

Docker



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Introducción:

Este trabajo es sobre el tema docker una aplicación para crear contenedores se aprendera a usarlo ,modificarlo etc.

Objetivos:

El objetivo de esta practica es aprender a como utilizar docker , a como crear sus contenedores vincularlo con visual asignarle puertos etc. Mediante las actividades aprenderemos todo entorno a docker.

Material utilizado:

DATOS	VALOR
Marca (fabricante) placa base	
Modelo placa base	
Marca Procesador	Intel
Modelo Procesador	Pentium CPU G4400 @ 3.30GHz
Frecuencia Procesador	
Tamaño de cache (L1, L2, ...)	
Marca bios	
Versión bios	
Puente PCH/FCH (chipset)	
Slot de la tarjeta gráfica	
Tipo Memoria RAM (memoria y slots)	informacion4GB RAM, 2400 MHz
Dispositivos de almacenamiento (marca, modelo, capacidad, ...)	Capacidad (GiB): HDD 1TB

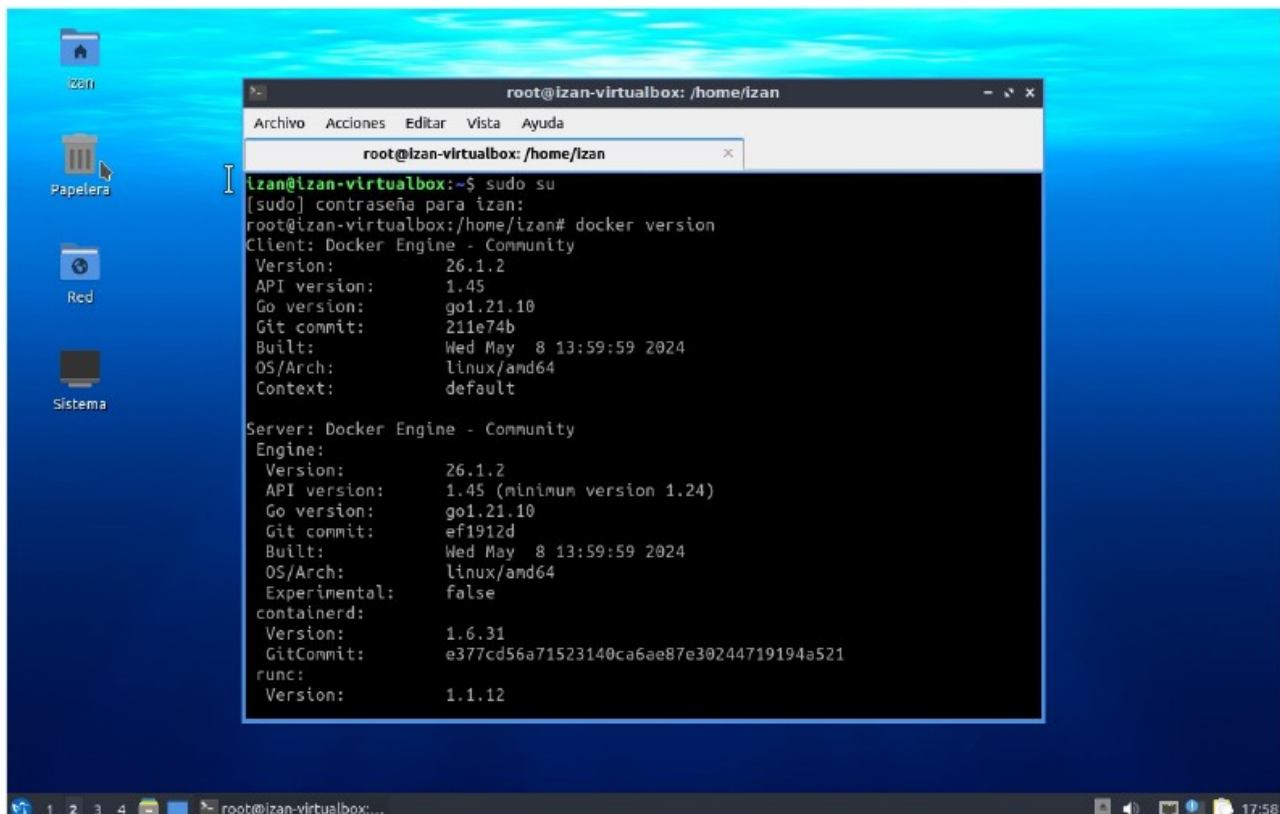
So :Ubuntu

Actividades :

Part II:

EXERCICI-1

Executa a la teua màquina amb la instal·lació completa de Docker l'ordre:
docker version



```
root@izan-virtualbox: /home/izan
Archivo Acciones Editar Vista Ayuda
root@izan-virtualbox: /home/izan
izan@izan-virtualbox:~$ sudo su
[sudo] contraseña para izan:
root@izan-virtualbox:/home/izan# docker version
