

**DWES - [Carlos Romero Romero]**

# **[Actividades evaluables - UD1]**

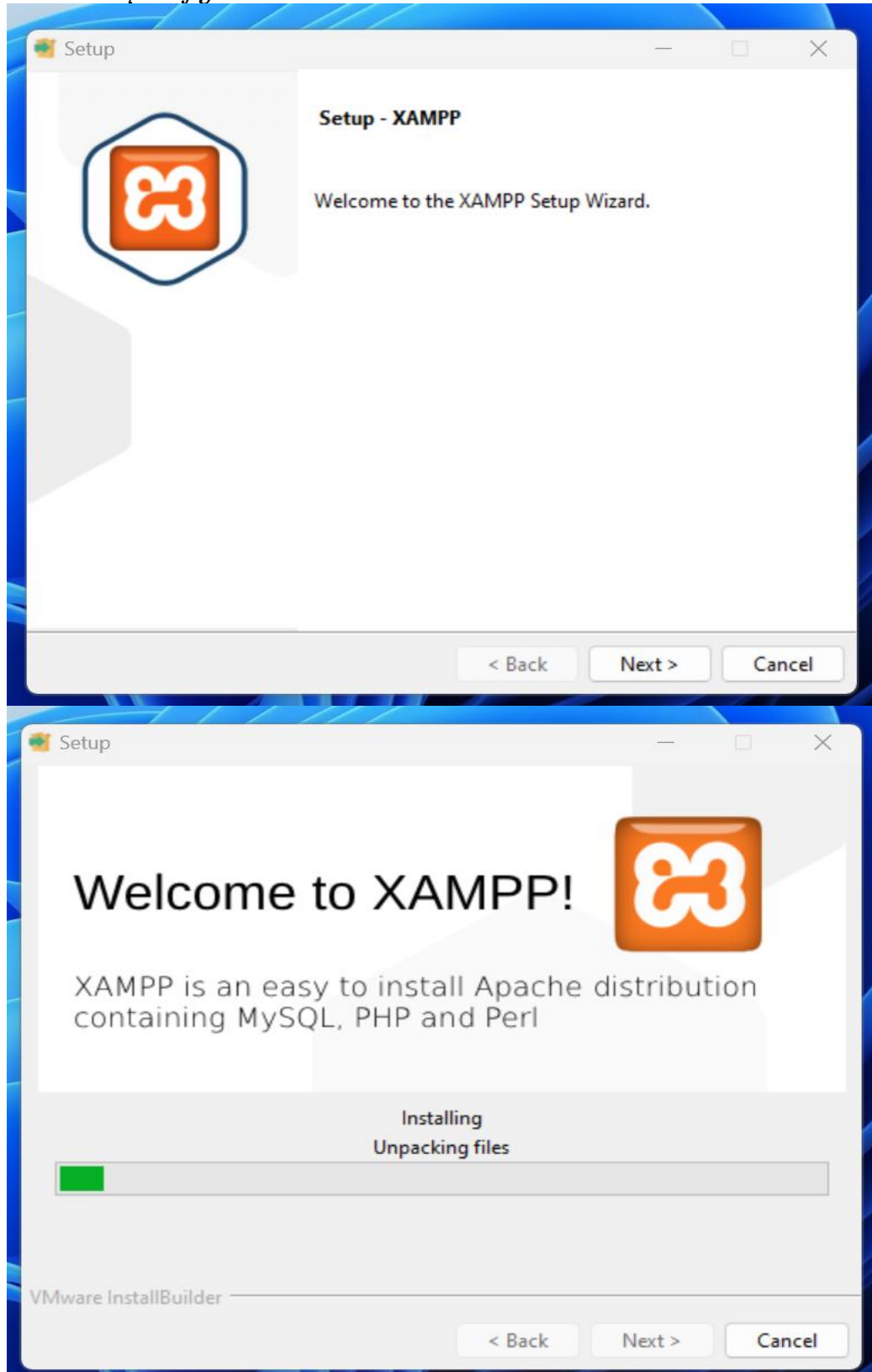
**[Entorno de desarrollo PHP]**



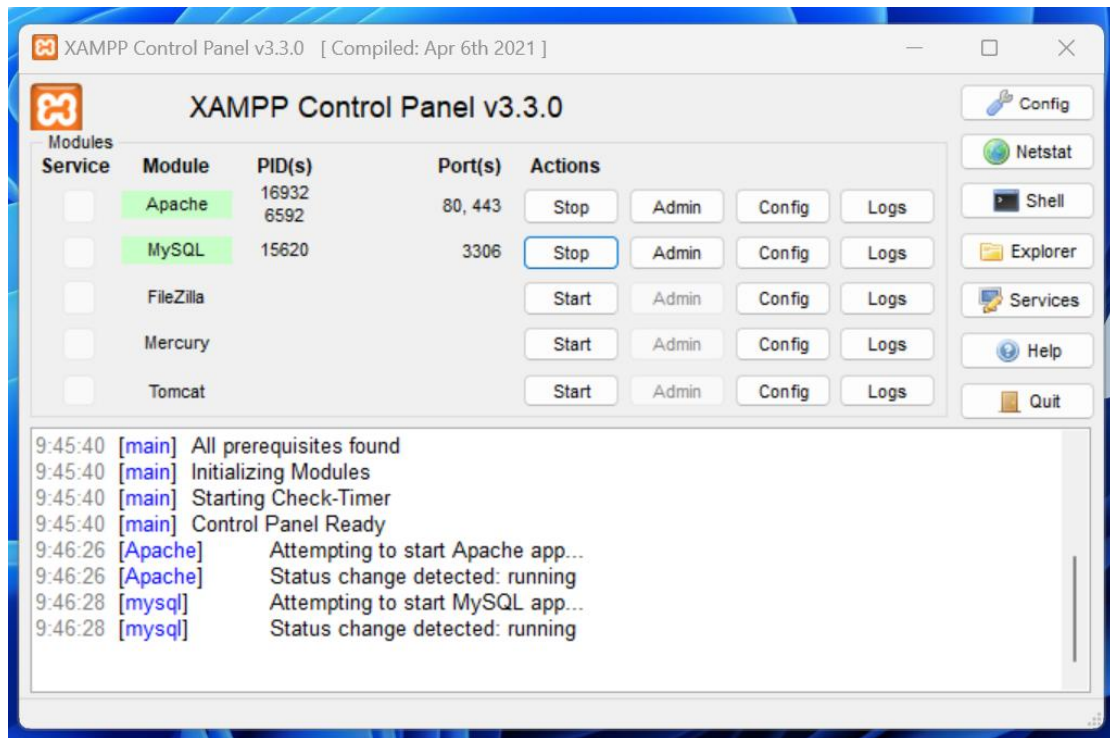
## Actividad 1.

*Objetivo: Instalar y configurar un paquete software que integre Apache, PHP y MySQL.*

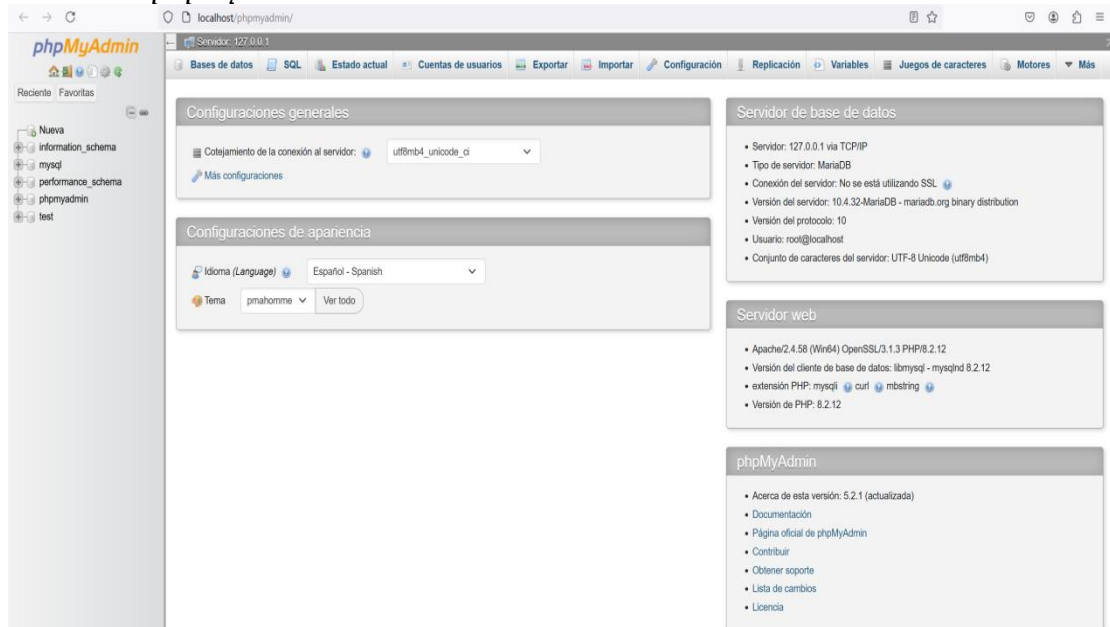
*1. Instalar y configurar XAMPP:*







## 2. Instalar phpmyadmin.





### 3. Probar la aplicación creando un portfolio personal básico.



## Actividad 2.

*Objetivo: Instalación y configuración de un entorno web utilizando una máquina virtual.*

### 1. Descargar e instalar VirtualBox.



### 2. Crear una máquina virtual con Ubuntu Server e instalar de manera independiente Apache, MariaDB, PHP y phpMyAdmin.



```
carlos@carlos:~$ sudo apt install apache2
carlos@carlos:~$ sudo apt install php libapache2-mod-php php-mysql
carlos@carlos:~$ sudo apt install mysql-server
carlos@carlos:~$ sudo apt install phpmyadmin
```



```

carlos@carlos:~$ mysql --version
mysql Ver 8.0.39-0ubuntu0.24.04.2 for Linux on x86_64 ((Ubuntu))
carlos@carlos:~$ dpkg -l | grep phpmyadmin
ii  php-phpmyadmin-motranslator      5.3.1-1      all
ii  php-phpmyadmin-shapefile        3.0.2-1      all
ii  php-phpmyadmin-sql-parser       5.8.2-1      all
ii  phpmyadmin                      4:5.2.1+dfsg-3  all
carlos@carlos:~$ apache2 -v
Server version: Apache/2.4.58 (Ubuntu)
Server built:   2024-07-17T18:55:23
carlos@carlos:~$ php -v
PHP 8.3.6 (cli) (built: Jun 13 2024 15:23:20) (NTS)
Copyright (c) The PHP Group
Zend Engine v4.3.6, Copyright (c) Zend Technologies
    with Zend OPcache v8.3.6, Copyright (c), by Zend Technologies

