

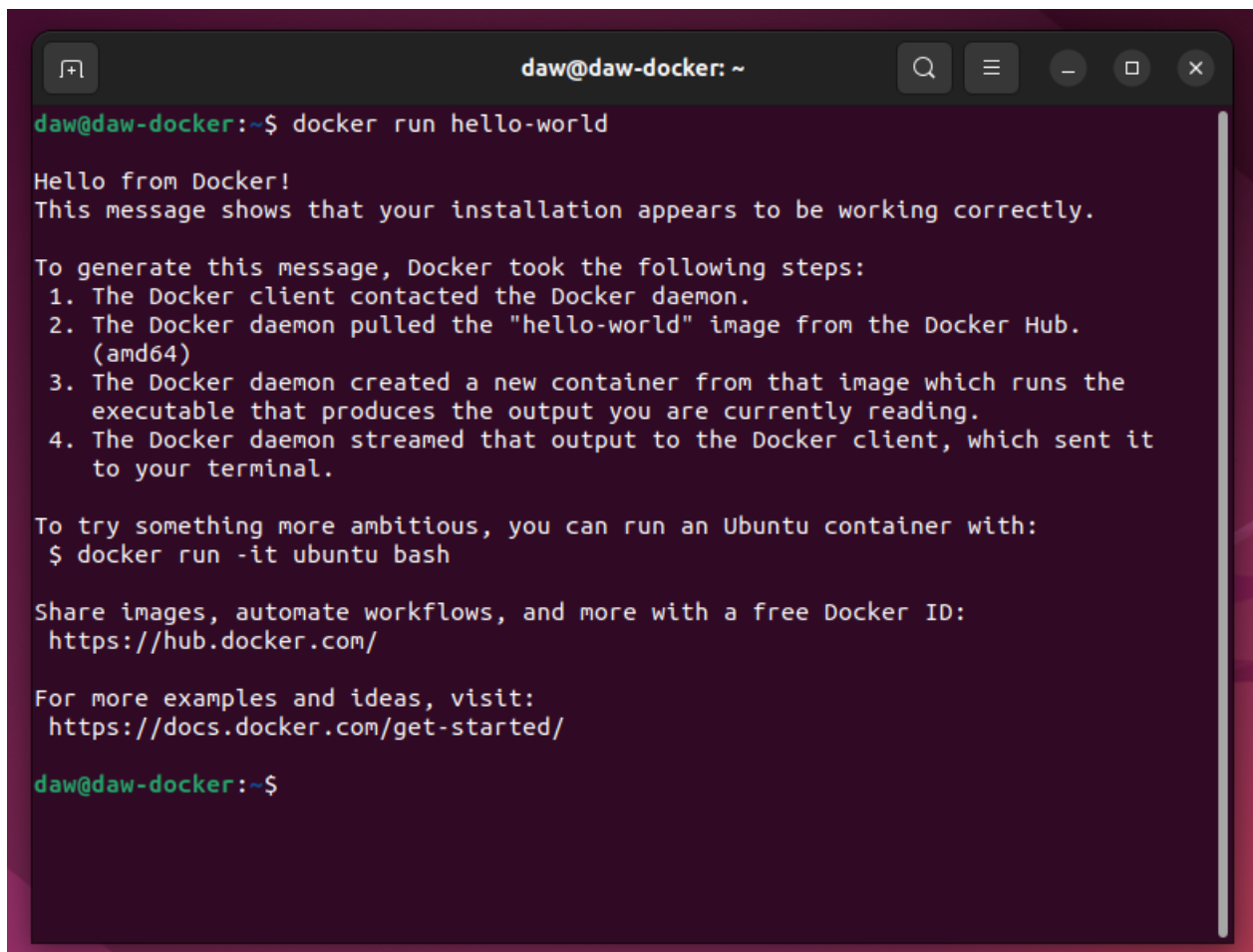
Ejercicios para repasar

1.-Instala docker en una máquina y configúralo para que se pueda usar con un usuario sin privilegios.

