

Tarea Evaluable 3 - Docker

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Módulo: Despliegue de Aplicaciones Web

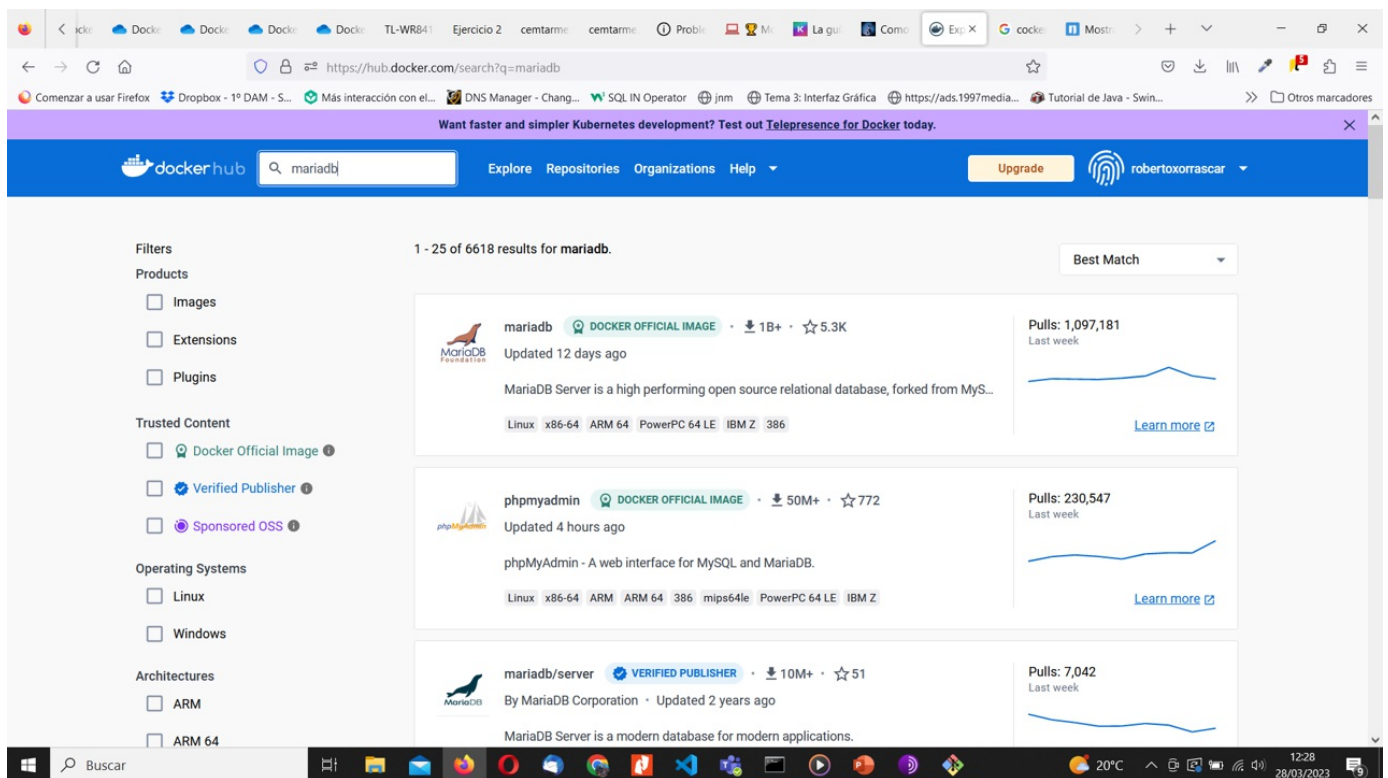