```

## 2. Configurar la conexión entre el entorno de trabajo y el servidor.

### ● IP de la máquina Ubuntu Server:

```

carlos@carlos:~$ ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host noprefixroute
        valid_lft forever preferred_lft forever
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 08:00:27:04:21:cb brd ff:ff:ff:ff:ff:ff
    inet 192.168.0.101/24 metric 100 brd 192.168.0.255 scope global dynamic enp0s3
        valid_lft 7200sec preferred_lft 7200sec
    inet6 fe80::a00:27ff:fe04:21cb/64 scope link
        valid_lft forever preferred_lft forever

```

### ● Servidor Apache desde anfitrión:



**Apache2 Default Page**

Ubuntu **It works!**

This is the default welcome page used to test the correct operation of the Apache2 server after installation on Ubuntu systems. It is based on the equivalent page on Debian, from which the Ubuntu Apache packaging is derived. If you can read this page, it means that the Apache HTTP server installed at this site is working properly. You should **replace this file** (located at `/var/www/html/index.html`) before continuing to operate your HTTP server.

If you are a normal user of this web site and don't know what this page is about, this probably means that the site is currently unavailable due to maintenance. If the problem persists, please contact the site's administrator.

**Configuration Overview**

Ubuntu's Apache2 default configuration is different from the upstream default configuration, and split into several files optimized for interaction with Ubuntu tools. The configuration system is **fully documented in `/usr/share/doc/apache2/README.Debian.gz`**. Refer to this for the full documentation. Documentation for the web server itself can be found by accessing the **manual** if the `apache2-doc` package was installed on this server.

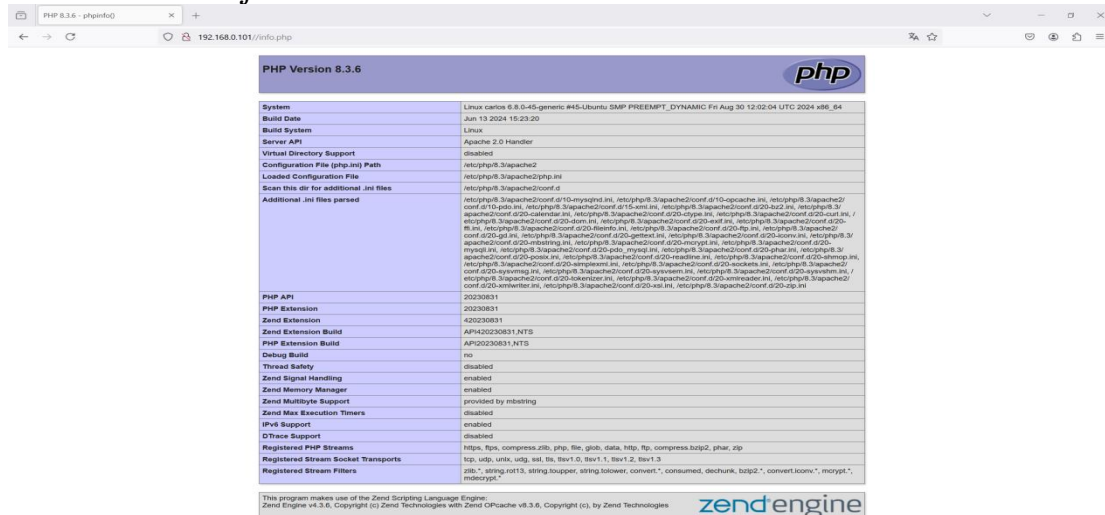
The configuration layout for an Apache2 web server installation on Ubuntu systems is as follows:

```

/etc/apache2/
|-- apache2.conf
|   |-- ports.conf
|   |-- mods-enabled
|   |-- *.load
|   |-- *.conf
|   |-- conf-enabled
|   |-- *.conf
|   |-- sites-enabled
|   |-- *.conf