Comandos para instalar docker:

```
sudo apt-get update
sudo apt-get install docker-ce docker-ce-cli containerd.io docker-compose-plugin
```

2.- Ejecuta un contenedor a partir de la imagen hello-word . Comprueba que nos devuelve la salida adecuada. Comprueba que no se está ejecutando. Lista los contenedores que están parado. Borra el contenedor.

A terminal window titled 'daw@daw-docker: ~' with standard window controls. The user enters 'docker run hello-world'. The output is a multi-line message: 'Hello from Docker!', 'This message shows that your installation appears to be working correctly.', 'To generate this message, Docker took the following steps:', followed by a numbered list of 4 steps describing the process from contacting the daemon to streaming output. It then suggests running an Ubuntu container and provides links to Docker Hub and documentation. The prompt returns to 'daw@daw-docker:~\$'.

```
docker run hello-world
```

```
daw@daw-docker:~$ docker ps
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS   NAMES
daw@daw-docker:~$
```

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```
docker ps
```

```
daw@daw-docker:~$ docker ps -a
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS          NAMES
1f9954f88b7a   hello-world    "/hello"                5 days ago    Exited (0) 5 days ago          nifty_ferri
daw@daw-docker:~$
```

```
docker ps -a
```

```
daw@daw-docker:~$ docker rm 1f9954f88b7a
1f9954f88b7a
daw@daw-docker:~$ docker ps -a
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS          NAMES
daw@daw-docker:~$
```

```
docker stop
docker rm "ID DEL CONTENEDOR"
```

3.- Crea un contenedor interactivo desde una imagen debian. Instala un paquete (por ejemplo nano). Sal de la terminal, ¿sigue el contenedor corriendo? ¿Por qué?. Vuelve a iniciar el contenedor y accede de nuevo a él de forma interactiva. ¿Sigue instalado el nano ?. Sal del contenedor, y bórralo. Crea un nuevo contenedor interactivo desde la misma imagen. ¿Tiene el nano instalado?

```
daw@daw-docker:~$ docker pull debian
Using default tag: latest
latest: Pulling from library/debian
bbee03cda1f: Pull complete
Digest: sha256:534da5794e770279c889daa891f46f5a530b0c5de8bfb5e40394a0164d9fa87
Status: Downloaded newer image for debian:latest
docker.io/library/debian:latest
daw@daw-docker:~$ docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
httpd         2.4       463980270363   5 days ago    145MB
debian        latest    5c8936e57a38   5 days ago    124MB
mariadb       <none>    a748acbaccac   5 weeks ago    410MB
ubuntu        latest    6b7dfa7e8fdb   5 weeks ago    77.8MB
hello-world   latest    feb5d9fea6a5   15 months ago  13.3kB
daw@daw-docker:~$
```

```
docker stop
docker pull debian
docker images
```

```
daw@daw-docker:~$ docker run -it --name contenedor1 debian bash
```

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```
docker stop
docker run -it --name contenedor1 debian bash
```

```
root@2eb584794efb:/# apt install nano
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  libgpm2 libncursesw6
Suggested packages:
  gpm hunspell
The following NEW packages will be installed:
  libgpm2 libncursesw6 nano
0 upgraded, 3 newly installed, 0 to remove and 0 not upgraded.
Need to get 825 kB of archives.
After this operation, 3087 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
```

```
apt update
apt upgrade
apt install nano
```

```
root@2eb584794efb:/# exit
exit
daw@daw-docker:~$ docker ps
CONTAINER ID   IMAGE      COMMAND                  CREATED        STATUS        PORTS        NAMES
daw@daw-docker:~$
```

```
docker ps
"el contenedor no sigue corriendo"
```

```
daw@daw-docker:~$ docker start contenedor1
contenedor1
daw@daw-docker:~$ docker exec -it contenedor1 bash
root@2eb584794efb:/#
```

```
daw@daw-docker:~$ docker exec -it contenedor1 bash
root@2eb584794efb:/# apt install nano
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
nano is already the newest version (5.4-2+deb11u2).
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
root@2eb584794efb:/#
```

```
"nano sigue instalado"
```