Client: Docker Engine - Community
Version: 26.1.2
API version: 1.45
Go version: go1.21.10
Git commit: 211e74b
Built: Wed May 8 13:59:59 2024
OS/Arch: linux/amd64
Context: default

Server: Docker Engine - Community
Engine:
Version: 26.1.2
API version: 1.45 (minimum version 1.24)
Go version: go1.21.10
Git commit: ef1912d
Built: Wed May 8 13:59:59 2024
OS/Arch: linux/amd64
Experimental: false
containerd:
Version: 1.6.31
GitCommit: e377cd56a71523140ca6ae87e30244719194a521
runc:
Version: 1.1.12
```

EXERCICIO - 2

Executa a la teua màquina amb la instal·lació completa de Docker l'ordre:
docker run hello-world

Adjunta en un document PDF una captura de pantalla amb el resultat de l'execució de l'ordre. L'ordre mostrarà un contingut similar al següent:
Hello

from Docker!

This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:

1. The Docker client contacted the Docker daemon.
2. The Docker daemon pulled the "hello-world" image from the Docker Hub. (amd64)
3. The Docker daemon created a new container from that image which runs the executable that produces the output you are currently reading.
4. The Docker daemon streamed that output to the Docker client, which sent it to your terminal. To try something more ambitious, you can run an

