

```
C:\Users\Usuario>docker version
Client:
 Version:      26.1.4
 API version:  1.45
 Go version:   go1.21.11
 Git commit:   5650f9b
 Built:        Wed Jun  5 11:29:54 2024
 OS/Arch:     windows/amd64
 Context:      desktop-linux

Server: Docker Desktop 4.31.1 (153621)
Engine:
 Version:      26.1.4
 API version:  1.45 (minimum version 1.24)
 Go version:   go1.21.11
 Git commit:   de5c9cf
 Built:        Wed Jun  5 11:29:22 2024
 OS/Arch:     linux/amd64
 Experimental: false
 containerd:
 Version:      1.6.33
 GitCommit:    d2d58213f83a351ca8f528a95fbd145f5654e957
 runc:
```

```
C:\Users\Usuario>docker pull busybox
Using default tag: latest
latest: Pulling from library/busybox
ec562eabd705: Pull complete
Digest: sha256:9ae97d36d26566ff84e8893c64a6dc4fe8ca6d1144bf5b87b2b85a32def253c7
Status: Downloaded newer image for busybox:latest
docker.io/library/busybox:latest

What's next:
View a summary of image vulnerabilities and recommendations → docker scout quickview busybox
```

```
C:\Users\Usuario>docker run busybox

C:\Users\Usuario>
```

[compassionate_la](#)

6f0cc4c31a3e

[busybox](#)

Exited

N/A 16 seconds a

▶ ⋮ 🗑

```
C:\Users\Usuario>docker run busybox echo "Hola"
Hola

C:\Users\Usuario>
```

[nostalgic_hypatia](#)

63a58264ae67

[busybox](#)

Exited

N/A 24 seconds a

▶ ⋮ 🗑

```
C:\Users\Usuario>docker ps
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
C:\Users\Usuario>docker ps -a						
CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
63a58264ae67	busybox	"echo Hola"	About a minute ago	Exited (0)	About a minute ago	nostalgic_hypatia
6f0cc4c31a3e	busybox	"sh"	2 minutes ago	Exited (0)	2 minutes ago	compassionate_lalande
e2d2623b7ca3	arqsw2-hotels	"/hotels/hotels"	5 weeks ago	Exited (2)	5 weeks ago	arqsw2-hotels
df443e980951	arqsw2-search2	"/search2/search2"	5 weeks ago	Exited (2)	5 weeks ago	arqsw2-search
5e8930a43d6d	solr:latest	"docker-entrypoint.s..."	5 weeks ago	Exited (143)	5 weeks ago	my-solr
a779a7f0f261	mongodb/mongodb-community-server:latest	"python3 /usr/local/..."	5 weeks ago	Exited (137)	5 weeks ago	mongo
4bcd2a124bbb	rabbitmq:3-management	"docker-entrypoint.s..."	5 weeks ago	Exited (0)	5 weeks ago	rabbitmq

```

C:\Users\Usuario>docker run -it busybox sh
/ # ls
bin      dev      etc      home     lib      lib64    proc     root     sys      tmp      usr      var
/ # ps
PID      USER     TIME    COMMAND
   1      root         0:00    sh
   8      root         0:00    ps
/ # uptime
 22:54:40 up 15 min,  0 users,  load average: 0.05, 0.07, 0.03
/ # free
              total        used        free      shared  buff/cache   available
Mem:        2974816        624228       2012332        3144       338256     2196564
Swap:        1048576           0       1048576
/ # ls -l
total 40
drwxr-xr-x  2 root    root           12288 May 18  2023 bin
drwxr-xr-x  5 root    root           360 Aug 22  22:54 dev
drwxr-xr-x  1 root    root          4096 Aug 22  22:54 etc
drwxr-xr-x  2 nobody nobody       4096 May 18  2023 home
drwxr-xr-x  2 root    root          4096 May 18  2023 lib
lrwxrwxrwx  1 root    root           3 May 18  2023 lib64 -> lib
dr-xr-xr-x 269 root    root           0 Aug 22  22:54 proc
drwx----- 1 root    root          4096 Aug 22  22:54 root
dr-xr-xr-x 11 root    root           0 Aug 22  22:54 sys
drwxrwxrwt  2 root    root          4096 May 18  2023 tmp
drwxr-xr-x  4 root    root          4096 May 18  2023 usr
drwxr-xr-x  4 root    root          4096 May 18  2023 var
/ #
/ # exit

```