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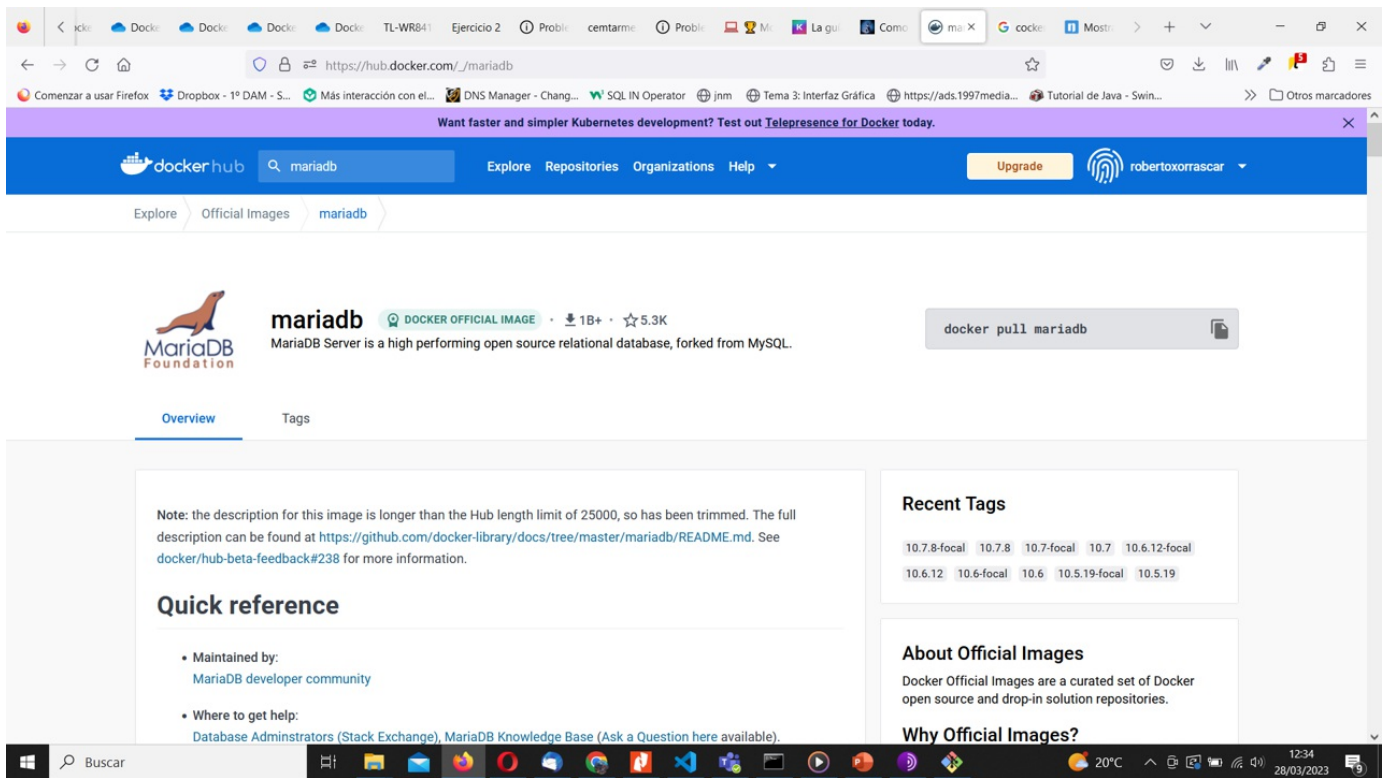
Ejercicio 1 - Trabajo con Imágenes

