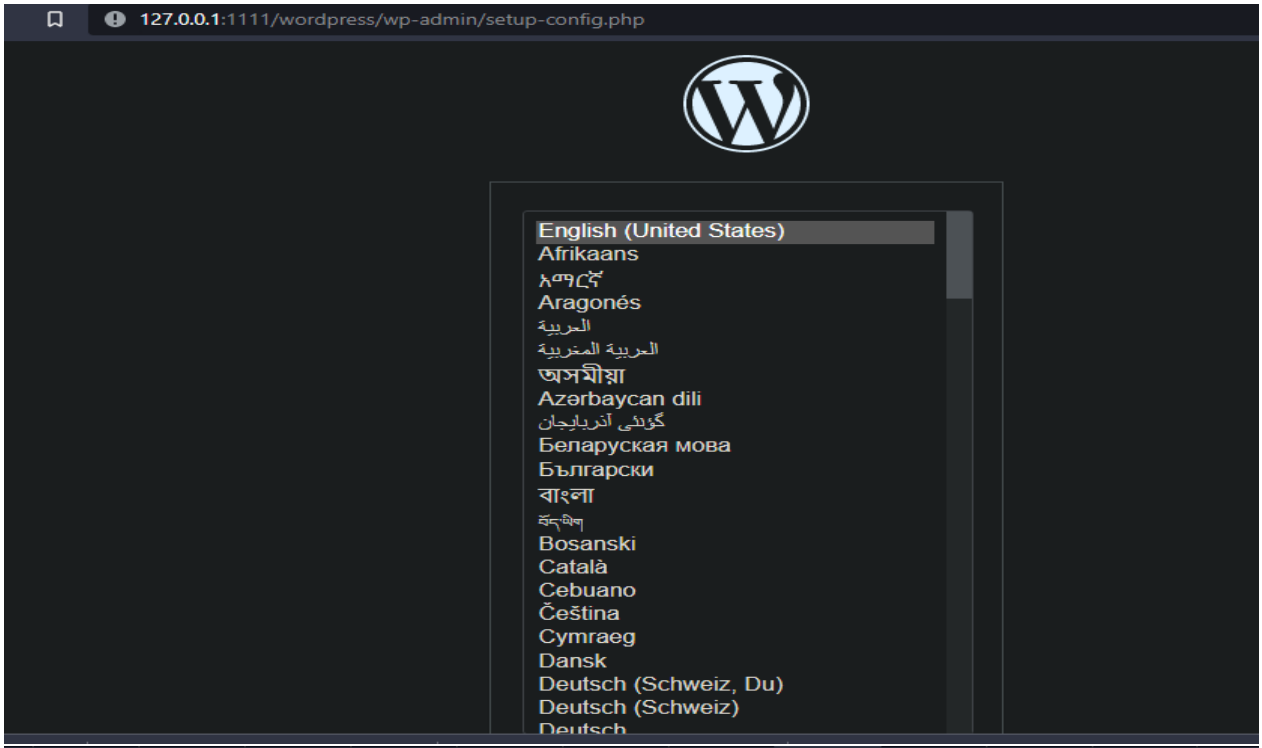
‘sudo mkdir /var/www/html/wordpress/wp-content/uploads’