```

Welcome  Dockerfile X
Dockerfile > ...
1  #See https://aka.ms/containerfastmode to understand how Visual Studio uses this Dockerfile to build your image
2
3  FROM mcr.microsoft.com/dotnet/aspnet:7.0 AS base
4  WORKDIR /app
5  EXPOSE 80
6  EXPOSE 443
7  EXPOSE 5254
8
9  FROM mcr.microsoft.com/dotnet/sdk:7.0 AS build
10 WORKDIR /src
11 COPY ["SimpleWebAPI/SimpleWebAPI.csproj", "SimpleWebAPI/"]
12 RUN dotnet restore "SimpleWebAPI/SimpleWebAPI.csproj"
13 COPY . .
14 WORKDIR "/src/SimpleWebAPI"
15 RUN dotnet build "SimpleWebAPI.csproj" -c Release -o /app/build
16
17 FROM build AS publish
18 RUN dotnet publish "SimpleWebAPI.csproj" -c Release -o /app/publish /p:UseAppHost=false
19
20 FROM base AS final
21 WORKDIR /app
22 COPY --from=publish /app/publish .
23 ENTRYPOINT ["dotnet", "SimpleWebAPI.dll"]
24 #CMD ["/bin/bash"]
25

```

FROM mcr.microsoft.com/dotnet/aspnet:7.0 AS base

Establece la imagen base para esta etapa del proceso de construcción. Se utiliza la imagen de ASP.NET 7.0 como base. AS base le da un nombre a esta etapa, que se puede referenciar en otras partes del Dockerfile.

WORKDIR /app

Cambia el directorio de trabajo actual dentro del contenedor a /app .

EXPOSE (80, 443, 5254)

Indica que el contenedor expondrá el puerto 80. Esto no realiza una publicación real del puerto, pero proporciona información a otros desarrolladores o administradores sobre qué puertos podría necesitar el contenedor.

FROM mcr.microsoft.com/dotnet/sdk:7.0 AS build

Establece otra imagen base para esta etapa, en este caso, la imagen SDK de .NET

WORKDIR /src

Cambia el directorio de trabajo actual nuevamente, esta vez a /src .

COPY ["SimpleWebAPI/SimpleWebAPI.csproj", "SimpleWebAPI/"]

Copia el archivo SimpleWebAPI.csproj del directorio SimpleWebAPI/ del contexto de construcción al directorio actual en el contenedor (/src).

RUN dotnet restore "SimpleWebAPI/SimpleWebAPI.csproj"

Ejecuta el comando dotnet restore para restaurar las dependencias del proyecto contenidas en el archivo SimpleWebAPI.csproj .

COPY . .

Copia todo el contenido del contexto de construcción al directorio actual en el contenedor (/src).

WORKDIR "/src/SimpleWebAPI"

Cambia el directorio de trabajo actual al subdirectorio SimpleWebAPI dentro de /src .

RUN dotnet build "SimpleWebAPI.csproj" -c Release -o /app/build

Ejecuta el comando dotnet build para compilar el proyecto SimpleWebAPI.csproj en modo Release y coloca los resultados en el directorio /app/build .

FROM build AS publish

Define una nueva etapa llamada publish basada en la etapa anterior build .

RUN dotnet publish "SimpleWebAPI.csproj" -c Release -o /app/publish

/p:UseAppHost=false

Ejecuta el comando dotnet publish para publicar la aplicación en modo Release y almacena los archivos publicados en el directorio /app/publish . La opción /p:UseAppHost=false indica que no se utilizará un host de aplicación específico al publicar.

COPY --from=publish /app/publish .

Copia los archivos publicados desde la etapa publish al directorio actual (/app) en esta etapa final .

ENTRYPOINT ["dotnet", "SimpleWebAPI.dll"]

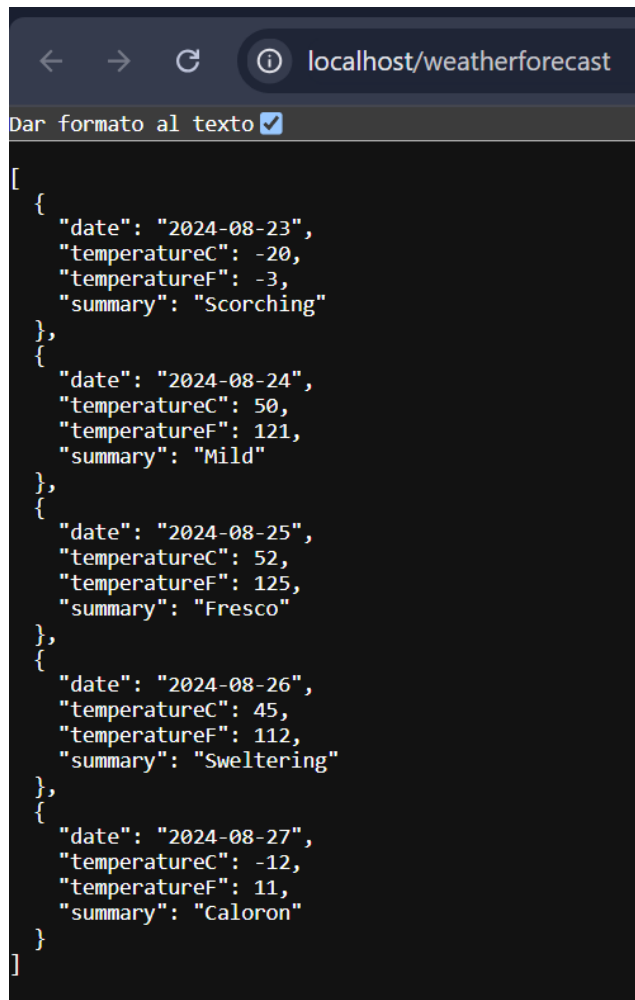
Establece el comando de entrada principal cuando se inicie el contenedor. En este caso, ejecuta el archivo SimpleWebAPI.dll utilizando el entorno de ejecución de .NET.

CMD ["/bin/bash"]

Establece el comando por defecto que se ejecutaría al iniciar el contenedor en lugar del ENTRYPOINT . En este caso, ejecutaría el shell de bash dentro del contenedor.

