

## 1.1 Servidor web

## 1.2 Servidor de base de datos

# 1.1 Servidor web

Arranco contenedor con una instancia de la imagen `php:7.4-apache`

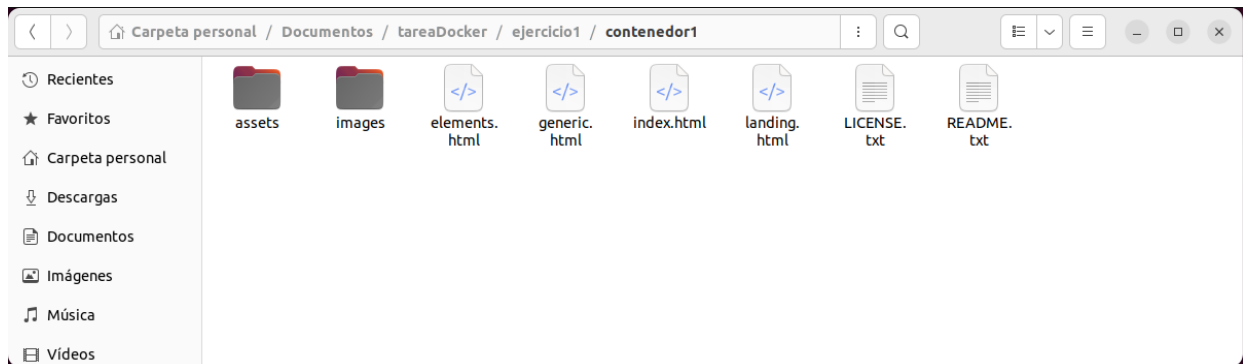
```
ivan@ivan-clienteLinux: ~  
ivan@ivan-clienteLinux:~$ docker run php:7.4-apache  
Unable to find image 'php:7.4-apache' locally  
7.4-apache: Pulling from library/php  
a603fa5e3b41: Pull complete  
c428f1a49423: Pull complete  
156740b07ef8: Pull complete  
fb5a4c8af82f: Pull complete  
25f85b498fd5: Pull complete  
9b233e420ac7: Pull complete  
fe42347c4ecf: Pull complete  
d14eb2ed1c17: Pull complete  
66d98f73acb6: Pull complete  
d2c43c5efbc8: Pull complete  
ab590b48ea47: Pull complete  
80692ae2d067: Pull complete  
05e465aaa99a: Pull complete  
Digest: sha256:c9d7e608f7383267347970d66aacc810011ec751d1905ff63fae3fe2e0ca6d  
Status: Downloaded newer image for php:7.4-apache  
AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 172.18.0.2. Set the 'ServerName' directive globally to suppress this message  
AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 172.18.0.2. Set the 'ServerName' directive globally to suppress this message  
[Tue Mar 28 17:04:56.074081 2023] [mpm_prefork:notice] [pid 1] AH00163: Apache/2.4.54 (Debian) PHP/7.4.33 configured -- resuming normal operations  
[Tue Mar 28 17:04:56.078493 2023] [core:notice] [pid 1] AH00094: Command line: 'apache2 -D FOREGROUND'  
[Tue Mar 28 17:05:10.973013 2023] [mpm_prefork:notice] [pid 1] AH00170: caught SIGWINCH, shutting down gracefully  
ivan@ivan-clienteLinux:~$
```

