

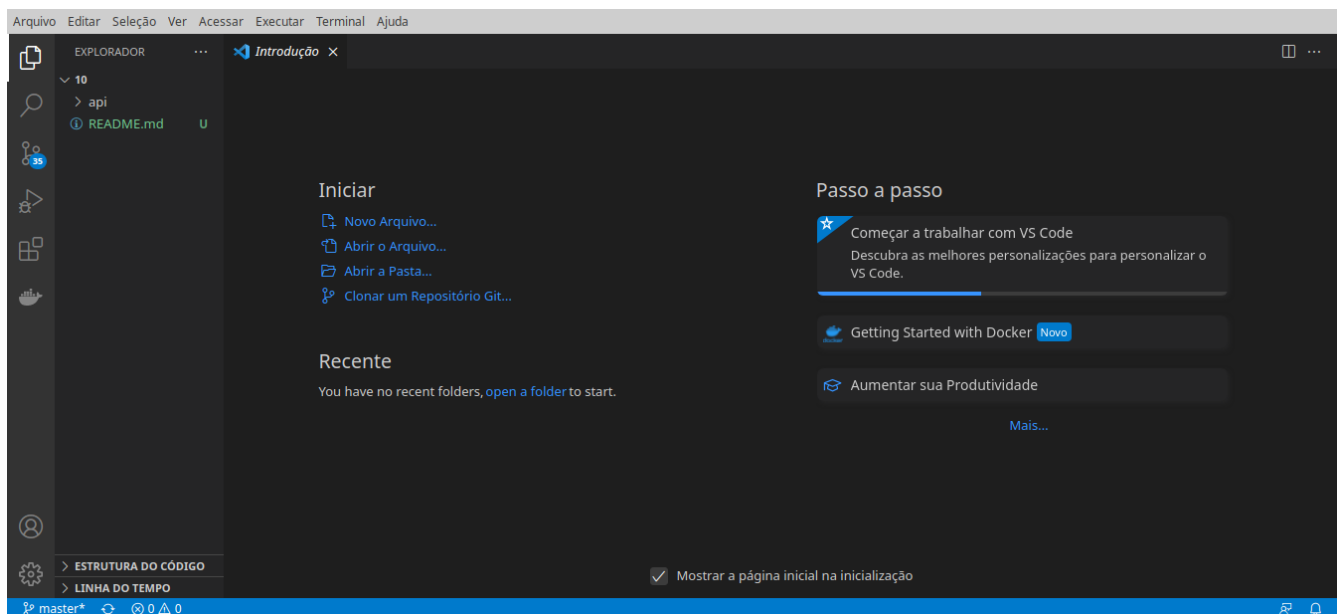
INSTITUTO FEDERAL DO CEARÁ – IFCE