Ejercicios repaso docker

```
daw@daw-docker:~$ docker stop contenedor1
contenedor1
daw@daw-docker:~$ docker ps -a
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS   NAMES
2eb584794efb   debian   "bash"    9 minutes ago   Exited (137) 5 seconds ago           contenedor1
daw@daw-docker:~$ docker rm contenedor1
contenedor1
daw@daw-docker:~$ docker ps -a
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS   NAMES
daw@daw-docker:~$
```

```
docker stop contenedor1
docker rm contenedor1
```

```
daw@daw-docker:~$ docker run -it --name contene2 debian bash
root@03995cde7d0a:/# apt install nano
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
E: Unable to locate package nano

root@03995cde7d0a:/# apt update
Get:1 http://deb.debian.org/debian bullseye InRelease [116 kB]
Get:2 http://deb.debian.org/debian-security bullseye-security InRelease [48.4 kB]
Get:3 http://deb.debian.org/debian bullseye-updates InRelease [44.1 kB]
Get:4 http://deb.debian.org/debian bullseye/main amd64 Packages [8183 kB]
Get:5 http://deb.debian.org/debian-security bullseye-security/main amd64 Packages [214 kB]
Get:6 http://deb.debian.org/debian bullseye-updates/main amd64 Packages [14.6 kB]
Fetched 8620 kB in 2s (4303 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
All packages are up to date.
root@03995cde7d0a:/# apt upgrade
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Calculating upgrade... Done
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
root@03995cde7d0a:/# apt install nano
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  libgpm2 libncursesw6
Suggested packages:
  gpm hunspell
The following NEW packages will be installed:
  libgpm2 libncursesw6 nano
0 upgraded, 3 newly installed, 0 to remove and 0 not upgraded.
Need to get 825 kB of archives.
After this operation, 3087 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
```

"nano no sigue instalado despues de eliminar el contenedor"

4.- Crea un contenedor demonio con un servidor nginx, usando la imagen oficial de nginx. Al crear el contenedor, ¿has tenido que indicar algún comando para que lo ejecute? Accede al navegador