2. Servidor-de-Base-de-Datos

Accedemos a DockerHub para buscar la imagen que nos interesa de MariaDB

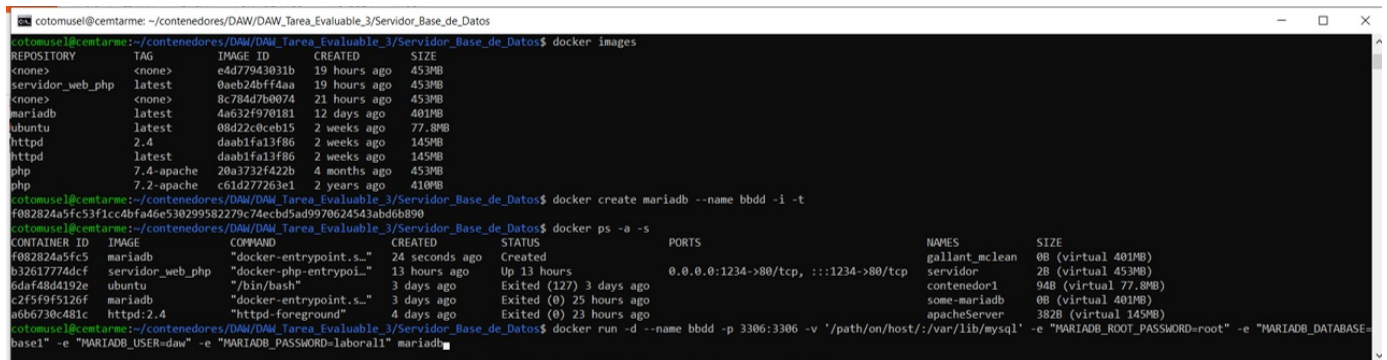


Moran_Noriega_Roberto_Actividad Evaluable – 3.1.2 – EV2 - Docker



Creamos el contenedor para la base de datos con la imagen de mariadb y agregamos los datos que se piden en el enunciado

```
docker run -d --name bbdd -p 3306:3306 -v "/path/on/host:/var/lib/mysql" \
-e "MARIADB_ROOT_PASSWORD=root" \
-e "MARIADB_DATABASE=base1" \
-e "MARIADB_USER=daw" \
-e "MARIADB_PASSWORD=laboral1" \
mariadb
```



Abrimos el puerto 3306 que utilizaremos para conectar al contenedor en firewall

```

cotomusel@centarm: ~/contenedores/DAW/DAW_Tarea_Evaluable_3/Servidor_Base_de_Datos
50000:50000/tcp (v6)    ALLOW    Anywhere (v6)
8088 (v6)              ALLOW    Anywhere (v6)
1234 (v6)              ALLOW    Anywhere (v6)

cotomusel@centarm:~/contenedores/DAW/DAW_Tarea_Evaluable_3/Servidor_Base_de_Datos$ ufw allow 3306
ERROR: You need to be root to run this script
cotomusel@centarm:~/contenedores/DAW/DAW_Tarea_Evaluable_3/Servidor_Base_de_Datos$ sudo ufw allow 3306
Rule added
Rule added (v6)
cotomusel@centarm:~/contenedores/DAW/DAW_Tarea_Evaluable_3/Servidor_Base_de_Datos$ sudo ufw status
Status: active

To Action From
--
Apache Full ALLOW Anywhere
20/tcp ALLOW Anywhere
21/tcp ALLOW Anywhere
22/tcp ALLOW Anywhere
990/tcp ALLOW Anywhere
40000:50000/tcp ALLOW Anywhere
50000:50000/tcp ALLOW Anywhere
8088 ALLOW Anywhere
1234 ALLOW Anywhere
3306 ALLOW Anywhere
Apache Full (v6) ALLOW Anywhere (v6)
20/tcp (v6) ALLOW Anywhere (v6)
21/tcp (v6) ALLOW Anywhere (v6)
22/tcp (v6) ALLOW Anywhere (v6)
990/tcp (v6) ALLOW Anywhere (v6)
40000:50000/tcp (v6) ALLOW Anywhere (v6)
50000:50000/tcp (v6) ALLOW Anywhere (v6)
8088 (v6) ALLOW Anywhere (v6)
1234 (v6) ALLOW Anywhere (v6)
3306 (v6) ALLOW Anywhere (v6)

cotomusel@centarm:~/contenedores/DAW/DAW_Tarea_Evaluable_3/Servidor_Base_de_Datos$

```

Al crear el contenedor lo nombramos con **bbdd**, mapeamos el puerto **3306**, vinculamos el column **/path/on/host/** que se creará, con la carpeta del contenedor **/var/lib/mysql** y establecemos las siguientes variables de entorno:

- contraseña para el usuario root = "root"
- nombre de la base de datos que se crea = "base1"
- nombre del usuario = "daw"
- contraseña para el usuario **daw** = "laboral1" y finalmente se cita la imagen que se usará de base para el contenedor

