

1°)

```
[rafael123@rafa docker-introducao]$ cd ./api
[rafael123@rafa api]$ ls
db Dockerfile package-lock.json src
[rafael123@rafa api]$ npm install
npm WARN old lockfile
npm WARN old lockfile The package-lock.json file was created with an old version of npm,
npm WARN old lockfile so supplemental metadata must be fetched from the registry.
npm WARN old lockfile This is a one-time fix-up, please be patient...
npm WARN deprecated urix@0.1.0: Please see https://github.com/lydell/urix#deprecated
npm WARN deprecated set-value@2.0.0: Critical bug fixed in v3.0.1, please upgrade to the latest version.
npm WARN deprecated mixin-deep@1.3.1: Critical bug fixed in v2.0.1, please upgrade to the latest version.
npm WARN deprecated resolve-url@0.2.1: https://github.com/lydell/resolve-url#deprecated
npm WARN deprecated ini@1.3.5: Please update to ini >=1.3.6 to avoid a prototype pollution issue
npm WARN deprecated set-value@0.4.3: Critical bug fixed in v3.0.1, please upgrade to the latest version.
npm WARN deprecated debug@3.2.6: Debug versions >=3.2.0 <3.2.7 || >=4 <4.3.1 have a low-severity ReDos regression when used in a Node.js
environment. It is recommended you upgrade to 3.2.7 or 4.3.1. (https://github.com/visionmedia/debug/issues/797)
npm WARN deprecated chokidar@2.1.5: Chokidar 2 will break on node v14+, Upgrade to chokidar 3 with 15x less dependencies.

added 274 packages and audited 275 packages in 34s

17 vulnerabilities (7 moderate, 7 high, 3 critical)
To address issues that do not require attention, run:
  npm audit fix

To address all issues (including breaking changes), run:
  npm audit fix --force

Run `npm audit` for details.
npm notice
npm notice New minor version of npm available! 8.1.3 -> 8.3.0
npm notice Changelog: https://github.com/npm/cli/releases/tag/v8.3.0
npm notice Run npm install -g npm@8.3.0 to update!
npm notice
```

2°)

```
[rafael123@rafa docker-introducao]$ sudo docker build -t mysql-image -f api/db/Dockerfile .
[sudo] senha para rafael123:
Sending build context to Docker daemon 12.24MB
Step 1/2 : FROM mysql
----> bb6f571db497
Step 2/2 : ENV MYSQL_ROOT_PASSWORD=3250x3250x3250
----> Using cache
----> 2eeb45c5db82
Successfully built 2eeb45c5db82
Successfully tagged mysql-image:latest
[rafael123@rafa docker-introducao]$ sudo docker build -t node-image -f api/Dockerfile .
Sending build context to Docker daemon 12.24MB
Step 1/3 : FROM node:10-slim
10-slim: Pulling from library/node
62deabe7a6db: Pull complete
f698164f6049: Pull complete
bc29352cb629: Pull complete
85e84b4c858f: Pull complete
ac72e4359589: Pull complete
Digest: sha256:88932859e3d022d79161b99628c4c2c50e836437455e2d1b1a008d98367b10d6
Status: Downloaded newer image for node:10-slim
----> 6fbcbbb5c603
Step 2/3 : WORKDIR /home/node/app
----> Running in 1ef9f57f8elf
Removing intermediate container 1ef9f57f8elf
----> 5a3364325eb8
Step 3/3 : CMD npm start
----> Running in d09cfd5616c
Removing intermediate container d09cfd5616c
----> ale7b5b91c9e
Successfully built ale7b5b91c9e
```