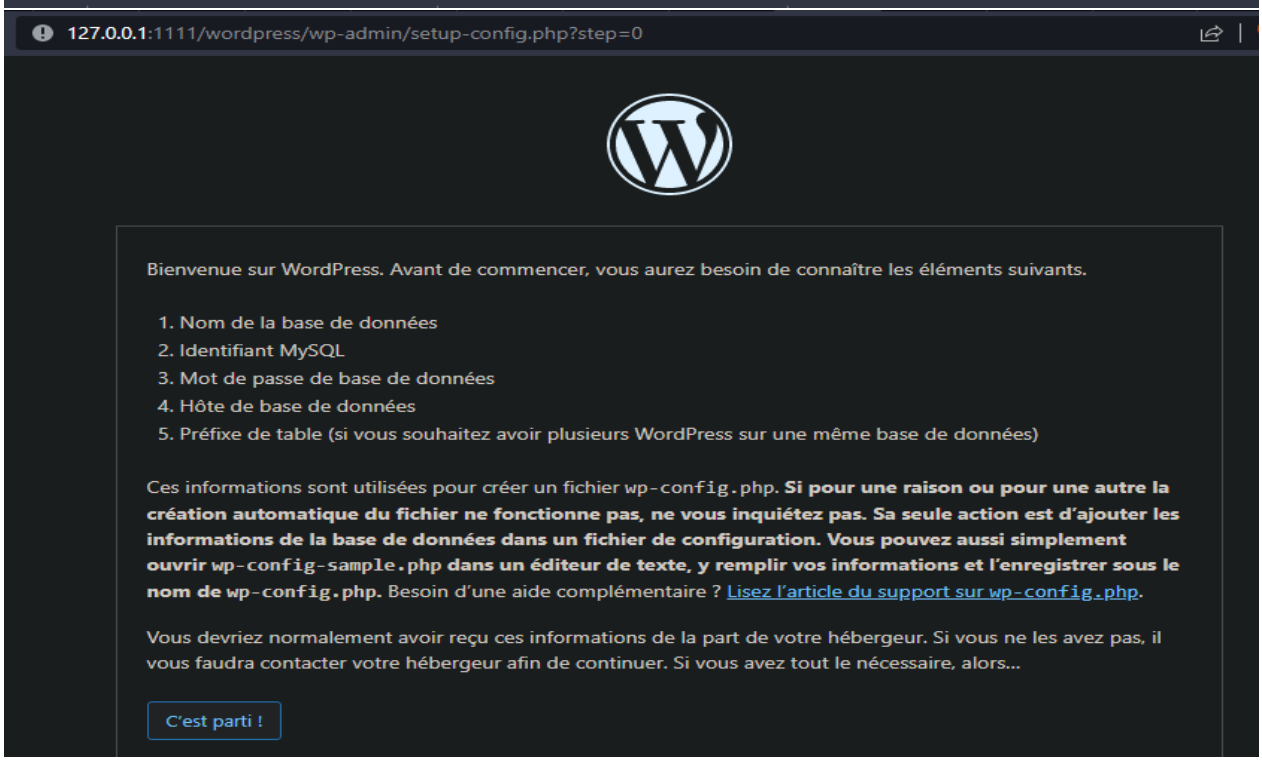
Enfin, on modifie les autorisations du répertoire 'uploads' avec

‘sudo chown -R www-data:www-data /var/www/html/wordpress/wp-content/uploads/’

```
vagrant@ubuntu-bionic:/home$ sudo chown -R www-data:www-data /var/www/html/wordpress/
vagrant@ubuntu-bionic:/home$ sudo chmod -R 755 /var/www/html/wordpress/
vagrant@ubuntu-bionic:/home$ mkdir /var/www/html/wordpress/wp-content/uploads
mkdir: cannot create directory ‘/var/www/html/wordpress/wp-content/uploads’: Permission denied
vagrant@ubuntu-bionic:/home$ sudo mkdir /var/www/html/wordpress/wp-content/uploads
vagrant@ubuntu-bionic:/home$ sudo chown -R www-data:www-data /var/www/html/wordpress/wp-content/uploads/
vagrant@ubuntu-bionic:/home$
```

On peut maintenant accéder à notre site WordPress en tapant : http://127.0.0.1:1111/wordpress