Un vez creado el contenedor:

```

cotomusel@centarm: ~/contenedores/DAW/DAW_Tarea_Evaluable_3/Servidor_Base_de_Datos
6daf48d4192e ubuntu "/bin/bash" 3 days ago Exited (127) 3 days ago contenedor1 94B (virtual 77.8MB)
c2f5f9f5126f mariadb "docker-entrypoint.s..." 3 days ago Exited (0) 25 hours ago some-mariadb 0B (virtual 401MB)
a6b6730c481c httpd:2.4 "httpd-foreground" 4 days ago Exited (0) 23 hours ago apacheServer 382B (virtual 145MB)

cotomusel@centarm:~/contenedores/DAW/DAW_Tarea_Evaluable_3/Servidor_Base_de_Datos$ docker run -d --name bbdd -p 3306:3306 -v /path/on/host:/var/lib/mysql -e "MARIADB_ROOT_PASSWORD=root" -e "MARIADB_DATABASE=base1" -e "MARIADB_USER=daw" -e "MARIADB_PASSWORD=laboral1" mariadb
5ae925699e423720af95e0a973d11ff4c38002dc03224acd930dac5d5db77a
cotomusel@centarm:~/contenedores/DAW/DAW_Tarea_Evaluable_3/Servidor_Base_de_Datos$ docker ps -a -s
Command 'docker' not found, did you mean:
  command 'docker' from snap docker (20.10.17)
  command 'docker' from deb docker.io (20.10.21-0ubuntu1~22.04.2)
  command 'docker' from deb podman-docker (3.4.4+ds1-1ubuntu1)
  command 'dckey' from deb dicom3tools (1.00-20220120135102-1)
See 'snap info <snapnames>' for additional versions.
cotomusel@centarm:~/contenedores/DAW/DAW_Tarea_Evaluable_3/Servidor_Base_de_Datos$ docker ps -a -s
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES SIZE
5ae925699e42 mariadb "docker-entrypoint.s..." 39 seconds ago Up 38 seconds 0.0.0.0:3306->3306/tcp, :::3306->3306/tcp bbdd 2B (virtual 401MB)
f082824a5fc5 mariadb "docker-entrypoint.s..." 26 minutes ago Created gallant_mclean 0B (virtual 401MB)
b32617774dcf servidor_web_php "docker-php-entrypoi..." 14 hours ago Up 14 hours 0.0.0.0:1234->80/tcp, :::1234->80/tcp servidor 2B (virtual 453MB)
6daf48d4192e ubuntu "/bin/bash" 3 days ago Exited (127) 3 days ago contenedor1 94B (virtual 77.8MB)
c2f5f9f5126f mariadb "docker-entrypoint.s..." 3 days ago Exited (0) 25 hours ago some-mariadb 0B (virtual 401MB)
a6b6730c481c httpd:2.4 "httpd-foreground" 4 days ago Exited (0) 24 hours ago apacheServer 382B (virtual 145MB)

cotomusel@centarm:~/contenedores/DAW/DAW_Tarea_Evaluable_3/Servidor_Base_de_Datos$

```

Accedemos a la consola del contenedor de la base de datos

```
docker exec -it bbdd bash
```

Iniciamos sesión el usuario **root**

```
mysql -u root -p
```

```

root@5ae925699e42: /
    "DriverOpts": null
  }
}
}
]
kotomusel@centarme:~/contenedores/DAW/DAW_Tarea_Evaluable_3/Servidor_Base_de_Datos$ ls
kotomusel@centarme:~/contenedores/DAW/DAW_Tarea_Evaluable_3/Servidor_Base_de_Datos$ docker exec -it bbdd bash
root@5ae925699e42:/# mysql -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 3
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)]>

```

Creamos la tabla

```

CREATE TABLE tabla1 (
  id BIGINT UNSIGNED AUTO_INCREMENT PRIMARY KEY,
  dni VARCHAR(20) UNIQUE,
  name VARCHAR(150),
  created_at TIMESTAMP NULL,
  updated_at TIMESTAMP NULL
);

```

```

root@5ae925699e42: /
    }
  ]
kotomusel@centarme:~/contenedores/DAW/DAW_Tarea_Evaluable_3/Servidor_Base_de_Datos$ ls
kotomusel@centarme:~/contenedores/DAW/DAW_Tarea_Evaluable_3/Servidor_Base_de_Datos$ docker exec -it bbdd bash
root@5ae925699e42:/# mysql -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 3
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
-> e changed
-> [base1]> CREATE TABLE tabla1 (
-> id BIGINT UNSIGNED AUTO_INCREMENT PRIMARY KEY,
-> dni VARCHAR(20) UNIQUE,
-> name VARCHAR(150),
-> created_at TIMESTAMP NULL,
-> updated_at TIMESTAMP NULL
-> );
Query OK, 0 rows affected (0.012 sec)

MariaDB [base1]>

```

Instalamos la aplicación **dbeaver-ce** y conectamos con el servidor de base de datos con el usuario **daw**

The image displays two screenshots of the DBeaver 23.0.1 application interface. The top screenshot shows the 'Navegador de Bases de Datos' (Database Navigator) pane on the left, listing the database structure for 'base1'. The bottom screenshot shows the 'Propiedades' (Properties) pane for the 'tabla1' table, displaying its schema details and a list of tables.