3°)

```
[rafael123@rafael docker-introducao]$ sudo docker build -t php-image -f website/Dockerfile .
Sending build context to Docker daemon 12.24MB
Step 1/2 : FROM php:7.2-apache
7.2-apache: Pulling from library/php
6ec7b7d162b2: Pull complete
db606474d60c: Pull complete
afb30f0cd8e0: Pull complete
3bb2e8051594: Pull complete
4c761b44e2cc: Pull complete
c2199db96575: Pull complete
1b9a9381eea8: Pull complete
fd07bbc59d34: Pull complete
72b73ab27698: Pull complete
983308f4f0d6: Pull complete
6c13f026e6da: Pull complete
e5e6cd163689: Pull complete
5c5516e56582: Pull complete
154729f6ba86: Pull complete
Digest: sha256:4dc0f0115acf8c2f0df69295ae822e49f5ad5fe849725847f15aa0e5802b55f8
Status: Downloaded newer image for php:7.2-apache
--> c61d277263e1
Step 2/2 : WORKDIR /var/www/html
--> Running in 5c584401b9bf
Removing intermediate container 5c584401b9bf
--> 5f904aa0662e
Successfully built 5f904aa0662e
Successfully tagged php-image:latest
```

4°)

```
[rafael123@rafael docker-introducao]$ sudo docker exec -i mysql-container mysql -uroot -prafaelpin <api/db/script.sql
[sudo] senha para rafael123:
mysql: [Warning] Using a password on the command line interface can be insecure.
[rafael123@rafael docker-introducao]$ sudo docker exec -it mysql-container mysql -uroot -prafaelpin <api/db/script.sql
the input device is not a TTY
[rafael123@rafael docker-introducao]$ sudo docker exec -it mysql-container /bin/bash
root@9c7cf0df705:/# mysql -uroot -prafaelpin
mysql: [Warning] Using a password on the command line interface can be insecure.
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 14
Server version: 8.0.27 MySQL Community Server - GPL

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owners.

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

mysql> use rafaelpin
ERROR 1049 (42000): Unknown database 'rafaelpin'
mysql> use rafaelpin;
ERROR 1049 (42000): Unknown database 'rafaelpin'
mysql> use programadorabordo;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> select * from products;
+----+-----+-----+
| id | name      | price |
+----+-----+-----+
|  1 | Exemplo 1 | 2500.00 |
|  2 | Exemplo 2 | 900.00 |
+----+-----+-----+
2 rows in set (0.01 sec)
```

5°)

```
3bb2e8051594: Pull complete
4c761b44e2cc: Pull complete
c2199db96575: Pull complete
1b9a9381eea8: Pull complete
fd07bbc59d34: Pull complete
72b73ab27698: Pull complete
983308f4f0d6: Pull complete
6c13f026e6da: Pull complete
e5e6cd163689: Pull complete
5c5516e56582: Pull complete
154729f6ba86: Pull complete
Digest: sha256:4dc0f0115acf8c2f0df69295ae822e49f5ad5fe849725847f15aa0e5802b55f8
Status: Downloaded newer image for php:7.2-apache
--> c61d277263e1
Step 2/2 : WORKDIR /var/www/html
--> Running in 5c584401b9bf
Removing intermediate container 5c584401b9bf
--> 5f904aa0662e
Successfully built 5f904aa0662e
Successfully tagged php-image:latest
[rafael123@rafa docker-introducao]$ docker run -d --rm --name mysql-container mysql-image
docker: Got permission denied while trying to connect to the Docker daemon socket at unix:///var/run/docker.sock: Post "http://%2Fvar%2Frun%2Fdocker.sock/v1.24/containers/create?name=mysql-container": dial unix /var/run/docker.sock: connect: permission denied.
See 'docker run --help'.
[rafael123@rafa docker-introducao]$ sudo docker run -d --rm --name mysql-container mysql-image
[sudo] senha para rafael123:
9c7cf0fdf705dd55e03dbf47a081350bb51eabf97d5fca618e4123e4e3148a87
[rafael123@rafa docker-introducao]$ docker ps
Got permission denied while trying to connect to the Docker daemon socket at unix:///var/run/docker.sock: Get "http://%2Fvar%2Frun%2Fdocker.sock/v1.24/containers/json": dial unix /var/run/docker.sock: connect: permission denied
[rafael123@rafa docker-introducao]$ sudo docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS                               NAMES
9c7cf0fdf705  mysql-image    "docker-entrypoint.s..." 3 minutes ago  Up 3 minutes  3306/tcp, 33060/tcp              mysql-container
[rafael123@rafa docker-introducao]$
```