```

### ● PHP desde anfitrión:



**PHP Version 8.3.6**

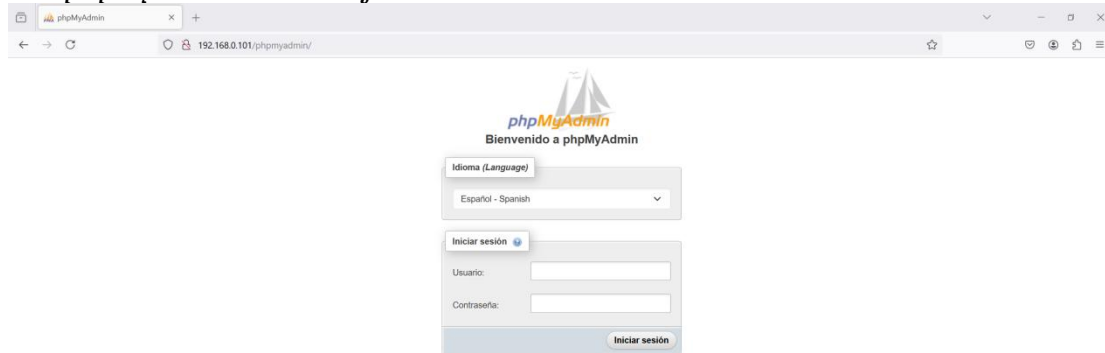
System	Linux carlos 6.8.0-45-generic #45-Ubuntu SMP PREEMPT_DYNAMIC Fri Aug 30 12:02:04 UTC 2024 x86_64
Build Date	Jun 13 2024 15:23:20
Build System	Linux
Server API	Apache 2.0 Handler
Virtual Directory Support	disabled
Configuration File (php.ini) Path	/etc/php/8.3/apache2
Loaded Configuration File	/etc/php/8.3/apache2/php.ini
Scan this dir for additional .ini files	/etc/php/8.3/apache2/conf.d
Additional .ini files parsed	/etc/php/8.3/apache2/conf.d/10-mysqlnd.ini, /etc/php/8.3/apache2/conf.d/10-opcache.ini, /etc/php/8.3/apache2/conf.d/10-pdo.ini, /etc/php/8.3/apache2/conf.d/15-mysql.ini, /etc/php/8.3/apache2/conf.d/20-apache.ini, /etc/php/8.3/apache2/conf.d/20-calendar.ini, /etc/php/8.3/apache2/conf.d/20-ctype.ini, /etc/php/8.3/apache2/conf.d/20-curl.ini, /etc/php/8.3/apache2/conf.d/20-dom.ini, /etc/php/8.3/apache2/conf.d/20-exif.ini, /etc/php/8.3/apache2/conf.d/20-ffi.ini, /etc/php/8.3/apache2/conf.d/20-fileinfo.ini, /etc/php/8.3/apache2/conf.d/20-gd.ini, /etc/php/8.3/apache2/conf.d/20-gettext.ini, /etc/php/8.3/apache2/conf.d/20-gmp.ini, /etc/php/8.3/apache2/conf.d/20-gnupg.ini, /etc/php/8.3/apache2/conf.d/20-http.ini, /etc/php/8.3/apache2/conf.d/20-imagick.ini, /etc/php/8.3/apache2/conf.d/20-ldap.ini, /etc/php/8.3/apache2/conf.d/20-libxml.ini, /etc/php/8.3/apache2/conf.d/20-mcrypt.ini, /etc/php/8.3/apache2/conf.d/20-memcached.ini, /etc/php/8.3/apache2/conf.d/20-mongo.ini, /etc/php/8.3/apache2/conf.d/20-mongodb.ini, /etc/php/8.3/apache2/conf.d/20-mssql.ini, /etc/php/8.3/apache2/conf.d/20-sockets.ini, /etc/php/8.3/apache2/conf.d/20-sqlite3.ini, /etc/php/8.3/apache2/conf.d/20-ssh2.ini, /etc/php/8.3/apache2/conf.d/20-tidy.ini, /etc/php/8.3/apache2/conf.d/20-tokenizer.ini, /etc/php/8.3/apache2/conf.d/20-xmlreader.ini, /etc/php/8.3/apache2/conf.d/20-xmlwriter.ini, /etc/php/8.3/apache2/conf.d/20-xsl.ini, /etc/php/8.3/apache2/conf.d/20-zip.ini
PHP API	20230831
PHP Extension	20230831
Zend Extension	602020031
Zend Extension Build	AP020230831.NTS
PHP Extension Build	AP020230831.NTS
Debug Build	no
Thread Safety	disabled
Zend Signal Handling	enabled
Zend Memory Manager	enabled
Zend Multibyte Support	provided by mbstring
Zend Max Execution Timers	disabled
IPv6 Support	enabled
Office Support	disabled
Registered PHP Streams	ftp, fss, compress.zlib, php, file, glob, data, http, ftp, compress.bzip2, phar, zip
Registered Stream Socket Transports	tcp, udp, unix, udg, ssl, tls, tlsv1.0, tlsv1.1, tlsv1.2, tlsv1.3
Registered Stream Filters	zlib, *, string.rot13, string.rot48, string.rot96, convert, consumed, dechunk, bzip2, *, convert.iconv, *, mcrypt, *, mbstring

This program makes use of the Zend Scripting Language Engine:  
 Zend Engine v4.3.6, Copyright (c) Zend Technologies with Zend OPcache v8.3.6, Copyright (c), by Zend Technologies