Ubuntu container with: \$
docker run -it ubuntu bash

```
Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
1. The Docker client contacted the Docker daemon.
2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
   (amd64)
3. The Docker daemon created a new container from that image which runs the
   executable that produces the output you are currently reading.
4. The Docker daemon streamed that output to the Docker client, which sent it
   to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
$ docker run -it ubuntu bash

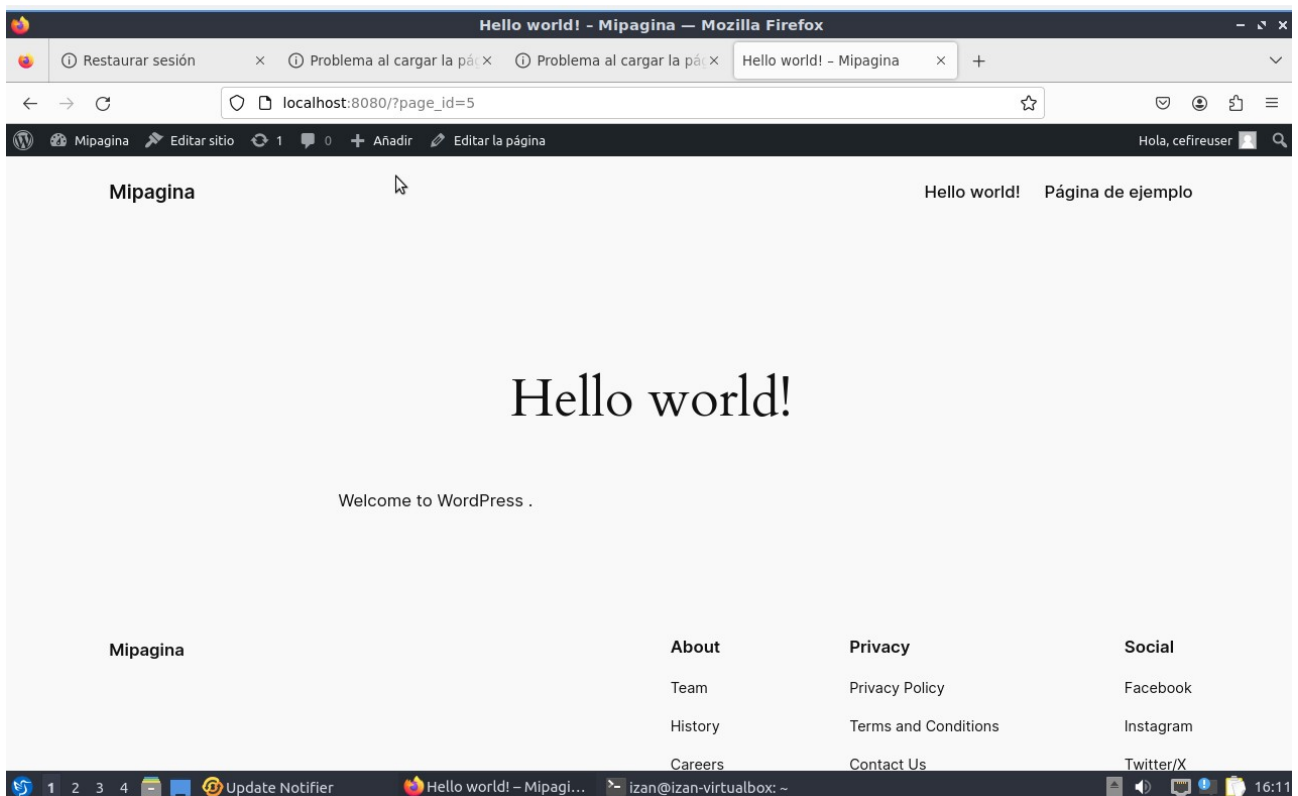
Share images, automate workflows, and more with a free Docker ID:
https://hub.docker.com/

For more examples and ideas, visit:
https://docs.docker.com/get-started/

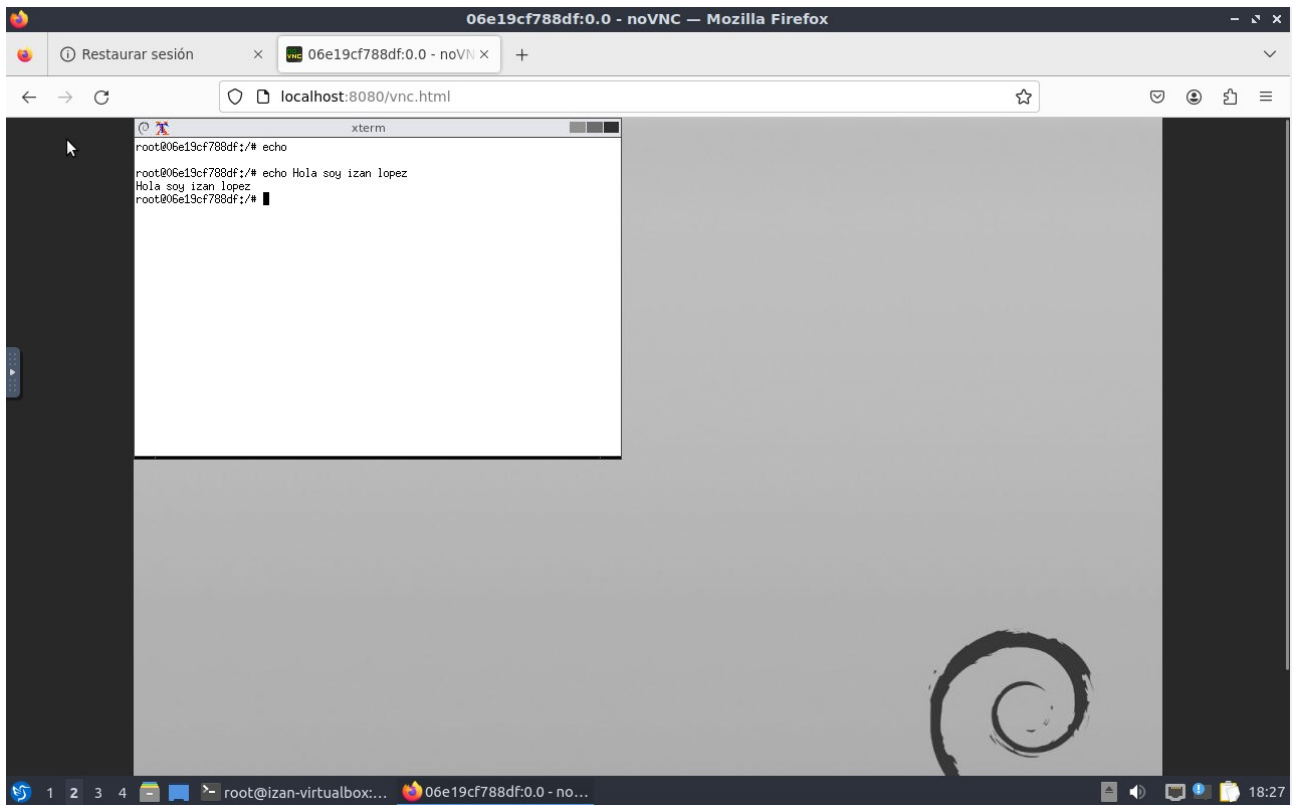
izan@izan-virtualbox:~$
```