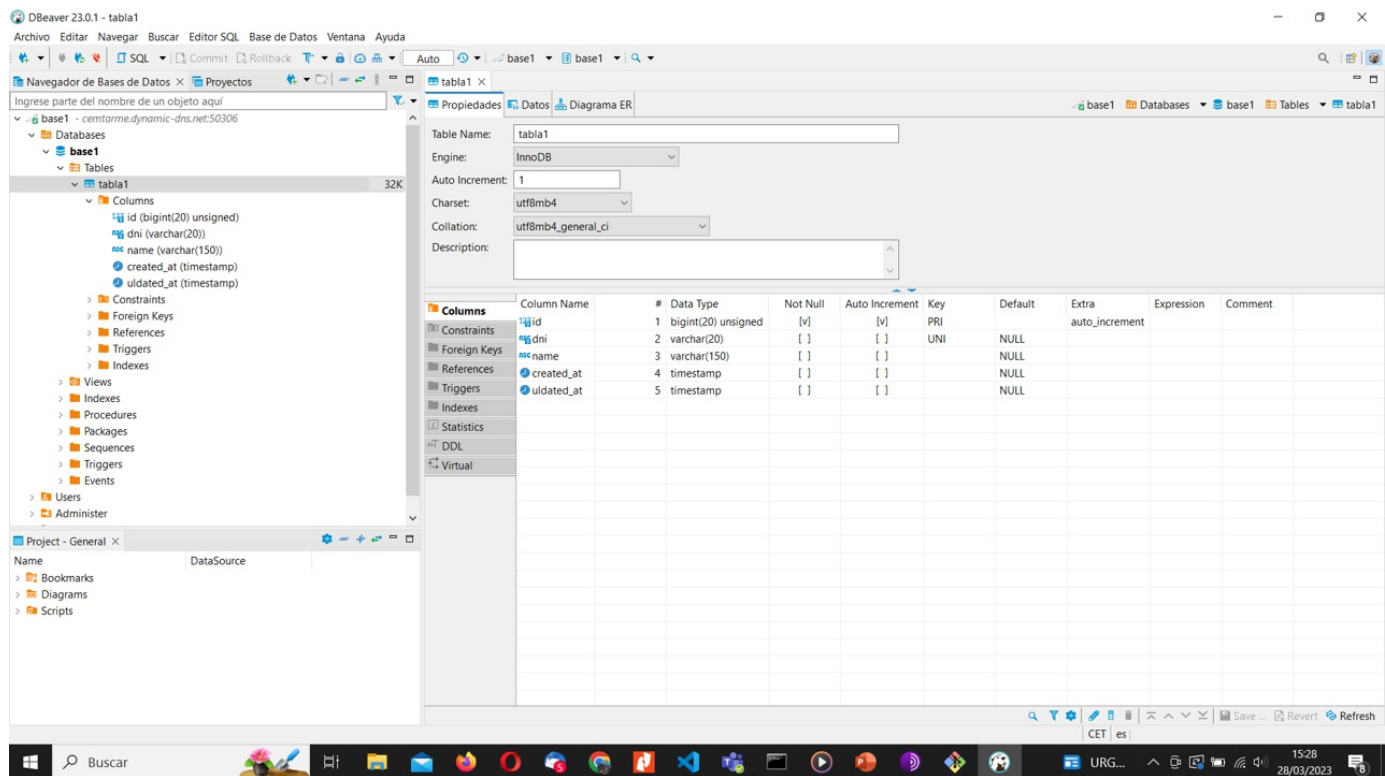
Top Screenshot: Database Navigator

- Database: base1
- Tables:
 - tabla1 (32K)
 - Columns:
 - id (bigint(20) unsigned)
 - dni (varchar(20))
 - name (varchar(150))
 - created_at (timestamp)
 - updated_at (timestamp)
 - Constraints
 - Foreign Keys
 - References
 - Triggers
 - Indexes