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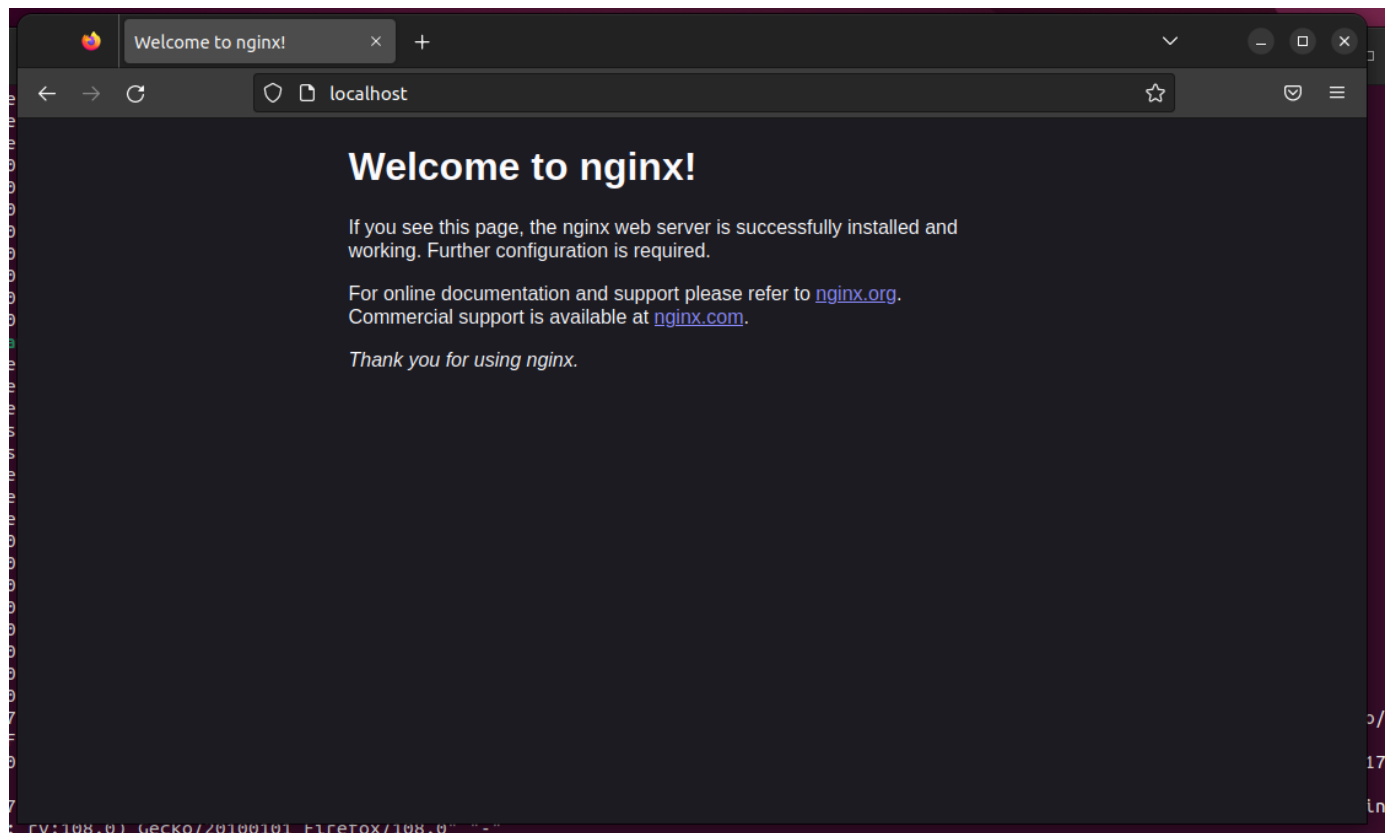
web y comprueba que el servidor esta funcionando. Muestra los logs del contenedor.

```
daw@daw-docker:~$ docker pull nginx
Using default tag: latest
latest: Pulling from library/nginx
8740c948ffd4: Already exists
d2c0556a17c5: Pull complete
c8b9881f2c6a: Pull complete
693c3ffa8f43: Pull complete
8316c5e80e6d: Pull complete
b2fe3577faa4: Pull complete
Digest: sha256:b8f2383a95879e1ae064940d9a200f67a6c79e710ed82ac42263397367e7cc4e
Status: Downloaded newer image for nginx:latest
docker.io/library/nginx:latest
daw@daw-docker:~$
```

```
daw@daw-docker:~$ docker run -d --name nginx1 -p 80:80 nginx
447408338e1f8da93d4e05685c3e814796621adb667f06a341b29dcf396f45ee
```

```
daw@daw-docker:~$ docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED        STATUS        PORTS                               NAMES
447408338e1f   nginx    "/docker-entrypoint..." 32 seconds ago Up 30 seconds  0.0.0.0:80->80/tcp, :::80->80/tcp  nginx1
daw@daw-docker:~$
```

```
docker pull nginx
docker run -d --name nginx1 -p 80:80 nginx
```