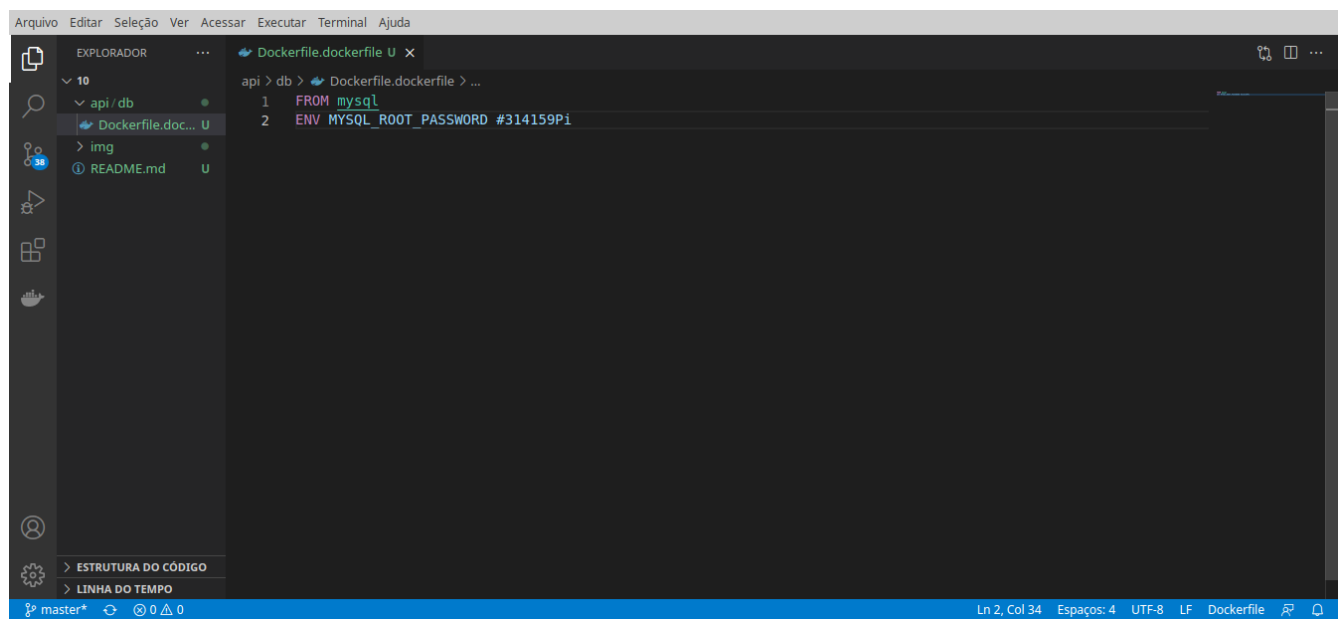
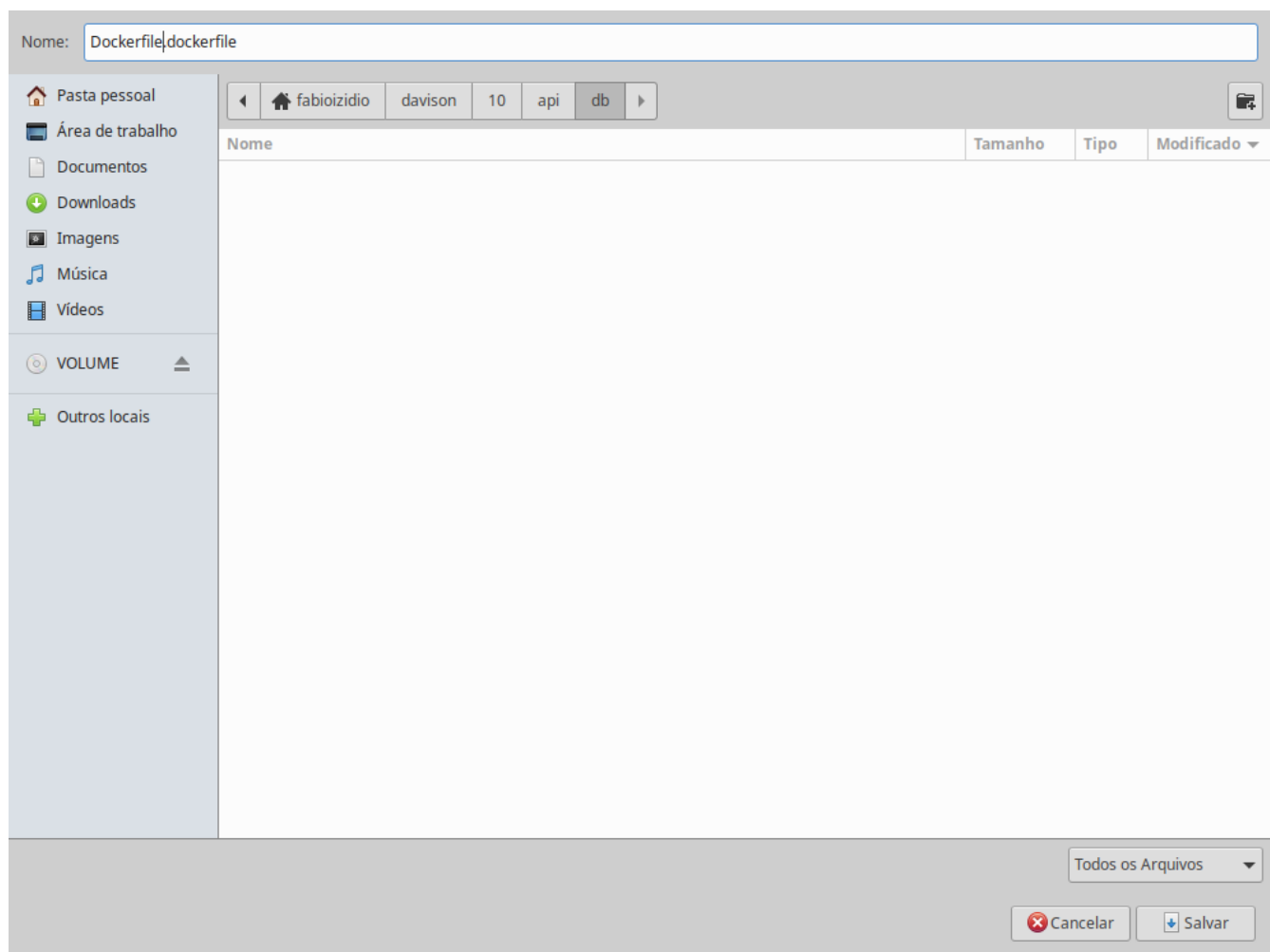
Davison Lennon de Lima Sousa