```
PS C:\Users\Usuario\Universidad\4º Año - Ing. de Sistemas\Ingenieria de Software III\SimpleWebAPI> docker build -t mywebapi .
>>
[+] Building 375.7s (18/18) FINISHED                                docker:desktop-linux
=> [internal] load build definition from Dockerfile                 0.0s
=> => transferring dockerfile: 810B                                0.0s
=> [internal] load metadata for mcr.microsoft.com/dotnet/sdk:7.0   1.9s
=> [internal] load metadata for mcr.microsoft.com/dotnet/aspnet:7.0 2.7s
=> [internal] load .dockerignore                                    0.0s
=> => transferring context: 2B                                       0.0s
```

```
C:\Users\Usuario>docker ps -a
CONTAINER ID   IMAGE          NAMES                COMMAND                CREATED        STATUS        PORTS
57450468b301   mywebapi      mywebapi             "dotnet SimpleWebAPI-" 2 minutes ago  Up 2 minutes  443/tcp, 0.0.0.0:80->80/tcp, 5254/tcp  myapi
9b3a126c264e   busybox       vibrant_neumann      "sh"                   52 minutes ago Up 22 minutes
63a58264ae67   busybox       nostalgic_hypatia    "echo Hola"           54 minutes ago Exited (0) 22 minutes ago
6f0cc4c31a3e   busybox       compassionate_lalande "sh"                   55 minutes ago Exited (0) 22 minutes ago
e2d2623b7ca3   arqsw2-hotels arqsw2-hotels        "/hotels/hotels"       5 weeks ago   Exited (2) 5 weeks ago
df443e980951   arqsw2-search arqsw2-search        "/search2/search2"     5 weeks ago   Exited (2) 5 weeks ago
5e8930a43d6d   solr:latest   my-solr              "docker-entrypoint.s_" 5 weeks ago   Exited (143) 5 weeks ago
a779a7f9f261   mongodb/mongodb-community-server:latest mongo             "python3 /usr/local/_/" 5 weeks ago   Exited (137) 5 weeks ago
4bcd2a124bbb   rabbitmq:3-management rabbitmq            "docker-entrypoint.s_" 5 weeks ago   Exited (0) 5 weeks ago
```



```
PS C:\Users\Usuario\Universidad\4º Año - Ing. de Sistemas\Ingenieria de Software III\SimpleWebAPI> docker login
Authenticating with existing credentials...
Login Succeeded
```

Volúmenes

```
PS C:\Users\Usuario\Universidad\4º Año - Ing. de Sistemas\Ingenieria de Software III\SimpleWebAPI> docker run -i
t --rm -p 80:80 -v /Users/miuser/temp:/var/temp mywebapi

info: Microsoft.Hosting.Lifetime[14]
      Now listening on: http://[::]:80
info: Microsoft.Hosting.Lifetime[0]
      Application started. Press Ctrl+C to shut down.
info: Microsoft.Hosting.Lifetime[0]
      Hosting environment: Production
info: Microsoft.Hosting.Lifetime[0]
      Content root path: /app
```

elated_payne

mywebapi

37b0cc942616

80:80

LogsInspectBind mounts