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```
daw@daw-docker:~$ docker logs -f nginx1
/docker-entrypoint.sh: /docker-entrypoint.d/ is not empty, will attempt to perform configuration
/docker-entrypoint.sh: Looking for shell scripts in /docker-entrypoint.d/
/docker-entrypoint.sh: Launching /docker-entrypoint.d/10-listen-on-ipv6-by-default.sh
10-listen-on-ipv6-by-default.sh: info: Getting the checksum of /etc/nginx/conf.d/default.conf
10-listen-on-ipv6-by-default.sh: info: Enabled listen on IPv6 in /etc/nginx/conf.d/default.conf
/docker-entrypoint.sh: Launching /docker-entrypoint.d/20-envsubst-on-templates.sh
/docker-entrypoint.sh: Launching /docker-entrypoint.d/30-tune-worker-processes.sh
/docker-entrypoint.sh: Configuration complete; ready for start up
2023/01/16 13:56:56 [notice] 1#1: using the "epoll" event method
2023/01/16 13:56:56 [notice] 1#1: nginx/1.23.3
2023/01/16 13:56:56 [notice] 1#1: built by gcc 10.2.1 20210110 (Debian 10.2.1-6)
2023/01/16 13:56:56 [notice] 1#1: OS: Linux 5.15.0-57-generic
2023/01/16 13:56:56 [notice] 1#1: getrlimit(RLIMIT_NOFILE): 1048576:1048576
2023/01/16 13:56:56 [notice] 1#1: start worker processes
2023/01/16 13:56:56 [notice] 1#1: start worker process 29
2023/01/16 13:56:56 [notice] 1#1: start worker process 30
172.17.0.1 - - [16/Jan/2023:14:00:36 +0000] "GET / HTTP/1.1" 200 615 "-" "Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:108.0) Gecko/2010
0101 Firefox/108.0" "-"
2023/01/16 14:00:36 [error] 29#29: *1 open() "/usr/share/nginx/html/favicon.ico" failed (2: No such file or directory), client: 172.17
.0.1, server: localhost, request: "GET /favicon.ico HTTP/1.1", host: "localhost", referer: "http://localhost/"
172.17.0.1 - - [16/Jan/2023:14:00:36 +0000] "GET /favicon.ico HTTP/1.1" 404 153 "http://localhost/" "Mozilla/5.0 (X11; Ubuntu; Linux x
86_64; rv:108.0) Gecko/20100101 Firefox/108.0" "-"
```

```
docker logs -f nginx1
```

5.- Crea un contenedor con la aplicación Nextcloud, mirando la documentación en docker Hub, para personalizar el nombre de la base de datos sqlite que va a utilizar.

```
daw@daw-docker:~$ docker pull nextcloud
Using default tag: latest
latest: Pulling from library/nextcloud
8740c948ffd4: Already exists
1873be858264: Pull complete
7ce6a163d8c1: Pull complete
008a172010ba: Pull complete
d15353ae3d77: Pull complete
223eb1888c0f: Pull complete
83374c2a967a: Pull complete
8fdc86711b26: Pull complete
23c0224c39b8: Pull complete
915d82c7f5c5: Pull complete
dc037a9c9035: Pull complete
768542e0b637: Pull complete
d7ade602d94f: Pull complete
7361225e9a5d: Pull complete
fdc75c5d6478: Pull complete
6e598d96642e: Pull complete
2183a95f6531: Pull complete
e4d461a63b9a: Pull complete
e50f69db5ce5: Pull complete
4e2f130d99f4: Pull complete
Digest: sha256:01435cc1463c01a8a611fd387dc588ccbd4abe9bf290d668c7d80eac160ab4ef
Status: Downloaded newer image for nextcloud:latest
docker.io/library/nextcloud:latest
daw@daw-docker:~$
```

```
docker logs -f nginx1
```

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```
daw@daw-docker:~$ docker run -d -p 8080:80 nextcloud
34d8a315dd06049705cd0da72c08bbb7a4f25fbcfa891e182187c7ba1283176e
daw@daw-docker:~$ docker ps
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
34d8a315dd06	nextcloud	"/entrypoint.sh apac..."	7 seconds ago	Up 5 seconds	0.0.0.0:8080->80/tcp, :::8080->80/tcp	confident_brattain
447408338e1f	nginx	"/docker-entrypoint..."	27 minutes ago	Up 27 minutes	0.0.0.0:80->80/tcp, :::80->80/tcp	nginx1

```
docker run -d -p 8080:80 nextcloud
```