**zend engine**



### ● *phpMyAdmin desde anfitrión:*



### ● *MySQL en Ubuntu Server:*

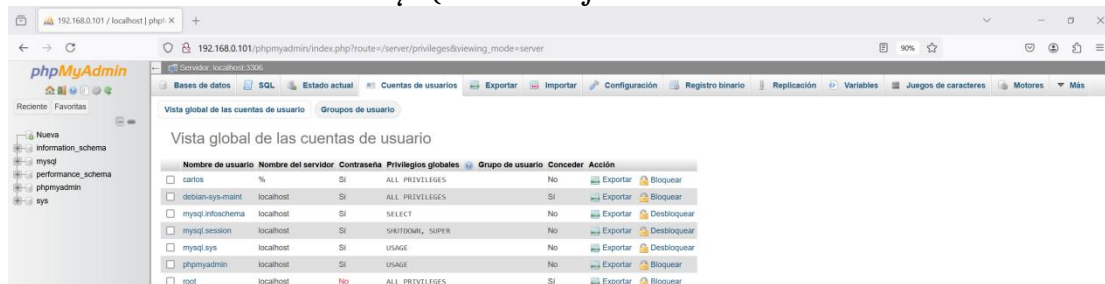
```
mysql> CREATE USER 'carlos' IDENTIFIED BY 'Usuario-1234';
Query OK, 0 rows affected (0,04 sec)

mysql> GRANT ALL PRIVILEGES ON *.* TO 'carlos';
Query OK, 0 rows affected (0,03 sec)

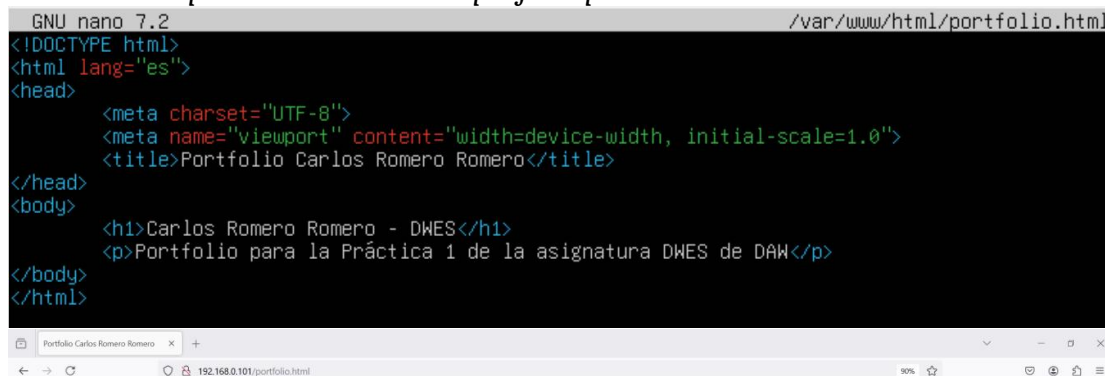
mysql> FLUSH PRIVILEGES;
Query OK, 0 rows affected (0,02 sec)

mysql> EXIT;
Bye
carlos@carlos:~$ sudo ufw allow 3306
Rules updated
Rules updated (v6)
carlos@carlos:~$ sudo ufw status
Status: inactive
```