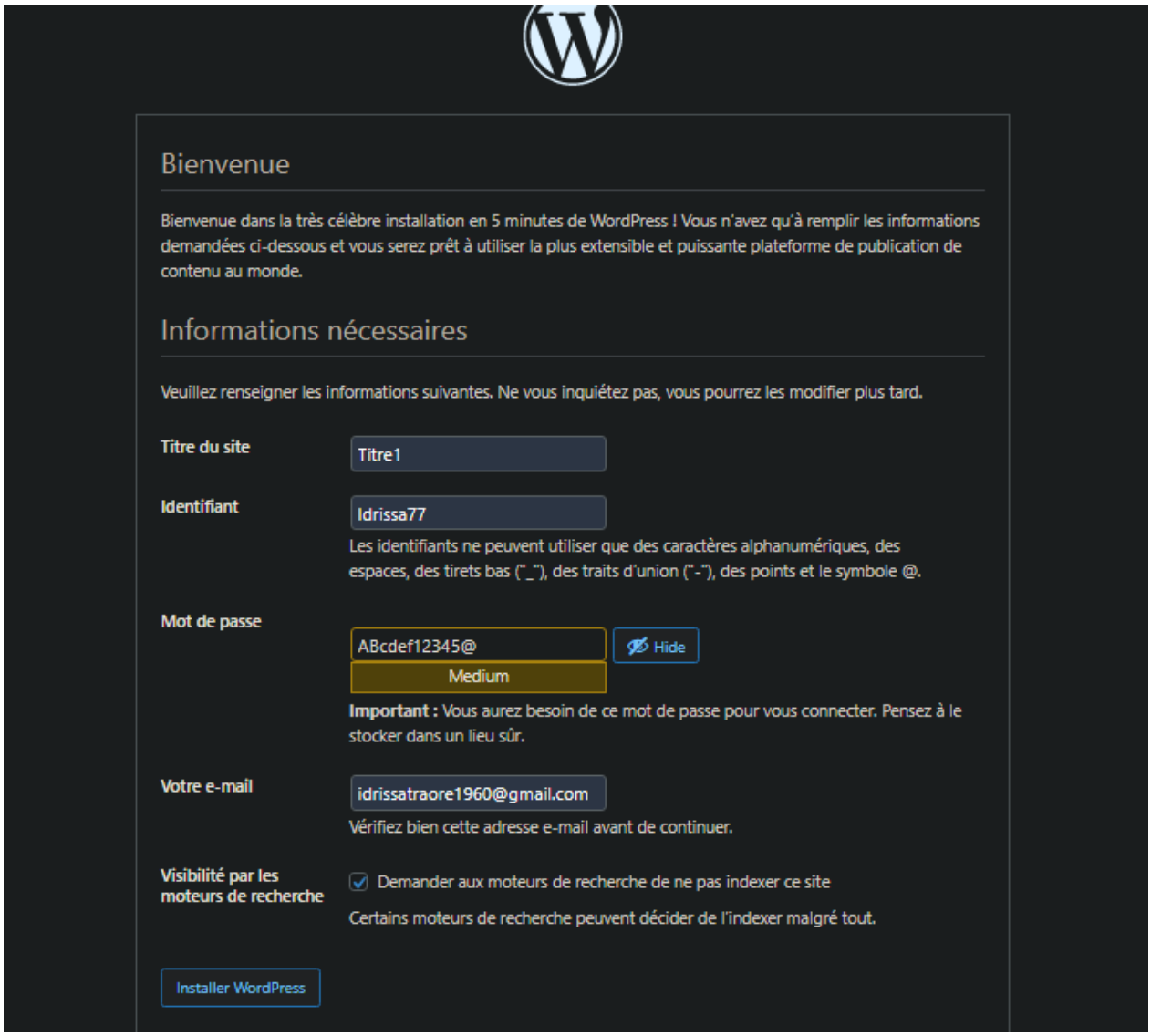


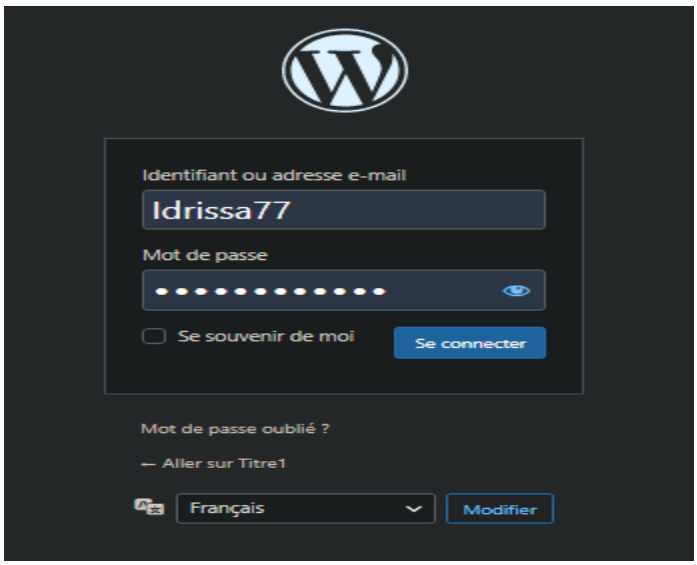


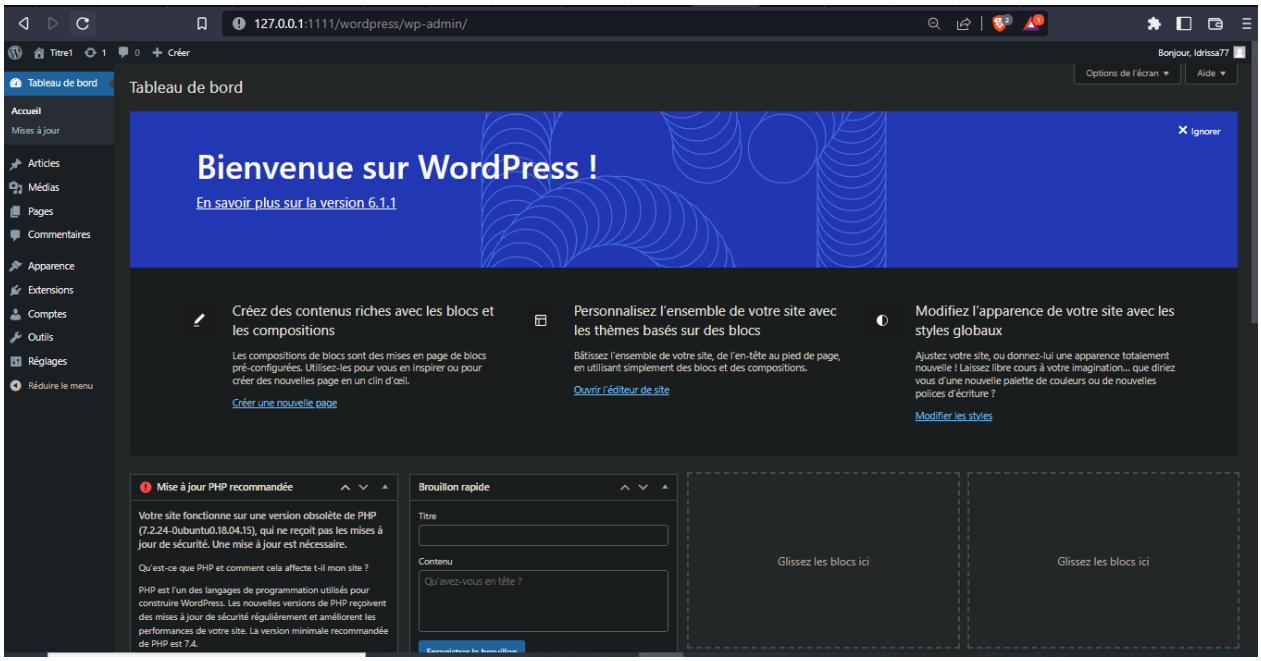
Vous devez saisir ci-dessous les détails de connexion à votre base de données. Si vous ne les connaissez pas, contactez votre hébergeur.

Nom de la base de données	wordpress_db	Le nom de la base de données avec laquelle vous souhaitez utiliser WordPress.
Identifiant	idrissa77	Votre identifiant MySQL.
Mot de passe	ABcd1234	Votre mot de passe de base de données.
Adresse de la base de données	localhost	Si `localhost` ne fonctionne pas, demandez cette information à l'hébergeur de votre site.
Préfixe des tables	wp_	Si vous souhaitez faire tourner plusieurs installations de WordPress sur une même base de données, modifiez ce réglage.

Envoyer


Bienvenue
Bienvenue dans la très célèbre installation en 5 minutes de WordPress ! Vous n'avez qu'à remplir les informations demandées ci-dessous et vous serez prêt à utiliser la plus extensible et puissante plateforme de publication de contenu au monde.
Informations nécessaires
Veuillez renseigner les informations suivantes. Ne vous inquiétez pas, vous pourrez les modifier plus tard.
Titre du site
Titre1
Identifiant
Idrissa77
Les identifiants ne peuvent utiliser que des caractères alphanumériques, des espaces, des tirets bas ("_"), des traits d'union ("-"), des points et le symbole @.
Mot de passe
ABcdef12345@
Hide
Medium
Important : Vous aurez besoin de ce mot de passe pour vous connecter. Pensez à le stocker dans un lieu sûr.
Votre e-mail
idrissatraore1960@gmail.com
Vérifiez bien cette adresse e-mail avant de continuer.
Visibilité par les moteurs de recherche
Demander aux moteurs de recherche de ne pas indexer ce site
Certains moteurs de recherche peuvent décider de l'indexer malgré tout.
Installer WordPress


Identifiant ou adresse e-mail
Idrissa77
Mot de passe
Se souvenir de moi
Se connecter
Mot de passe oublié ?
← Aller sur Titre1
Français
Modifier