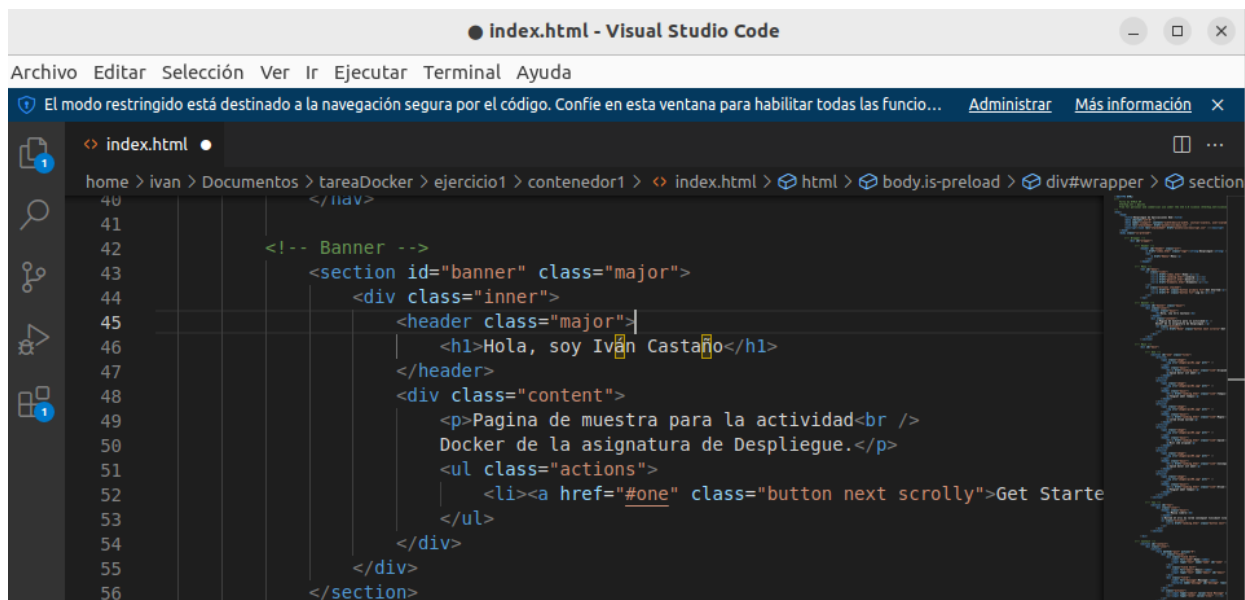
Elimino el contenedor y creo un nuevo usando *bind mount* para montar mi propio directorio y que persistan los datos

```
ivan@ivan-clienteLinux:~$ docker run -d -p 1234:80 -v  
/home/ivan/Documentos/tareaDocker/ejercicio1/contenedor1:/var/www/html --name  
servidor php:7.4-apache
```

```
ivan@ivan-clienteLinux:~$ docker rm 5c08659d614f  
5c08659d614f  
ivan@ivan-clienteLinux:~$ docker run -d -p 1234:80 -v /home/ivan/Documentos/tareaDocker/ejercicio1/contenedor1:/var/www/html --name servidor php:7.4-apache  
62ff88bd4681304dbf3e8f37757b15625a102f2176ea718d9d580111ce27a93  
ivan@ivan-clienteLinux:~$
```

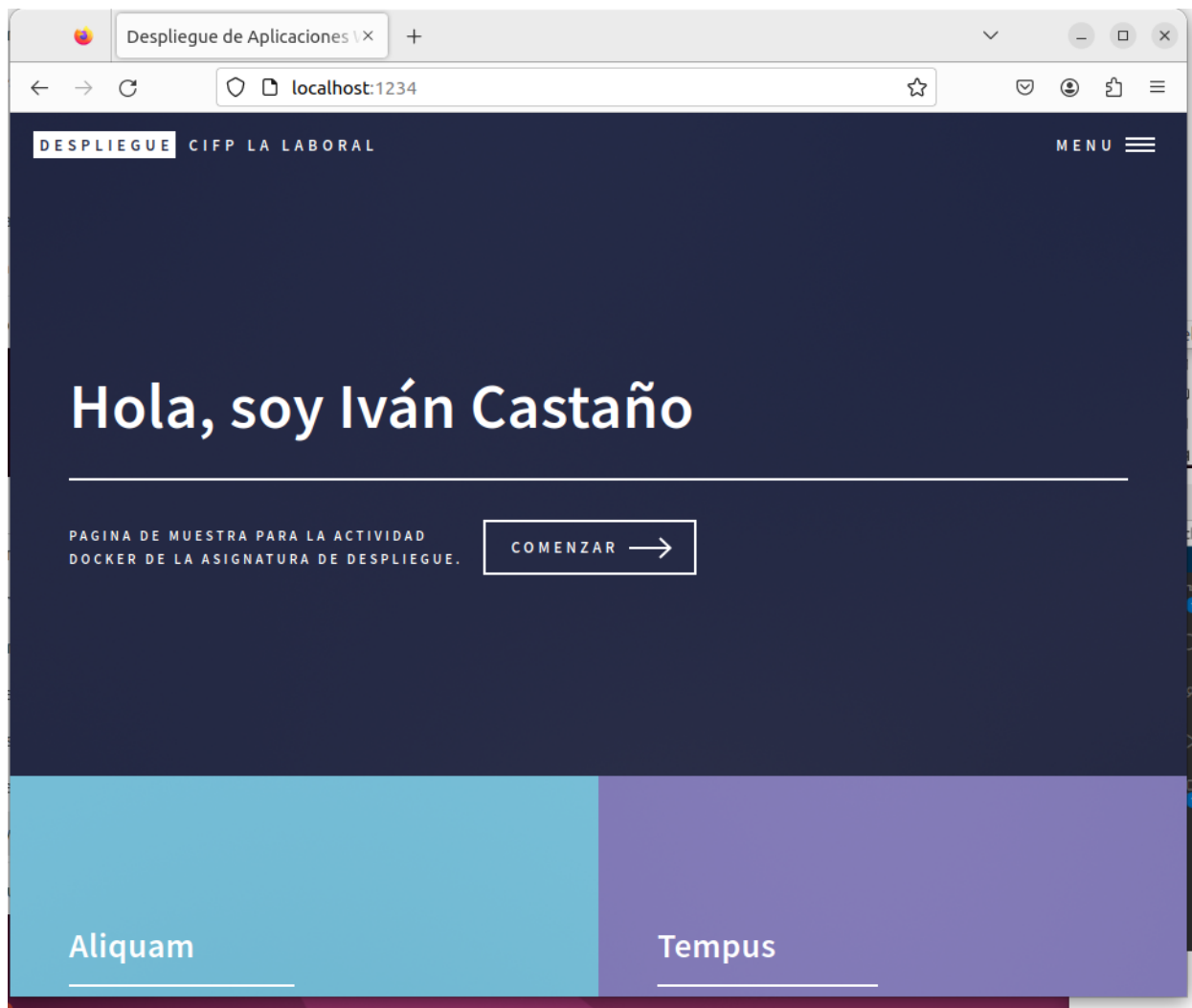
Coloco en el directorio raíz del servicio web un sitio web. Personalizo `index.html` con *Visual Studio Code*





```
index.html
40 </div>
41
42 <!-- Banner -->
43 <section id="banner" class="major">
44   <div class="inner">
45     <header class="major">
46       <h1>Hola, soy Iván Castaño</h1>
47     </header>
48     <div class="content">
49       <p>Pagina de muestra para la actividad<br />
50       Docker de la asignatura de Despliegue.</p>
51       <ul class="actions">
52         <li><a href="#one" class="button next scrolly">Get Started</a>
53       </ul>
54     </div>
55   </div>
56 </section>
```