### ● *Acceso a base de datos MySQL desde anfitrión:*



### 3. Probar la aplicación creando un portfolio personal básico.



**Carlos Romero Romero - DWES**

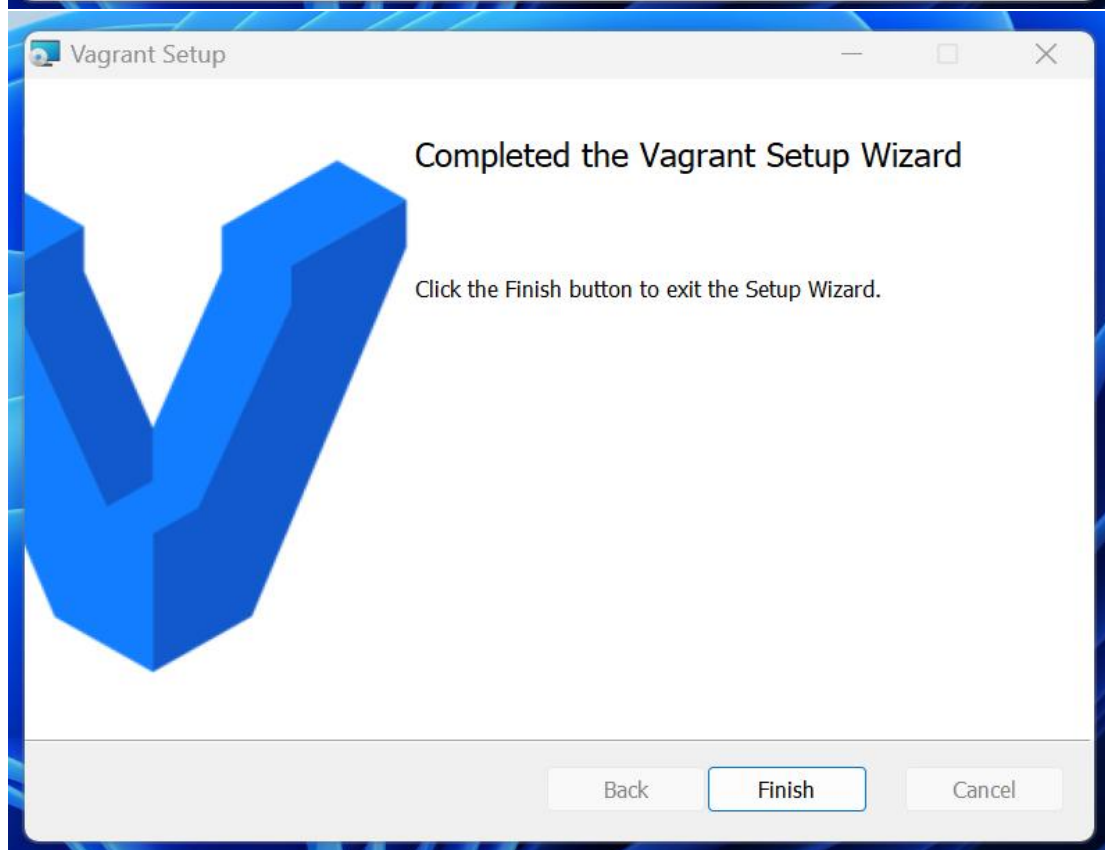
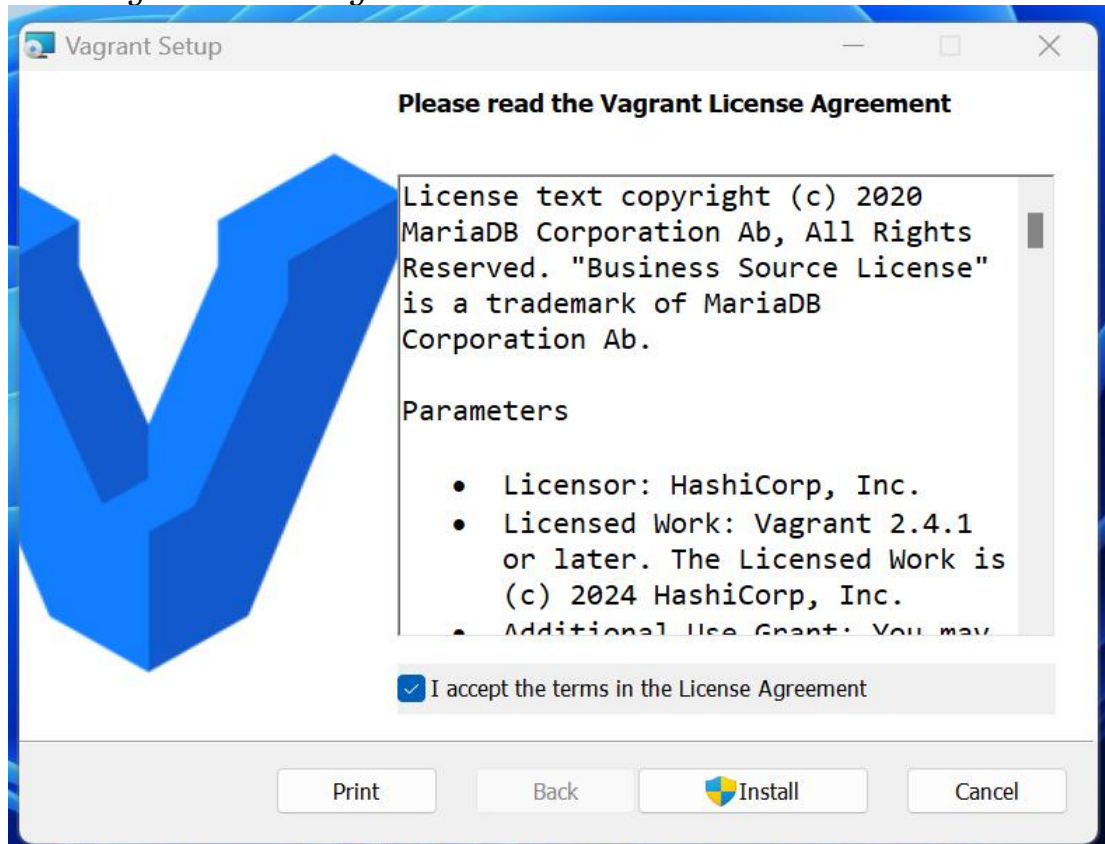
Portfolio para la Práctica 1 de la asignatura DWES de DAW



## Actividad 4.

Objetivo: Crear un entorno virtual para desarrollo en el lado del servidor.

1. Descargar e instalar Vagrant.





## 2. Comprobar que la instalación se realizó correctamente lanzando el comando que muestra la versión instalada.

```

C:\Windows\System32>vagrant --version
Vagrant 2.4.1

C:\Windows\System32>

```

## 3. Añadir el proyecto Laravel Homestead seleccionando VirtualBox.

```

C:\Windows\System32>vagrant box add laravel/homestead
=> box: Loading metadata for box 'laravel/homestead'
box: URL: https://vagrantcloud.com/api/v2/vagrant/laravel/homestead
This box can work with multiple providers! The providers that it
can work with are listed below. Please review the list and choose
the provider you will be working with.
a) parallels
b) virtualbox
Enter your choice: 2
=> box: Adding box 'laravel/homestead' (v14.0.2) for provider: virtualbox (amd64)
box: Downloading: https://vagrantcloud.com/laravel/boxes/homestead/versions/14.0.2/providers/virtualbox/amd64/vagrant.box
box: Calculating and comparing box checksum...
=> box: Successfully added box 'laravel/homestead' (v14.0.2) for 'virtualbox (amd64)'!

```

## 4. Clonar el proyecto de Laravel Homestead en el directorio de trabajo:

git clone <https://github.com/laravel/homestead.git>

```

C:\Homestead>git clone https://github.com/laravel/homestead.git
Cloning into 'homestead'...
remote: Enumerating objects: 6652, done.
remote: Counting objects: 2008 (429/429), done.
remote: Compressing objects: 100% (198/198), done.
remote: Total 6652 (delta 278), reused 348 (delta 227), pack-reused 6223 (from 1)
Receiving objects: 100% (6652/6652), 1.45 MiB | 2.05 MiB/s, done.
Resolving deltas: 100% (4197/4197), done.

C:\Homestead>

```

## 5. Inicia homestead init.bat

```

C:\Homestead>cd homestead
C:\Homestead\homestead>init.bat
1 archivo(s) copiado(s).
1 archivo(s) copiado(s).
1 archivo(s) copiado(s).
homestead initialized!