```
# ls -l /var/temp
total 0
# touch /var/temp/hola.txt
#
```

elated_payne

mywebapi

37b0cc942616

80:80

STATUS

Running (3 minutes ago)

Buttons: Stop, Play, Refresh, Delete

LogsInspectBind mountsExecFilesStats

Open file editor

Name	Note	Size	Last modified	Mode
local			7 months ago	dgrwxrwxr-x
lock -> /run/lock		9 Bytes	3 months ago	Lrwxrwxrwx
log			3 months ago	drwxr-xr-x
mail			3 months ago	dgrwxrwxr-x
opt			3 months ago	drwxr-xr-x
run -> /run		4 Bytes	3 months ago	Lrwxrwxrwx
spool			3 months ago	drwxr-xr-x
temp	MOUNT		33 seconds ago	drwxrwxrwx
hola.txt	MOUNT	0 Bytes	33 seconds ago	-rw-r--r--
tmp			7 months ago	dtrwxrwxrwx

Base de datos Postgres

```
Mode                LastWriteTime         Length Name
----                -
d-----           13/8/2024    15:59           .postgres
Unable to find image 'postgres:9.4' locally
9.4: Pulling from library/postgres
619014d83c02: Pull complete
7ec0fe6664f6: Pull complete
9ca7ba8f7764: Pull complete
9e1155d037e2: Pull complete
febcbf7f8870: Pull complete
8c78c79412b5: Pull complete
5a35744405c5: Pull complete
27717922e067: Pull complete
36f0c5255550: Pull complete
dbf0a396f422: Pull complete
ec4c06ea33e5: Pull complete
e8dd33eba6d1: Pull complete
51c81b3b2c20: Pull complete
2a03dd76f5d7: Pull complete
Digest: sha256:42a7a6a647a602efa9592edd1f56359800d079b93fa52c5d92244c58ac4a2ab9
Status: Downloaded newer image for postgres:9.4
6503c04d29b995358beef760b3eb36f3d60bab7743b96ddef85a7713689429c9
```

```

postgres=# create database test;
ERROR:  syntax error at or near "#"
LINE 1: #Estos comandos se corren una vez conectados a la base
      ^
postgres=# \connect test
FATAL:  database "test" does not exist
Previous connection kept
postgres=# create table tabla_a (mensaje varchar(50));
CREATE TABLE
postgres=# insert into tabla_a (mensaje) values('Hola mundo!');
INSERT 0 1
postgres=# select * from tabla_a;
   mensaje
-----
 Hola mundo!
(1 row)

postgres=#
postgres=# \q
# #

```

Levantar BD MySQL

Imagen

```

PS C:\Users\Usuario\Universidad\4º Año - Ing. de Sistemas\Ingenieria de Software III\SimpleWebAPI> docker pull mcr.micr
rosort.com/mssql/server:2022-latest
2022-latest: Pulling from mssql/server
e7945123d2a2: Already exists
18a53d1b3bd7: Pull complete
d2a9a15297bf: Pull complete
Digest: sha256:c1aa8afe9b06eab64c9774a4802dcd032205d1be785b1fd51e1c0151e7586b74
Status: Downloaded newer image for mcr.microsoft.com/mssql/server:2022-latest
mcr.microsoft.com/mssql/server:2022-latest

What's Next?
  View a summary of image vulnerabilities and recommendations → docker scout quickview mcr.microsoft.com/mssql/server:2022-latest
PS C:\Users\admin\Desktop\IGNACIO UCC\4 Cuarto año\Ing Sw III\Practico\ingSw3\tp2\simplewebapi>



```


Container

```





PS C:\Users\admin\Desktop\IGNACIO UCC\4 Cuarto año\Ing Sw III\Practico\ingSw3\tp2\simplewebapi> docker run -e "ACCEPT_EULA=Y" -e "SA_PASSWORD=Igna1234" -p 15000:1433 -d mcr.microsoft.com/mssql/server:2022-latest
8a9c71b1992435aaa48f927635383f5f7b3cb46de240066dc96b00200deb9de2

```



great_currant

8a9c71b19924


[mcr.microsoft.com/mssql/](#) Running

2.2%





Consultas

```

PS C:\Users\admin\Desktop\IGNACIO UCC\4 Cuarto año\Ing Sw III\Practico\ingSw3\tp2\simplewebapi> docker exec -it great_currant /opt/mssql-tools18/bin/sqlcmd -S localhost -U S
A -P 'Igna1234' -C
1> CREATE DATABASE test;
2> GO
1> USE test;
2> GO
Changed database context to 'test'.
1> CREATE TABLE TablaA (ID INT PRIMARY KEY);
2> GO
1> INSERT INTO TablaA (ID) VALUES (1);
2> GO

(1 rows affected)
1> SELECT * FROM TablaA;
2> GO
ID
-----
 1
(1 rows affected)
1>

```