Part III:

La primera parte el wordpress echo .



La segunda parte,



La prueba de que he realizado el 3 pdf creando un contenedor y trabajando un poco con el .

```
root@izan-virtualbox:/home/izan# docker ps -a
```

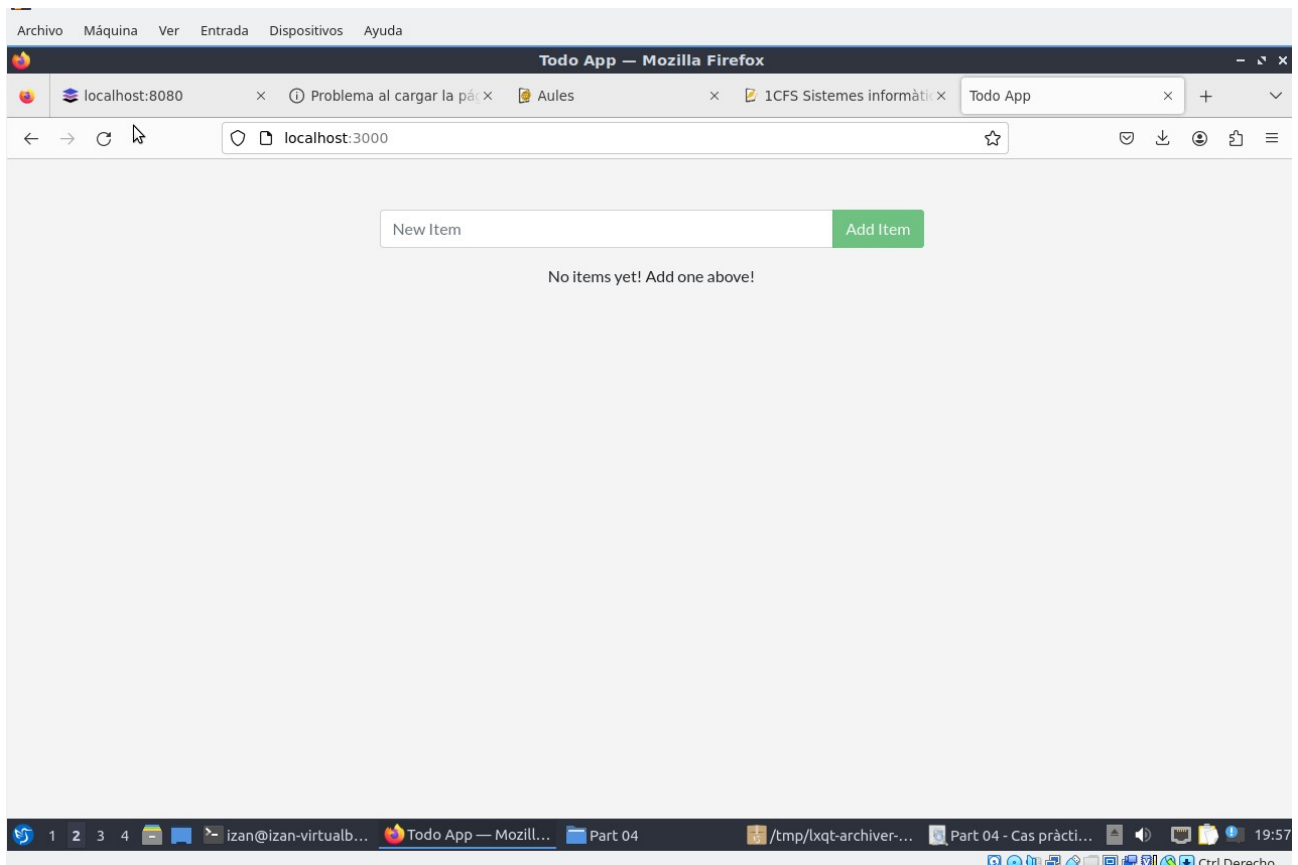
CONTAINER ID	IMAGE	NAMES	COMMAND	CREATED	STATUS	PORTS
6761c5048f38	sampledocker	cranky_dhawan	"docker-entrypoint.s..."	About a minute ago	Exited (1) About a minute ago	
9eeb6fa18b5e	hello-world	dazzling_benz	"/hello"	32 minutes ago	Exited (0) 32 minutes ago	
e28b83521503	hello-world	recurring_agnesi	"/hello"	About an hour ago	Exited (0) About an hour ago	
e39d1f969cfd	sampledocker	elegant_satoshi	"docker-entrypoint.s..."	47 hours ago	Exited (1) 47 hours ago	
13d05734ec82	sampledocker	kind_cartwright	"docker-entrypoint.s..."	47 hours ago	Exited (1) 47 hours ago	
3c7c51e30ecd	sampledocker	nervous_brown	"docker-entrypoint.s..."	47 hours ago	Exited (1) 47 hours ago	
83e5a04eeb95	ubuntu		"/bin/bash"	12 days ago	Exited (255) 8 days ago	0.0.0.0:8080->80/tcp
e041703641a4	hello-world	practical_visvesvaraya	"/hello"	12 days ago	Exited (0) 12 days ago	

```
root@izan-virtualbox:/home/izan# docker run -it -e MENSAJE=HOLA ubuntu bash
root@15ba1b9e2faf:/# echo $MENSAJE
HOLA
root@15ba1b9e2faf:/#
```

1 2 3 4 root@15ba1b9e2faf:/

Part IV:

La parte 2



La captura accediendo al puerto 3000

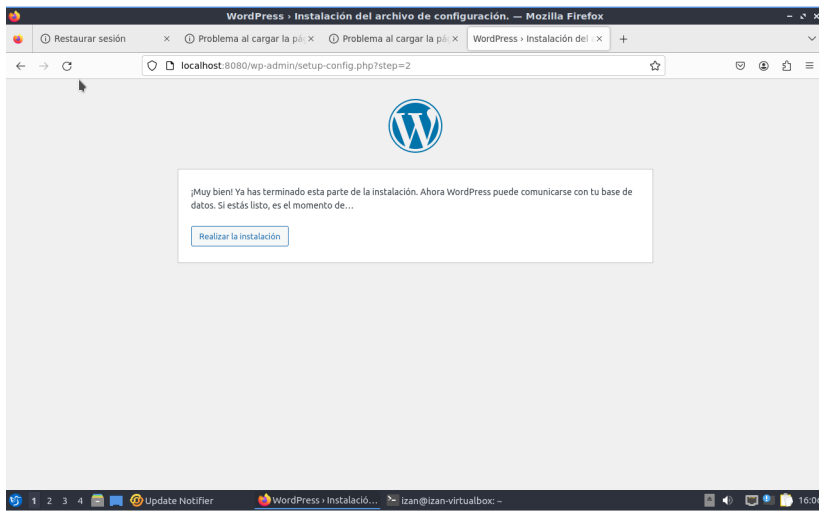
```

izan@izan-virtualbox: ~/Desca.../P04/Part 04/sampledocker/app
Dockerfile package.json spec src yarn.lock
izan@izan-virtualbox:~/Descargas/P04/Part 04/sampledocker/app$ docker build -t sampledocker .
[+] Building 26.5s (9/9) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 422B
=> [internal] load metadata for docker.io/library/node:12-alpine
=> [internal] load .dockerignore
=> => transferring context: 2B
=> [1/4] FROM docker.io/library/node:12-alpine@sha256:d4b15b3d48f42059a15bd659be60afe21762aae9d6cbea6f124440895c27db6
=> => resolve docker.io/library/node:12-alpine@sha256:d4b15b3d48f42059a15bd659be60afe21762aae9d6cbea6f124440895c27db6
=> => sha256:4517380049fc3c9aacceae7764fcf3500354b0ac8a47e4afb35b5bbeb75b9498 1.16kB / 1.16kB
=> => sha256:bb6d28039b8cec9aa8d9032f9aa640a792a60c2cb1644691627bf046aab27c8b 6.58kB / 6.58kB
=> => sha256:df9b9388f04ad6279a7410b85cedfdbc2208c0a003da7ab5613af71079148139 2.81MB / 2.81MB
=> => sha256:3bf6d738020517f4622814e8c21db4b4aaa78ae7cab4e4f872c11696886c6285 24.91MB / 24.91MB
=> => sha256:7939e601ee5e4737cf7fdb6d1dfe31ca4c2697109290462f694710761450aef0 2.36MB / 2.36MB
=> => sha256:d4b15b3d48f42059a15bd659be60afe21762aae9d6cbea6f124440895c27db6 1.43kB / 1.43kB
=> => extracting sha256:df9b9388f04ad6279a7410b85cedfdbc2208c0a003da7ab5613af71079148139
=> => sha256:31f0fb9de071269230cb0f786012ae4e81d26e489b1fe922e57b5201e6bc9ab0 451B / 451B
=> => extracting sha256:3bf6d738020517f4622814e8c21db4b4aaa78ae7cab4e4f872c11696886c6285
=> => extracting sha256:7939e601ee5e4737cf7fdb6d1dfe31ca4c2697109290462f694710761450aef0
=> => extracting sha256:31f0fb9de071269230cb0f786012ae4e81d26e489b1fe922e57b5201e6bc9ab0
=> [internal] load build context
=> => transferring context: 4.63MB
=> [2/4] WORKDIR /app
=> [3/4] COPY . .
=> [4/4] RUN yarn install --production
=> => exporting layers
=> => writing image sha256:f4b7cc79f6bf455ec9ad769c6c572ccc12226a7d75c2f82e8e7bd7c1a822e1ad
=> => naming to docker.io/library/sampledocker
izan@izan-virtualbox:~/Descargas/P04/Part 04/sampledocker/app$ docker run -dp 3000:3000 sampledocker
70a0dc5eff0aa8df8214d047910c7127b31faad588ebb2628ffa55ef1350b1a8
izan@izan-virtualbox:~/Descargas/P04/Part 04/sampledocker/app$

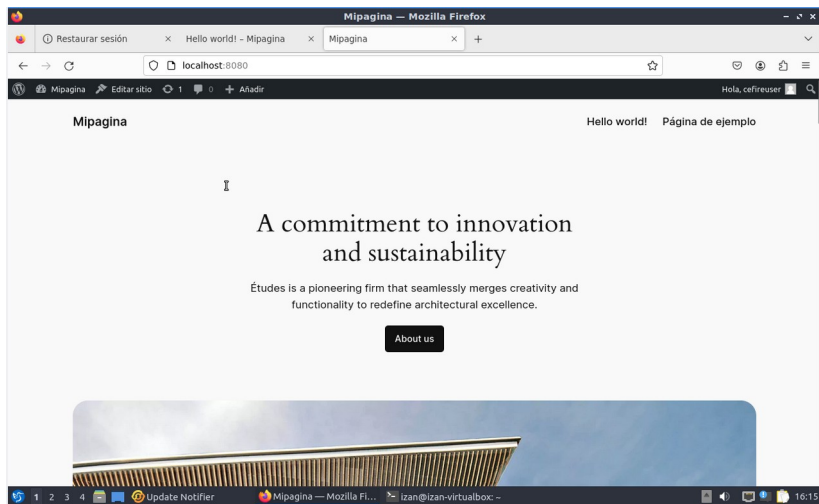
```