ATIVIDADE 10

- Implementem e evidencie o exemplo de uso de containers tal qual apresentado no vídeo no Youtube.

Capturas de Tela





```
fabioizidio@math:~/davison/10$ sudo docker build -t mysql-image -f api/db/Dockerfile.dockerfile .
[sudo] senha para fabioizidio:
Sending build context to Docker daemon 160.3kB
Step 1/2 : FROM mysql
```

Lixeira

Início

```
fabioizidio@math:~/davison/10$ sudo docker image ls
REPOSITORY TAG IMAGE ID CREATED SIZE
mysql-image latest 15270db0a742 32 seconds ago 516MB
mysql latest bbf6571db497 12 days ago 516MB
fabioizidio@math:~/davison/10$
```

Lixeira

Início

```
fabioizidio@math:~/davison/10$ sudo docker image ls
REPOSITORY TAG IMAGE ID CREATED SIZE
mysql-image latest 15270db0a742 32 seconds ago 516MB
mysql latest bbf6571db497 12 days ago 516MB
fabioizidio@math:~/davison/10$ sudo docker run -d --rm --name mysql-container mysql-image
af1c5b3f493a80c9cf19574bcd8b55f60825ceb5f117d891c80e6f44df4279
fabioizidio@math:~/davison/10$ sudo docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
af1c5b3f493a mysql-image "docker-entrypoint.s..." 8 seconds ago Up 5 seconds 3306/tcp, 33060/tcp mysql-container
fabioizidio@math:~/davison/10$
```

Lixeira

Arquivo Editar Seleção Ver Acessar Executar Terminal Ajuda

EXPLORADOR

10

api/db

Dockerfile.doc... U

script.sql U

img

README.md U

ESTRUTURA DO CÓDIGO

LINHA DO TEMPO

api > db > script.sql

```

1 CREATE DATABASE IF NOT EXISTS teste;
2
3 USE teste;
4
5 CREATE TABLE IF NOT EXISTS produtos (
6     id INT(11) AUTO INCREMENT,
7     nome VARCHAR(255),
8     preco DECIMAL(10, 2),
9     PRIMARY KEY (id)
10 );
11
12 INSERT INTO produtos VALUE(0, 'Arroz', 3.50);
13 INSERT INTO produtos VALUE(0, 'Feijão', 7.00);
14
```

Ln 14, Col 1 Espaços: 4 UTF-8 LF SQL

```
fabioizidio@math:~/davison/10$ sudo docker exec -i mysql-container mysql -u root -p < api/db/script.sql
Enter password: ERROR 1045 (28000): Access denied for user 'root'@'localhost' (using password: YES)
fabioizidio@math:~/davison/10$ sudo docker exec -i mysql-container mysql -uroot -p#314159P1 < api/db/script.sql
mysql: [Warning] Using a password on the command line interface can be insecure.
fabioizidio@math:~/davison/10$ rm img/Captura\ de\ tela_2021-12-14_1
Captura de tela_2021-12-14_10-53-54.png Captura de tela_2021-12-14_11-06-46.png Captura de tela_2021-12-14_11-11-56.png Captura de tela_2021-12-14_11-25-33.png
Captura de tela_2021-12-14_11-06-06.png Captura de tela_2021-12-14_11-10-09.png Captura de tela_2021-12-14_11-14-41.png
fabioizidio@math:~/davison/10$ rm img/Captura\ de\ tela_2021-12-14_11-25-33.png
fabioizidio@math:~/davison/10$
```