Resultado:



Creo el archivo `cabeceras.php` en el mismo directorio que contiene el `index.html` y muestro el resultado:



Detengo y borro el contenedor:

```
ivan@ivan-clienteLinux:~$ docker stop servidor
servidor
ivan@ivan-clienteLinux:~$ docker rm servidor
servidor
```

```
ivan@ivan-clienteLinux:~$ docker ps -a
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS
62ff88bd4681   php:7.4-apache "docker-php-entrypoi..." 3 hours ago   Up 3 hours   0.0.0.0:1234->80
/tcp, :::1234->80/tcp
ivan@ivan-clienteLinux:~$ docker stop servidor
servidor
ivan@ivan-clienteLinux:~$ docker rm servidor
servidor
ivan@ivan-clienteLinux:~$ docker ps -a
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS        NAMES
ivan@ivan-clienteLinux:~$
```

## 1.2 Servidor de base de datos

Descargamos la imagen de `mariadb`

```
ivan@ivan-clienteLinux: ~/Documentos/tareaDocker/ejercicio1
ivan@ivan-clienteLinux:~/Documentos/tareaDocker/ejercicio1$ docker pull mariadb
Using default tag: latest
latest: Pulling from library/mariadb
74ac377868f8: Pull complete
9f8acee20aa1: Pull complete
11b336495e01: Pull complete
20ab1641dd41: Pull complete
eaf0c5c99086: Pull complete
239335430207: Pull complete
931baaab2c80: Pull complete
f2e86cc8f052: Pull complete
Digest: sha256:9ff479f244cc596aed9794d035a9f352662f2caed933238c533024df64569853
Status: Downloaded newer image for mariadb:latest
docker.io/library/mariadb:latest
ivan@ivan-clienteLinux:~/Documentos/tareaDocker/ejercicio1$
```