La construccion del contenedor y su arranque en el puerto 3000

Part V:



Instalacion finalizada wordpress



El final del el caso practico mostrand que el puerto migrado.

Part VI:

```
izan@izan-virtualbox: ~/Desktop/Part 06/CasoPractico1-Wordpress
Archivo Acciones Editar Vista Ayuda
izan@izan-virtualbox: ~/Deskt...rt 06/CasoPractico1-Wordpress x
db_1 | 2024-05-31T14:38:08.566447Z 0 [Warning] CA certificate ca.pem is self signed.
db_1 | 2024-05-31T14:38:08.566816Z 0 [Note] Skipping generation of RSA key pair as key files are present in data dire
ctory.
db_1 | 2024-05-31T14:38:08.567693Z 0 [Note] Server hostname (bind-address): '*'; port: 3306
db_1 | 2024-05-31T14:38:08.567996Z 0 [Note] IPv6 is available.
db_1 | 2024-05-31T14:38:08.568214Z 0 [Note] - '::' resolves to '::';
db_1 | 2024-05-31T14:38:08.568386Z 0 [Note] Server socket created on IP: '::'.
db_1 | 2024-05-31T14:38:08.571220Z 0 [Warning] Insecure configuration for --pid-file: Location '/var/run/mysqld' in t
he path is accessible to all OS users. Consider choosing a different directory.
db_1 | 2024-05-31T14:38:08.585130Z 0 [Note] Event Scheduler: Loaded 0 events
db_1 | 2024-05-31T14:38:08.586002Z 0 [Note] mysqld: ready for connections.
db_1 | Version: '5.7.44' socket: '/var/run/mysqld/mysqld.sock' port: 3306 MySQL Community Server (GPL)
docker-compose down
exit
^[[^A^CGracefully stopping... (press Ctrl+C again to force)
Stopping casopractico1-wordpress_wordpress_1 ... done
Stopping casopractico1-wordpress_db_1 ... done
izan@izan-virtualbox:~/Desktop/Part 06/CasoPractico1-Wordpress$ docker-compose up -d
Starting casopractico1-wordpress_db_1 ... done
Starting casopractico1-wordpress_wordpress_1 ... done
izan@izan-virtualbox:~/Desktop/Part 06/CasoPractico1-Wordpress$ docker-compose down
Stopping casopractico1-wordpress_wordpress_1 ... done
Stopping casopractico1-wordpress_db_1 ... done
Removing casopractico1-wordpress_wordpress_1 ... done
Removing casopractico1-wordpress_db_1 ... done
Removing network casopractico1-wordpress_default
izan@izan-virtualbox:~/Desktop/Part 06/CasoPractico1-Wordpress$ docker-compose up -d
Creating network "casopractico1-wordpress_default" with the default driver
Creating casopractico1-wordpress_db_1 ... done
Creating casopractico1-wordpress_wordpress_1 ... done
izan@izan-virtualbox:~/Desktop/Part 06/CasoPractico1-Wordpress$
```