Lixeira

Início

```
Arquivo  Editar  Seleção  Ver  Acessar  Executar  Terminal  Ajuda
EXPLORADOR  ...  Dockerfile.dockerfile U  script.sql U x
10
  api/db
  Dockerfile.doc... U
  script.sql U
  img
  README.md U
  ESTRUTURA DO CÓDIGO
  LINHA DO TEMPO
master*  0 0 0 0  Ln 14, Col 1  Espaços: 4  UTF-8  LF  SQL  R2  Q

fabioizidio@math:~/davison/10$ sudo docker exec -i mysql-container mysql -u root -p < api/db/script.sql
Enter password: ERROR 1045 (28000): Access denied for user 'root'@'localhost' (using password: YES)
fabioizidio@math:~/davison/10$ sudo docker exec -i mysql-container mysql -uroot -p314159Pi < api/db/script.sql
mysql: [Warning] Using a password on the command line interface can be insecure.
fabioizidio@math:~/davison/10$ rm img/Captura\ de\ tela_2021-12-14 1
Captura de tela_2021-12-14_10-53-54.png  Captura de tela_2021-12-14_11-06-46.png  Captura de tela_2021-12-14_11-11-56.png  Captura de tela_2021-12-14_11-25-33.png
Captura de tela_2021-12-14_11-06-06.png  Captura de tela_2021-12-14_11-10-09.png  Captura de tela_2021-12-14_11-14-41.png
fabioizidio@math:~/davison/10$ rm img/Captura\ de\ tela_2021-12-14_11-25-33.png
fabioizidio@math:~/davison/10$
```

```
fabioizidio@math:~/davison/10$ sudo docker exec -it mysql-container /bin/bash
root@a67376cb62de6769213e04540381e468ce32820671c1dc377545692cecf12482:/# mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 11
Server version: 8.0.27 MySQL Community Server - GPL

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Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.
```

```
Database changed
mysql> SELECT * FROM produtos;
+----+-----+-----+
| id | nome  | preco |
+----+-----+-----+
| 1  | Arroz | 3.50  |
| 2  | Feijão | 7.00  |
+----+-----+-----+
2 rows in set (0.00 sec)

mysql>
```

```
| 1 | Arroz | 3.50 |
| 2 | Feijão | 7.00 |
+---+-----+-----+
2 rows in set (0.00 sec)
```

```
mysql> exit
Bye
root@a67376cb62de6769213e04540381e468ce32820671c1dc377545692cecf12482:/# exit
exit
fabioizidio@math:~/davison/10$ sudo docker stop mysql-container
mysql-container
fabioizidio@math:~/davison/10$
```

```
fabioizidio@math:~/davison/10$ sudo docker run -d -v $(pwd)/api/db/data:/var/lib/mysql --rm --name mysql-container mysql-image
a67376cb62de6769213e04540381e468ce32820671c1dc377545692cecf12482
fabioizidio@math:~/davison/10$
```

```

fabioizidio@math:~/davison/10$ sudo docker run -d -v $(pwd)/api/db/data:/var/lib/mysql --rm --name mysql-container mysql-image
a67376cb62de676921e04540381e468ce32820671c1dc377545692cecf12482
fabioizidio@math:~/davison/10$ sudo docker exec -i mysql-container mysql -uroot -p#314159Pi < api/db/script.sql
mysql: [Warning] Using a password on the command line interface can be insecure.
ERROR 2002 (HY000): Can't connect to local MySQL server through socket '/var/run/mysqld/mysqld.sock' (2)
fabioizidio@math:~/davison/10$ sudo docker ps
CONTAINER ID   IMAGE      COMMAND                  CREATED        STATUS        PORTS                    NAMES
a67376cb62de   mysql-image  "docker-entrypoint.s..." About a minute ago Up About a minute   3306/tcp, 33060/tcp     mysql-container
fabioizidio@math:~/davison/10$ sudo docker exec -it mysql-container /bin/bash
root@a67376cb62de:/#