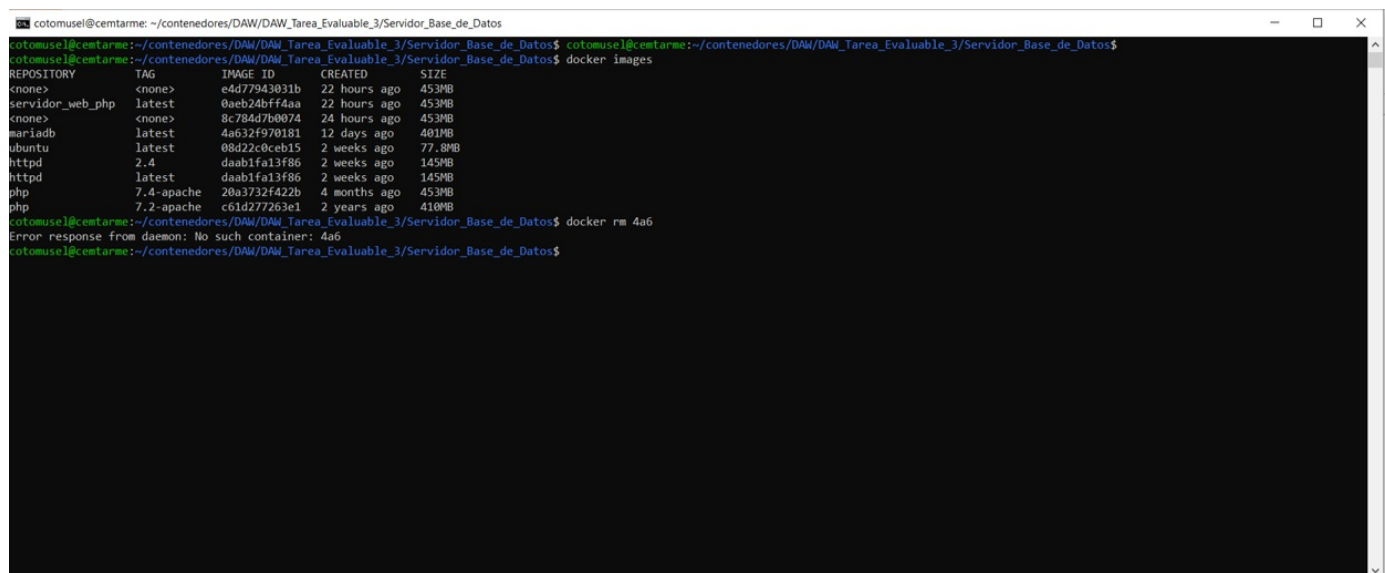
Bottom Screenshot: Table Properties

Schema Name: base1
 Default Charset: utf8mb4
 Default Collation: utf8mb4_general_ci
 SQL Path:
 Database size: 32K