Captura del compose ejecuntadose y deteniendose.

Part VII:

phpinfo()

localhost:8080

lxqt-config-monitor

Se ha aplicado la configuración predeterminada del monitor. Si desea cambiar la configuración de los monitores, utilice lxqt-config-monitor.

PHP Version 7.2.34

System	Linux a7de060e6e8e 6.5.0-35-generic #35~22.04.1-Ubuntu SMP PREEMPT_DYNAMIC Tue May 7 09:00:52 UTC 2 x86_64
Build Date	Dec 11 2020 10:50:00
Configure Command	./configure '--build=x86_64-linux-gnu' '--with-config-file-path=/usr/local/etc/php' '--with-config-file-scan-dir=/usr/local/etc/php/conf.d' '--enable-option-checking=fatal' '--with-mhash' '--with-pic' '--enable-ftp' '--enable-mbstring' '--enable-mysqld' '--with-password-argon2' '--with-sodium=shared' '--with-pdo-sqlite=/usr' '--with-sqlite3=/usr' '--with-curl' '--with-libedit' '--with-openssl' '--with-zlib' '--with-libdir=lib/x86_64-linux-gnu' '--with-apxs2' '--disable-cgi' 'build_alias=x86_64-linux-gnu'
Server API	Apache 2.0 Handler
Virtual Directory Support	disabled
Configuration File (php.ini) Path	/usr/local/etc/php
Loaded Configuration File	(none)
Scan this dir for additional .ini files	/usr/local/etc/php/conf.d
Additional .ini files parsed	/usr/local/etc/php/conf.d/docker-php-ext-sodium.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
Zend Memory Manager	enabled
Zend Multibyte Support	provided by mbstring
IPv6 Support	enabled
DTrace Support	disabled
Registered PHP Streams	https, ftps, compress.zlib, php, file, glob, data, http, ftp, phar
Registered Stream Socket Transports	tcp, udp, unix, udg, ssl, tls, tlsv1.0, tlsv1.1, tlsv1.2
Registered Stream Filters	zlib.*, convert.iconv.*, string.rot13, string.toupper, string.tolower, string.strip_tags, convert.*, consumed, dechunk

phpinfo() — Mozilla Firefox

Imagen del remote de php desde visual studio en el puerto 8080

Problemas encontrados:

He tenido problemas con docker determinando los puertos y las vinculaciones con el sistema operativo del centro .

Conclusión:

Al final lo he podido solucionar todo , habian errores que eran por el nombre , otros por el sistema operativo , otros por comando y tambien porque no lo entendia bien del todo investigando he podido solucionar la mayoria.

Bibliografía:

https://github.com/izancnuac/Docker/tree/main/Partes_Docker

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https://aules.edu.gva.es/fp/pluginfile.php/7377506/mod_folder/content/0/Docker%20CheatSheet%20Valenci%C3%A0.pdf?forcedownload=1

https://aules.edu.gva.es/fp/pluginfile.php/7377506/mod_folder/content/0/Gu%C3%ADa%20de%20estudi%20SGE-%20UD%2001%20-%20Introducci%C3%B3a%20Docker_2023.pdf?forcedownload=1