```

The screenshot shows a code editor with a file explorer on the left. The file explorer shows a directory structure with 'api/db' containing 'script.sql'. The main editor area shows the content of 'script.sql', which contains SQL commands to create a database, a table, and insert data. Below the editor, a terminal window shows the output of a Docker build command, indicating a successful build and tagging of the 'mysql-image'.

```

api > db > script.sql
1 CREATE DATABASE IF NOT EXISTS teste;
2
3 USE teste;
4
5 CREATE TABLE IF NOT EXISTS produtos (
6     id INT(11) AUTO INCREMENT,
7     nome VARCHAR(255),
8     preco DECIMAL(10, 2),
9     PRIMARY KEY (id)
10 );
11
12 INSERT INTO produtos VALUE(0, 'Arroz', 3.50);
13 INSERT INTO produtos VALUE(0, 'Feijão', 7.00);
14
fabioizidio@math:~/davison/10$ sudo docker build -t mysql-image -f api/db/Dockerfile.dockerfile .
Sending build context to Docker daemon 192.7MB
Step 1/2 : FROM mysql
--> bb6f6571db497
Step 2/2 : ENV MYSQL_ROOT_PASSWORD #314159Pi
--> Using cache
--> 15270db0a742
Successfully built 15270db0a742
Successfully tagged mysql-image:latest
fabioizidio@math:~/davison/10$ sudo docker ps
CONTAINER ID   IMAGE      COMMAND                  CREATED        STATUS        PORTS                    NAMES
fabioizidio@math:~/davison/10$ docker image ls
Got permission denied while trying to connect to the Docker daemon socket at unix:///var/run/docker.so

```

```

fabioizidio@math:~/davison/10$ sudo docker build -t mysql-image -f api/db/Dockerfile.dockerfile .
Sending build context to Docker daemon 192.7MB
Step 1/2 : FROM mysql
--> bb6f6571db497
Step 2/2 : ENV MYSQL_ROOT_PASSWORD #314159Pi
--> Using cache
--> 15270db0a742
Successfully built 15270db0a742
Successfully tagged mysql-image:latest
fabioizidio@math:~/davison/10$ sudo docker ps
CONTAINER ID   IMAGE      COMMAND                  CREATED        STATUS        PORTS                    NAMES
fabioizidio@math:~/davison/10$ docker image ls
Got permission denied while trying to connect to the Docker daemon socket at unix:///var/run/docker.so

```

```

Successfully tagged mysql-image:latest
fabioizidio@math:~/davison/10$ sudo docker ps
CONTAINER ID   IMAGE      COMMAND                  CREATED        STATUS        PORTS                    NAMES
fabioizidio@math:~/davison/10$ docker image ls
Got permission denied while trying to connect to the Docker daemon socket at unix:///var/run/docker.so
ck: Get "http://%2Fvar%2Frun%2Fdocker.sock/v1.24/images/json": dial unix /var/run/docker.sock: connect
: permission denied
fabioizidio@math:~/davison/10$ sudo docker image ls
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
mysql-image    latest    15270db0a742   34 minutes ago  516MB
mysql          latest    bb6f6571db497  12 days ago    516MB
fabioizidio@math:~/davison/10$