```



6. Observar el archivo de configuración *Homestead.yaml*, especialmente en *folders*, y *sites*. Es posible tener múltiples proyectos en la misma máquina.

```

1 ---
2 ip: "192.168.56.56"
3 memory: 2048
4 cpus: 2
5 provider: virtualbox
6
7 authorize: ~/.ssh/id_rsa.pub
8
9 keys:
10 - ~/.ssh/id_rsa
11
12 folders:
13 - map: ~/code
14   to: /home/vagrant/code
15
16 sites:
17 - map: homestead.test
18   to: /home/vagrant/code/public
19
20 databases:
21 - homestead
22
23 features:
24 - mariadb: false
25 - postgresql: false
26 - onyxsh: false
27 - webdriver: false
28
29 services:
30 - enabled:
31   - "mysql"
32 # - disabled:
33 #   - "postgresql-main"
34
35 # ports:
36 # - send: 33060 # MySQL/MariaDB
37 #   to: 3306
38 # - send: 4040
39 #   to: 4040
40 # - send: 54320 # PostgreSQL
41 #   to: 5432
42 # - send: 8025 # Mailpit
43 #   to: 8025
44 # - send: 9600
45 #   to: 9600
46 # - send: 27017
47 #   to: 27017

```

7. Lanza la máquina.  
*vagrant up*

```

C:\Homestead\homestead> vagrant up
Generating public/private rsa key pair.
Enter file in which to save the key (C:\Users\Carlos\.ssh/id_rsa):
Created directory 'C:\Users\Carlos\.ssh'.
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in C:\Users\Carlos\.ssh/id_rsa
Your public key has been saved in C:\Users\Carlos\.ssh/id_rsa.pub
The key fingerprint is:
SHA256:NBH0m08F8qU4gKb4fUQs107UKs+Q891wgrVW4VU a23rrocca@iesgrancapitan.org
The key's randomart image is:
[SHA256]
+---[RSA 3072]-----
+.. .Ho..o
+..o oH..
+. +. #Eo
o o o o +..
+ o + #o
+ B . . .
. X + +
. o + . o
. . +.
+---[SHA256]-----

```

```

PS C:\Users\Carlos> vagrant up
A Vagrant environment or target machine is required to run this
command. Run 'vagrant init' to create a new Vagrant environment. Or,
get an ID of a target machine from 'vagrant global-status' to run
this command on. A final option is to change to a directory with a
Vagrantfile and to try again.
PS C:\Users\Carlos> cd C:\Homestead\homestead
PS C:\Homestead\homestead> vagrant up
Bringing machine 'homestead' up with 'virtualbox' provider...
==> homestead: Checking if box 'laravel/homestead' version '14.0.2' is up to date...
==> homestead: There was a problem while downloading the metadata for your box
==> homestead: to check for updates. This is not an error, since it is usually due
==> homestead: to temporary network problems. This is just a warning. The problem
==> homestead: encountered was:
==> homestead:
==> homestead: The requested URL returned error: 503
==> homestead:
==> homestead: If you want to check for box updates, verify your network connection
==> homestead: is valid and try again.
==> homestead: Clearing any previously set forwarded ports...
==> homestead: Clearing any previously set network interfaces...
==> homestead: Preparing network interfaces based on configuration...
homestead: Adapter 1: nat
homestead: Adapter 2: hostonly
==> homestead: Forwarding ports...
homestead: 80 (guest) => 8000 (host) (adapter 1)
homestead: 443 (guest) => 44300 (host) (adapter 1)
homestead: 22 (guest) => 2222 (host) (adapter 1)
==> homestead: Running 'pre-boot' VM customizations...
==> homestead: Booting VM...
==> homestead: Waiting for machine to boot. This may take a few minutes...
homestead: SSH address: 127.0.0.1:2222
homestead: SSH username: vagrant
homestead: SSH auth method: private key
homestead: Warning: Connection reset. Retrying...
homestead: Warning: Connection aborted. Retrying...
==> homestead: Machine booted and ready!
==> homestead: Checking for guest additions in VM...
==> homestead: Setting hostname...
==> homestead: Configuring and enabling network interfaces...
==> homestead: Mounting shared folders...
homestead: /vagrant => C:/Homestead/homestead
==> homestead: Machine already provisioned. Run 'vagrant provision' or use the '--provision'
==> homestead: flag to force provisioning. Provisioners marked to run always will still run.

```

8. Prueba a conectarte a la máquina por ssh.

```

PS C:\Homestead\homestead> vagrant ssh
Welcome to Ubuntu 22.04.3 LTS (GNU/Linux 5.15.0-91-generic x86_64)

vagrant@homestead:~$

```



## 9. Modifica el fichero de hosts para asignar nombre y dirección ip del archivo de configuración Homestead.yaml.

```
# Copyright (c) 1993-2009 Microsoft Corp.
#
# This is a sample HOSTS file used by Microsoft TCP/IP for Windows.
#
# This file contains the mappings of IP addresses to host names. Each
# entry should be kept on an individual line. The IP address should
# be placed in the first column followed by the corresponding host name.
# The IP address and the host name should be separated by at least one
# space.
#
# Additionally, comments (such as these) may be inserted on individual
# lines or following the machine name denoted by a '#' symbol.
#
# For example:
#
# 102.54.94.97 rhino.acme.com # source server
# 38.25.63.10 x.acme.com # x client host
#
# localhost name resolution is handled within DNS itself.
#
#::1 localhost
#
192.168.56.56 homestead.test
```