Table Name	Engine	Auto Increment	Data Length	Description
tabla1	InnoDB	1	16K	



Intentamos eliminar la imagen de mariadb



Eliminamos contenedores

```
cotomusel@centarme: ~/contenedores/DAW/DAW_Tarea_Evaluable_3/Servidor_Base_de_Datos
cotomusel@centarme:~/contenedores/DAW/DAW_Tarea_Evaluable_3/Servidor_Base_de_Datos$ cotomusel@centarme:~/contenedores/DAW/DAW_Tarea_Evaluable_3/Servidor_Base_de_Datos$
cotomusel@centarme:~/contenedores/DAW/DAW_Tarea_Evaluable_3/Servidor_Base_de_Datos$ docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
<none>               <none>             e4d77943031b       22 hours ago       453MB
servidor_web_php     latest             0aeb24bffa4a       22 hours ago       453MB
<none>               <none>             8c784d7b0074       24 hours ago       453MB
mariadb              latest             4a632f970181       12 days ago        401MB
ubuntu               latest             08d22c0ceb15       2 weeks ago        77.8MB
httpd                 2.4               daab1fa13f86       2 weeks ago        145MB
httpd                 latest            daab1fa13f86       2 weeks ago        145MB
php                   7.4-apache        20a3732f422b       4 months ago       453MB
php                   7.2-apache        c61d277263e1       2 years ago        410MB
cotomusel@centarme:~/contenedores/DAW/DAW_Tarea_Evaluable_3/Servidor_Base_de_Datos$ docker rm 4a6
Error response from daemon: No such container: 4a6
cotomusel@centarme:~/contenedores/DAW/DAW_Tarea_Evaluable_3/Servidor_Base_de_Datos$ docker ps -a -s
CONTAINER ID        IMAGE               COMMAND                  CREATED             STATUS              PORTS                               NAMES
5ae925699e42       mariadb            "docker-entrypoint.s..." 2 hours ago         Up 2 hours          0.0.0.0:3306->3306/tcp, :::3306->3306/tcp    bddd
f082824a5fc5       mariadb            "docker-entrypoint.s..." 2 hours ago         Created                                gallant_mclean
b32617774dcf       servidor_web_php   "docker-php-entrypoi..." 16 hours ago        Up 16 hours         0.0.0.0:1234->80/tcp, :::1234->80/tcp        servidor
6daf48d4192e       ubuntu            "/bin/bash"               3 days ago          Exited (127) 3 days ago                                contenedor1
c2f5f9f5126f       mariadb            "docker-entrypoint.s..." 3 days ago          Exited (0) 27 hours ago                                some-mariadb
a6b6730c481c       httpd:2.4          "httpd-foreground"        4 days ago          Exited (0) 26 hours ago                                apacheServer
cotomusel@centarme:~/contenedores/DAW/DAW_Tarea_Evaluable_3/Servidor_Base_de_Datos$ docker stop bddd
bddd
cotomusel@centarme:~/contenedores/DAW/DAW_Tarea_Evaluable_3/Servidor_Base_de_Datos$ docker rm bddd
bddd
cotomusel@centarme:~/contenedores/DAW/DAW_Tarea_Evaluable_3/Servidor_Base_de_Datos$ docker ps -a -s
CONTAINER ID        IMAGE               COMMAND                  CREATED             STATUS              PORTS                               NAMES
f082824a5fc5       mariadb            "docker-entrypoint.s..." 3 hours ago         Created                                gallant_mclean
b32617774dcf       servidor_web_php   "docker-php-entrypoi..." 16 hours ago        Up 16 hours         0.0.0.0:1234->80/tcp, :::1234->80/tcp        servidor
6daf48d4192e       ubuntu            "/bin/bash"               3 days ago          Exited (127) 3 days ago                                contenedor1
c2f5f9f5126f       mariadb            "docker-entrypoint.s..." 3 days ago          Exited (0) 27 hours ago                                some-mariadb
a6b6730c481c       httpd:2.4          "httpd-foreground"        4 days ago          Exited (0) 26 hours ago                                apacheServer
cotomusel@centarme:~/contenedores/DAW/DAW_Tarea_Evaluable_3/Servidor_Base_de_Datos$ docker rm f08
f08
cotomusel@centarme:~/contenedores/DAW/DAW_Tarea_Evaluable_3/Servidor_Base_de_Datos$ docker ps -a -s
CONTAINER ID        IMAGE               COMMAND                  CREATED             STATUS              PORTS                               NAMES
b32617774dcf       servidor_web_php   "docker-php-entrypoi..." 16 hours ago        Up 16 hours         0.0.0.0:1234->80/tcp, :::1234->80/tcp        servidor
6daf48d4192e       ubuntu            "/bin/bash"               3 days ago          Exited (127) 3 days ago                                contenedor1
c2f5f9f5126f       mariadb            "docker-entrypoint.s..." 3 days ago          Exited (0) 27 hours ago                                some-mariadb
a6b6730c481c       httpd:2.4          "httpd-foreground"        4 days ago          Exited (0) 26 hours ago                                apacheServer
cotomusel@centarme:~/contenedores/DAW/DAW_Tarea_Evaluable_3/Servidor_Base_de_Datos$
```

No los elimino todos por estar haciendo pruebas con el tercer ejercicio, que es el contenedor que tengo arrancado

```
cotomusel@centarme:~/contenedores/DAW/DAW_Tarea_Evaluable_3/Servidor_Base_de_Datos$ docker ps -a
CONTAINER ID        IMAGE               COMMAND                  CREATED             STATUS              PORTS                               NAMES
99c73f5e927b       robertoxorrascar/juego-dibujos:v1 "httpd-foreground"      4 hours ago         Up 4 hours          0.0.0.0:8084->80/tcp, :::8084->80/tcp    juegoDibujos
cotomusel@centarme:~/contenedores/DAW/DAW_Tarea_Evaluable_3/Servidor_Base_de_Datos$
```

(Volver)

Parte 7 - Webgrafía

No se han necesitado ayudas externas a parte del material del campus

(Volver)