```

```
ck: Get "http://%2Fvar%2Frun%2Fdocker.sock/v1.24/images/json": dial unix /var/run/docker.sock: connect
: permission denied
fabioizidio@math:~/davison/10$ sudo docker image ls
REPOSITORY      TAG         IMAGE ID      CREATED        SIZE
mysql-image      latest      15270db0a742  34 minutes ago 516MB
mysql            latest      bbf6571db497  12 days ago   516MB
fabioizidio@math:~/davison/10$ sudo docker exec -i mysql-container mysql -uroot -p#314159Pi < api/db/s
cript.sql
Error: No such container: mysql-container
fabioizidio@math:~/davison/10$ sudo docker run -d --rm --name mysql-container mysql-image
46fb5e25dfbba8012e43d1c02d3af3144b7acbf6f3faf414cc89eab40b9b477
fabioizidio@math:~/davison/10$
```

```
fabioizidio@math:~/davison/10$ sudo docker ps
CONTAINER ID   IMAGE      COMMAND                  CREATED        STATUS        PORTS
NAMES
46fb5e25dfbb   mysql-image "docker-entrypoint.s..." 4 minutes ago Up 4 minutes  3306/tcp, 33060/t
cp   mysql-container
fabioizidio@math:~/davison/10$ sudo docker exec -i mysql-container mysql -uroot -p#314159Pi < api/db/s
cript.sql
mysql: [Warning] Using a password on the command line interface can be insecure.
fabioizidio@math:~/davison/10$
```

```
mysql> show tables;
+-----+
| Tables_in_teste |
+-----+
| produtos        |
+-----+
1 row in set (0.00 sec)

mysql> SELECT * FROM produtos;
+----+-----+-----+
| id | nome  | preco |
+----+-----+-----+
| 1  | Arroz | 3.50  |
| 2  | Feijão | 7.00  |
+----+-----+-----+
2 rows in set (0.01 sec)

mysql>
```

```
fabioizidio@math:~/davison/10$ sudo docker exec -i mysql-container mysql -uroot -p#314159Pi < api/db/script.sql
mysql: [Warning] Using a password on the command line interface can be insecure.
fabioizidio@math:~/davison/10$ cd api/
fabioizidio@math:~/davison/10/api$ npm init
This utility will walk you through creating a package.json file.
It only covers the most common items, and tries to guess sensible defaults.

See 'npm help json' for definitive documentation on these fields
and exactly what they do.

Use 'npm install <pkg>' afterwards to install a package and
save it as a dependency in the package.json file.

Press ^C at any time to quit.
package name: (api)
```

```
fabioizidio@math:~/davison/10/api$ npm init
This utility will walk you through creating a package.json file.
It only covers the most common items, and tries to guess sensible defaults.
```

```
See `npm help json` for definitive documentation on these fields
and exactly what they do.
```

```
Use `npm install <pkg>` afterwards to install a package and
save it as a dependency in the package.json file.
```

```
Press ^C at any time to quit.
```

```
package name: (api)
version: (1.0.0)
description: API para Docker-Node
entry point: (index.js)
```

```
See `npm help json` for definitive documentation on these fields
and exactly what they do.
```

```
Use `npm install <pkg>` afterwards to install a package and
save it as a dependency in the package.json file.
```

```
Press ^C at any time to quit.
```

```
package name: (api)
version: (1.0.0)
description: API para Docker-Node
entry point: (index.js)
test command: teste
git repository:
keywords: Docker
author: Davison Lennon
```

```
{
  "description": "API para Docker-Node",
  "main": "index.js",
  "scripts": {
    "test": "teste"
  },
  "keywords": [
    "Docker"
  ],
  "author": "Davison Lennon",
  "license": "ISC"
}
```

```
Is this OK? (yes)
```

```
fabioizidio@math:~/davison/10/api$
```

```
Is this OK? (yes)
```

```
fabioizidio@math:~/davison/10/api$ npm install --save-dev nodemon
```

```
> nodemon@2.0.15 postinstall /home/fabioizidio/davison/10/api/node_modules/nodemon
> node bin/postinstall || exit 0
```

```
Love nodemon? You can now support the project via the open collective:
```

```
> https://opencollective.com/nodemon/donate
```

```
npm notice created a lockfile as package-lock.json. You should commit this file.
```

```
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@~2.3.2 (node_modules/chokidar/node_modules/fs
events):
```

```
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@2.3.2: wanted {"os":"d
arwin","arch":"any"} (current: {"os":"linux","arch":"x64"})
```