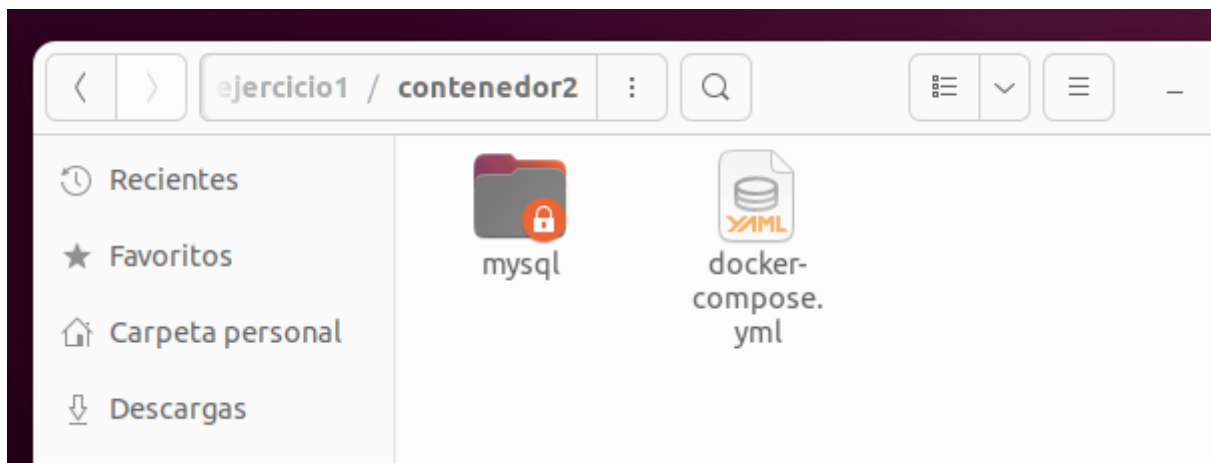
Utilizo un fichero `docker-compose` para la creación y declaración de las variables de entorno requeridas en el enunciado

```
Abrir  docker-compose.yml  Guardar
~/Documentos/tareaDocker/ejercicio1/contenedor2

1 version: '3.1'
2 services:
3   db:
4     container_name: bbdd
5     image: mariadb
6     restart: always
7     environment:
8       MYSQL_DATABASE: base1
9       MYSQL_USER: daw
10      MYSQL_PASSWORD: laboral1
11      MYSQL_ROOT_PASSWORD: root
12     volumes:
13       - ./mysql:/var/lib/mysql
```

Ejecutamos el fichero

```
ivan@ivan-clienteLinux: ~/Documentos/tareaDocker/ejercicio1/contenedor2
ivan@ivan-clienteLinux:~/Documentos/tareaDocker/ejercicio1/contenedor2$ docker-compose up -d
Creating network "contenedor2_default" with the default driver
Creating bbdd ... done
ivan@ivan-clienteLinux:~/Documentos/tareaDocker/ejercicio1/contenedor2$
```



Accedemos a la consola del contenedor y mostramos la base de datos

```
root@03efaab5ed50: /
ivan@ivan-clienteLinux:~/Documentos/tareaDocker/ejercicio1/contenedor2$ docker exec -ti bbdd /bin/bash
root@03efaab5ed50:/# mysql -u daw -p
Enter password:
ERROR 1045 (28000): Access denied for user 'daw'@'localhost' (using password: YES)
root@03efaab5ed50:/# mysql -u daw -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 4
Server version: 10.11.2-MariaDB-1:10.11.2+maria~ubu2204 mariadb.org binary distribution

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

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

MariaDB [(none)]> show databases
-> ;
+-----+
| Database |
+-----+
| base1    |
| information_schema |
+-----+
2 rows in set (0.043 sec)

MariaDB [(none)]> 
```

Me conecto como usuario *root* y creo la tabla *tabla1*

```
root@03efaab5ed50: /
root@03efaab5ed50:/# mysql -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 6
Server version: 10.11.2-MariaDB-1:10.11.2+maria~ubu2204 mariadb.org binary distribution

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

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

MariaDB [(none)]> use base1;
Database changed
MariaDB [base1]> create table tabla1;
ERROR 1113 (42000): A table must have at least 1 column
MariaDB [base1]> CREATE TABLE tabla1 (nombre VARCHAR(30));
Query OK, 0 rows affected (0.029 sec)
```

Muestro la tabla creada

```
MariaDB [base1]> show tables;
+-----+
| Tables_in_base1 |
+-----+
| tabla1           |
+-----+
1 row in set (0.000 sec)
```

Intento borrar la imagen `mariadb` y compruebo que no se permite mientras el contenedor está creado

```
ivan@ivan-clienteLinux: ~/Documentos/tareaDocker/ejercicio1/contenedor2
ivan@ivan-clienteLinux:~/Documentos/tareaDocker/ejercicio1/contenedor2$ docker stop bdd
bdd
ivan@ivan-clienteLinux:~/Documentos/tareaDocker/ejercicio1/contenedor2$ docker rm bdd
bdd
ivan@ivan-clienteLinux:~/Documentos/tareaDocker/ejercicio1/contenedor2$ docker ps -a
```

Elimino y muestro que no hay ningún contenedor

```
ivan@ivan-clienteLinux: ~/Documentos/tareaDocker/ejercicio1/contenedor2
ivan@ivan-clienteLinux:~/Documentos/tareaDocker/ejercicio1/contenedor2$ docker stop bdd
bdd
ivan@ivan-clienteLinux:~/Documentos/tareaDocker/ejercicio1/contenedor2$ docker rm bdd
bdd
ivan@ivan-clienteLinux:~/Documentos/tareaDocker/ejercicio1/contenedor2$ docker ps -a
CONTAINER ID   IMAGE      COMMAND                  CREATED        STATUS        PORTS          NAMES
ivan@ivan-clienteLinux:~/Documentos/tareaDocker/ejercicio1/contenedor2$
```