Partie 2 : Déploiement avec docker

J’ai procédé à la création du d’un nouveau fichier ‘Vagrantfile’

```
Vagrant.configure("2") do |config|

  config.vm.box = "ubuntu/bionic64"
  config.vm.provision :shell, path: "install-apache.sh"

  config.vm.network :forwarded_port, guest: 80, host:8000

  config.vm.define "ma-machine3" do |node|
    node.vm.provider "virtualbox" do |vb|
      vb.name = "wp-docker3"
      vb.memory = 512
      vb.cpus = 1
    end

  end


end
```

```
λ vagrant up
Bringing machine 'ma-machine3' up with 'virtualbox' provider...
==> ma-machine3: Importing base box 'ubuntu/bionic64'...
==> ma-machine3: Matching MAC address for NAT networking...
==> ma-machine3: Checking if box 'ubuntu/bionic64' version '20221117.0.0' is up to
date...
==> ma-machine3: Setting the name of the VM: wp-docker3
==> ma-machine3: Clearing any previously set network interfaces...
==> ma-machine3: Preparing network interfaces based on configuration...
    ma-machine3: Adapter 1: nat
==> ma-machine3: Forwarding ports...
    ma-machine3: 80 (guest) => 8000 (host) (adapter 1)
    ma-machine3: 22 (guest) => 2222 (host) (adapter 1)
==> ma-machine3: Running 'pre-boot' VM customizations...
==> ma-machine3: Booting VM...
==> ma-machine3: Waiting for machine to boot. This may take a few minutes...
    ma-machine3: SSH address: 127.0.0.1:2222
    ma-machine3: SSH username: vagrant
    ma-machine3: SSH auth method: private key
```

On se connecte à la machine

```
λ vagrant ssh
Welcome to Ubuntu 18.04.6 LTS (GNU/Linux 4.15.0-197-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/advantage

  System information as of Fri Nov 25 01:34:15 UTC 2022

  System load:  0.97              Processes:             90
  Usage of /:   3.3% of 38.70GB   Users logged in:       0
  Memory usage: 26%               IP address for enp0s3: 10.0.2.15
  Swap usage:   0%


1 update can be applied immediately.
1 of these updates is a standard security update.
To see these additional updates run: apt list --upgradable

New release '20.04.5 LTS' available.
Run 'do-release-upgrade' to upgrade to it.
```

On crée la base de données pour WordPress en utilisant ‘touch init.sql’ puis ‘vim init.sql‘

```
CREATE DATABASE IF NOT EXISTS wordpress;
CREATE USER IF NOT EXISTS 'wordpress'@'%' IDENTIFIED BY 'Password123';
GRANT ALL ON `wordpress`.* TO 'wordpress'@'%' IDENTIFIED BY 'Password123';
FLUSH PRIVILEGES;
```