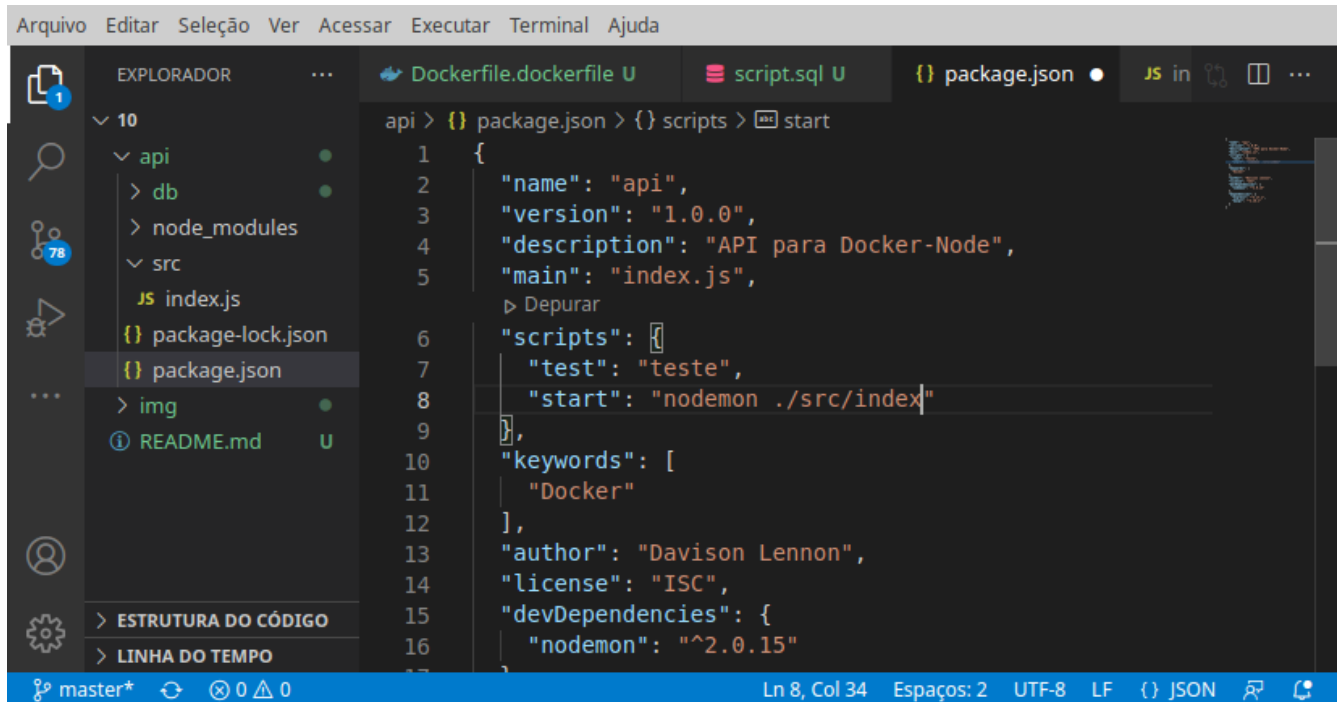
```
npm WARN api@1.0.0 No repository field.
```

found 0 vulnerabilities

```
fabioizidio@math:~/davison/10/api$ npm install --save express mysql
npm WARN api@1.0.0 No repository field.
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@2.3.2 (node_modules/fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@2.3.2: wanted {"os":"darwin","arch":"any"} (current: {"os":"linux","arch":"x64"})

+ express@4.17.1
+ mysql@2.18.1
added 65 packages from 48 contributors and audited 182 packages in 50.447s

15 packages are looking for funding
  run `npm fund` for details
```