6°)

```
[rafael123@rafa api]$ npm install --save-dev nodemon
npm WARN deprecated chokidar@2.1.8: Chokidar 2 will break on node v14+. Upgrade to chokidar 3 with 15x less dependencies.
added 32 packages, removed 25 packages, changed 23 packages, and audited 282 packages in 12s
11 vulnerabilities (6 moderate, 5 high)
To address issues that do not require attention, run:
  npm audit fix
To address all issues (including breaking changes), run:
  npm audit fix --force
Run `npm audit` for details.
[rafael123@rafa api]$ npm install --save express mysql
added 3 packages, changed 28 packages, and audited 285 packages in 8s
11 vulnerabilities (6 moderate, 5 high)
To address issues that do not require attention, run:
  npm audit fix
To address all issues (including breaking changes), run:
  npm audit fix --force
Run `npm audit` for details.
[rafael123@rafa api]$ docker inspect mysql-container
[]
Got permission denied while trying to connect to the Docker daemon socket at unix:///var/run/docker.sock: Get "http://%2Fvar%2Frun%2Fdocker.sock/v1.24/containers/mysql-container/json": dial unix /var/run/docker.sock: connect: permission denied
[rafael123@rafa api]$ sudo docker inspect mysql-container
[sudo] senha para rafael123:
[
  {
    "Id": "0320a40b42984d27e225bb1bf8f04e9164dd9fc53fbaec235835e3c32212355",
```

7°)

```
[rafael123@rafa docker-introducao]$ sudo docker image ls
REPOSITORY          TAG             IMAGE ID        CREATED         SIZE
php-image            latest          5f904aa0662e   About an hour ago  410MB
node-image           latest          a1e7b5b91c9e   About an hour ago  134MB
mysql-image          latest          2eeb45c5db82   About an hour ago  516MB
mysql                latest          bb6f6571db497   11 days ago       516MB
node                 10-slim         6fbcbbb5c603    8 months ago       134MB
php                  7.2-apache      c61d277263e1    12 months ago       410MB

[rafael123@rafa docker-introducao]$ sudo docker run -d -v $(pwd)/api:/home/node/app -p 9001:9001 --link mysql-container --rm --name node-container node-image
3551464f1b1eaa8af2860a42194b7a1e881cafcd196f402df9227917635f0a

[rafael123@rafa docker-introducao]$ sudo docker ps
CONTAINER ID   IMAGE             COMMAND                  CREATED          STATUS          PORTS
3551464f1b1e   node-image        "docker-entrypoint.s..." About a minute ago Up 58 seconds    0.0.0.0:9001->9001/tcp, :::9001->9001/tcp
0320a40b4298   mysql-image       "docker-entrypoint.s..." 22 minutes ago   Up 22 minutes    3306/tcp, 33060/tcp

[rafael123@rafa docker-introducao]$ sudo docker stop node-container
node-container

[rafael123@rafa docker-introducao]$ sudo docker run -d -v $(pwd)/api:/home/node/app -p 9001:9001 --link mysql-container --rm --name node-container node-image
c3eeafe6ec0f5a06e144fe0da4b22af14a70db1890b667a03f5fd5be3cbf74bb

[rafael123@rafa docker-introducao]$ sudo docker build -t php-image -f website/Dockerfile .
Sending build context to Docker daemon  217.8MB
Step 1/2 : FROM php:7.2-apache
--> c61d277263e1
Step 2/2 : WORKDIR /var/www/html
--> Using cache
--> 5f904aa0662e
Successfully built 5f904aa0662e
Successfully tagged php-image:latest

[rafael123@rafa docker-introducao]$ sudo docker run -d -v "$(pwd)/website":/var/www/html -p 8888:80 --link node-container --rm --name php-container php-image
653a004b74bbda73201857239d90ca303cb62971e5373cdfd74c779a1efdb64

[rafael123@rafa docker-introducao]$
```