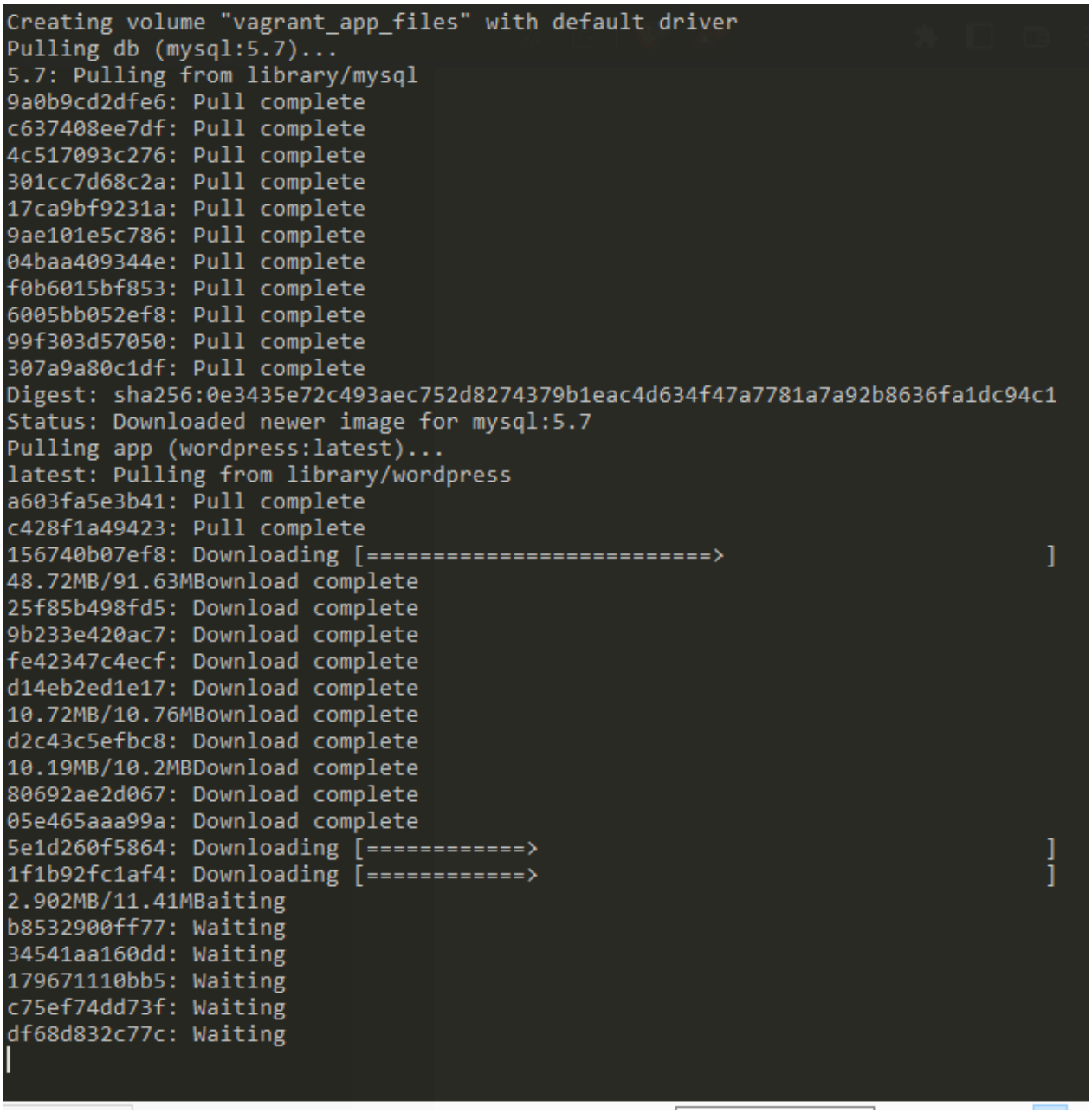
Maintenant on utilise ‘touch docker-compose.yml’

```
version: '3.3'

services:
  app:
    depends_on:
      - db
    image: wordpress:latest
    volumes:
      - ./app_files:/var/www/html
    ports:
      - "80:80"
    restart: always
    environment:
      WORDPRESS_DB_HOST: db:3306
      WORDPRESS_DB_USER: wordpress
      WORDPRESS_DB_PASSWORD: Password123
  db:
    image: mysql:5.7
    command: --init-file /data/application/init.sql
    volumes:
      - ./db_data:/var/lib/mysql
      - ./init.sql:/data/application/init.sql
    restart: always
    environment:
      MYSQL_DATABASE: wordpress
      MYSQL_USER: wordpress
      MYSQL_PASSWORD: Password123
      MYSQL_ROOT_PASSWORD: root_password
volumes:
  db_data:
  app_files:
~
~
~
~
~
~
~
~
~
"docker-compose.yml" 31L, 685C                                11,11
```

Nous tapons ‘sudo docker-compose up ‘

```
vagrant@ubuntu-bionic:~$ ls
docker-compose.yml  init.sql
vagrant@ubuntu-bionic:~$ sudo docker-compose up -d
Creating network "vagrant_default" with the default driver
Creating volume "vagrant_db_data" with default driver
Creating volume "vagrant_app_files" with default driver
Pulling db (mysql:5.7)...
5.7: Pulling from library/mysql
9a0b9cd2dfe6: Pulling fs layer
c637408ee7df: Pulling fs layer
4c517093c276: Pulling fs layer
301cc7d68c2a: Waiting
17ca9bf9231a: Waiting
9ae101e5c786: Waiting
04baa409344e: Waiting
f0b6015bf853: Waiting
6005bb052ef8: Waiting
99f303d57050: Waiting
307a9a80c1df: Waiting
```



Il avait des erreurs comme quoi le port 80/tcp était déjà utilisé, du coup, j'ai utiise les commandes suivantes

sudo service apache2 stop

sudo apt-get remove apache2

curl -fsSL https://unms.com/install > /tmp/unms_inst.sh && sudo bash /tmp/unms_inst.sh --http-port xxxx –update

J'ai changé de port et ai retapé *sudo docker-compose. Up.*

```
vagrant@ubuntu-bionic:~$ sudo docker-compose up -d
Starting vagrant_db_1 ... done
Recreating vagrant_app_1 ... done
vagrant@ubuntu-bionic:~$ ls
app_files  db_data  docker-compose.yml  init.sql
vagrant@ubuntu-bionic:~$
```

Maintenant, le site marche sur http://localhost:80