The screenshot shows the Visual Studio Code editor interface. The Explorer sidebar on the left displays the file structure of a project named '10', which includes a subdirectory 'api' containing 'db', 'node_modules', 'src', and 'img'. The 'src' directory contains 'index.js', 'package-lock.json', and 'package.json'. The 'package.json' file is selected and its content is displayed in the main editor area. The file is a JSON object with the following properties: 'name' (api), 'version' (1.0.0), 'description' (API para Docker-Node), 'main' (index.js), 'scripts' (test: teste, start: nodemon ./src/index), 'keywords' (Docker), 'author' (Davison Lennon), 'license' (ISC), and 'devDependencies' (nodemon: ^2.0.15). The status bar at the bottom indicates the file is on line 8, column 34, and is a JSON file.

```
api > {} package.json > {} scripts > start
1  {
2    "name": "api",
3    "version": "1.0.0",
4    "description": "API para Docker-Node",
5    "main": "index.js",
6    "scripts": {
7      "test": "teste",
8      "start": "nodemon ./src/index"
9    },
10   "keywords": [
11     "Docker"
12   ],
13   "author": "Davison Lennon",
14   "license": "ISC",
15   "devDependencies": {
16     "nodemon": "^2.0.15"
```



```
fabioizidio@math: ~/davison... fabioizidio@math: ~/davison... index.js - 10 - Visual Studio...
Arquivo Editar Seleção Ver Acessar Executar Terminal Ajuda
EXPLORADOR ... Dockerfile.dockerfile U scripts.sql U package.json JS index.js 4
10
  api
  db
  node_modules
  src
    JS index.js 4
    package-lock.json
    package.json
    img
    README.md
ESTRUTURA DO CÓDIGO
LINHA DO TEMPO
Ln 7, Col 22 (10 selecionado) Espaços: 4 UTF-8 LF JavaScript
+ mysql@02.18.1
added 65 packages from 48 contributors and audited 182 packages in 50.447s
15 packages are looking for funding
run 'npm fund' for details

fabioizidio@math:~$ docker inspect mysql-conta
ner | grep "IPAddress"
"SecondaryIPAddresses": null,
"IPAddress": "172.17.0.2",
"IPAddress": "172.17.0.2",
fabioizidio@math:~$ ^C
fabioizidio@math:~$ cd davison/10/api/
fabioizidio@math:~/davison/10/api$ tree -L 1
tree: Invalid level, must be greater than 0.
fabioizidio@math:~/davison/10/api$ tree -L 1
.
├── db
├── node_modules
├── package.json
├── package-lock.json
└── src
3 directories, 2 files
fabioizidio@math:~/davison/10/api$
```

```
fabioizidio@math:~/davison/10$ sudo docker build -t node-image -f api/Dockerfile.dockerfile .
[sudo] senha para fabioizidio:
Sinto muito, tente novamente.
[sudo] senha para fabioizidio:
Sending build context to Docker daemon 200.2MB
Step 1/3 : FROM node:10-slim
10-slim: Pulling from library/node
62deabe7a6db: Pull complete
f698164f6049: Extracting 4.173kB/4.173kB
bc29352cb629: Download complete
85e84b4c858f: Download complete
ac72e4359589: Download complete
```

```
fabioizidio@math:~/davison/10$ docker image ls
REPOSITORY TAG IMAGE ID CREATED SIZE
node-image latest 453b7708c7a8 About a minute ago 134MB
mysql-image latest 15270db0a742 4 hours ago 516MB
mysql-image latest bbf6571db497 12 days ago 516MB
node 10-slim 6fbcbbb5c603 8 months ago 134MB
fabioizidio@math:~/davison/10$
```

```
node-image latest 453b7708c7a8 About a minute ago 134MB
mysql-image latest 15270db0a742 4 hours ago 516MB
mysql-image latest bbf6571db497 12 days ago 516MB
fabioizidio@math:~/davison/10$ docker run -d -v $(pwd)/api:/home/node/app -p 9001:9001 --rm --name node-container node-image
8d796037912431a9ba0d3575937c7ff714721125a5d59a1ee183d46c2ca970c
fabioizidio@math:~/davison/10$ docker image ls
REPOSITORY TAG IMAGE ID CREATED SIZE
node-image latest 453b7708c7a8 32 minutes ago 134MB
mysql-image latest 15270db0a742 5 hours ago 516MB
mysql-image latest bbf6571db497 12 days ago 516MB
node 10-slim 6fbcbbb5c603 8 months ago 134MB
fabioizidio@math:~/davison/10$
```

```

Successfully tagged node-image:latest
fabioizidio@math:~/davison/10$ sudo docker run -d -v $(pwd)/api:/home/node/app -p 9001:9001 --rm --name node-container node-image
29ebf2c198dc5fba3bb2672af86b33218253d3b890bdaa6e4ace20ad8425e89
fabioizidio@math:~/davison/10$ sudo docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS
NAMES
29ebf2c198dc   node-image     "docker-entrypoint.s..." 4 seconds ago  Up 1 second   0.0.0.0:9001->9001/tcp, :::9001->9001/tcp
node-container
37c90f3d22bc   mysql-image    "docker-entrypoint.s..." 2 hours ago   Up 2 hours    3306/tcp, 33060/tcp
mysql-container
fabioizidio@math:~/davison/10$

```