## 10. Crea una página que muestre el mensaje “Hello Vagrant”.

- *En primer lugar, crear en el PC anfitrión la carpeta que contiene el proyecto:*

```
Microsoft Windows [Versión 10.0.22631.4299]
(c) Microsoft Corporation. Todos los derechos reservados.

C:\Users\Carlos>mkdir C:\Homestead\homestead\projectoVagrant
C:\Users\Carlos>cd C:\Homestead\homestead\projectoVagrant
C:\Homestead\homestead\projectoVagrant>dir
El volumen de la unidad C no tiene etiqueta.
El número de serie del volumen es: B455-1965

Directorio de C:\Homestead\homestead\projectoVagrant

05/10/2024 17:21 <DIR> .
05/10/2024 17:17 <DIR> ..
05/10/2024 17:21          32 index.php
                1 archivos          32 bytes
                2 dirs 734,993,813,504 bytes libres

C:\Homestead\homestead\projectoVagrant>type index.php
<?php
echo "Hello Vagrant";
?>
```

- *Establecer en el fichero “Homestead.yaml” la ruta de la carpeta del proyecto en la máquina anfitrión que pasará a la máquina virtual:*

```
1 ---
2 ip: "192.168.56.56"
3 memory: 2048
4 cpu: 2
5 provider: virtualbox
6
7 authorize: ~/.ssh/id_rsa.pub
8
9 keys:
10 | - ~/.ssh/id_rsa
11
12 folders:
13 - map: C:\Homestead\homestead\projectoVagrant
14   to: /home/vagrant/code
15
16 sites:
17 - map: homestead.test
18   to: /home/vagrant/code/index.php
19
```



## ● Apagar la máquina y volver a encenderla para reprovisionar:

```
PS C:\Homestead\homestead> vagrant halt
==> homestead: Attempting graceful shutdown of VM...
homestead: Guest communication could not be established! This is usually because
homestead: SSH is not running, the authentication information was changed,
homestead: or some other networking issue. Vagrant will force halt, if
homestead: capable.
==> homestead: Forcing shutdown of VM...
PS C:\Homestead\homestead> vagrant up --provision
Bringing machine 'homestead' up with 'virtualbox' provider...
==> homestead: Checking if box 'laravel/homestead' version '14.0.2' is up to date...
==> homestead: Clearing any previously set forwarded ports...
==> homestead: Clearing any previously set network interfaces...
==> homestead: Preparing network interfaces based on configuration...
homestead: Adapter 1: nat
homestead: Adapter 2: hostonly
==> homestead: Forwarding ports...
homestead: 80 (guest) => 8080 (host) (adapter 1)
homestead: 443 (guest) => 44300 (host) (adapter 1)
homestead: 22 (guest) => 2222 (host) (adapter 1)
==> homestead: Running 'pre-boot' VM customizations...
==> homestead: Booting VM...
==> homestead: Waiting for machine to boot. This may take a few minutes...
homestead: SSH address: 127.0.0.1:2222
homestead: SSH username: vagrant
homestead: SSH auth method: private key
homestead: Warning: Connection reset. Retrying...
homestead: Warning: Connection aborted. Retrying...
==> homestead: Machine booted and ready!
==> homestead: Checking for guest additions in VM...
==> homestead: Setting hostname...
==> homestead: Configuring and enabling network interfaces...
==> homestead: Mounting shared folders...
homestead: /vagrant => C:\Homestead\homestead
homestead: /home/vagrant/code => C:\Homestead\homestead\proyectoVagrant
==> homestead: Detected mount owner ID within mount options. (uid: 1000 guestpath: /home/vagrant/code)
==> homestead: Detected mount group ID within mount options. (gid: 1000 guestpath: /home/vagrant/code)
==> homestead: Running provisioner: file...
homestead: C:\Homestead\homestead\aliases => /tmp/bash_aliases
==> homestead: Running provisioner: handle_aliases (shell)...
homestead: Running: inline script
==> homestead: Running provisioner: setting authorize key (shell)...
homestead: Running: inline script
==> homestead: Running provisioner: setting authorize permissions for id_rsa (shell)...
homestead: Running: inline script
==> homestead: Running provisioner: mk_features (shell)...
homestead: Running: inline script
==> homestead: Running provisioner: own_features (shell)...
homestead: Running: inline script
==> homestead: Running provisioner: apt_update (shell)...
homestead: Running: inline script
homestead: Hit:1 http://us.archive.ubuntu.com/ubuntu jammy InRelease
homestead: Hit:2 https://download.docker.com/linux/ubuntu jammy InRelease
```

## ● Comprobar que los ficheros ahora están también en la máquina virtual:

```
PS C:\Homestead\homestead> vagrant ssh
Welcome to Ubuntu 22.04.3 LTS (GNU/Linux 5.15.0-91-generic x86_64)

Last login: Sat Oct 5 14:52:00 2024 from 10.0.2.2
vagrant@homestead:~$ ls
total
-rw-r--r-- 1 vagrant vagrant 1024 Oct 5 14:52 index.php
vagrant@homestead:~$ cat /home/vagrant/code/index.php
<?php
echo "Hello Vagrant";
?>vagrant@homestead:~$
```