

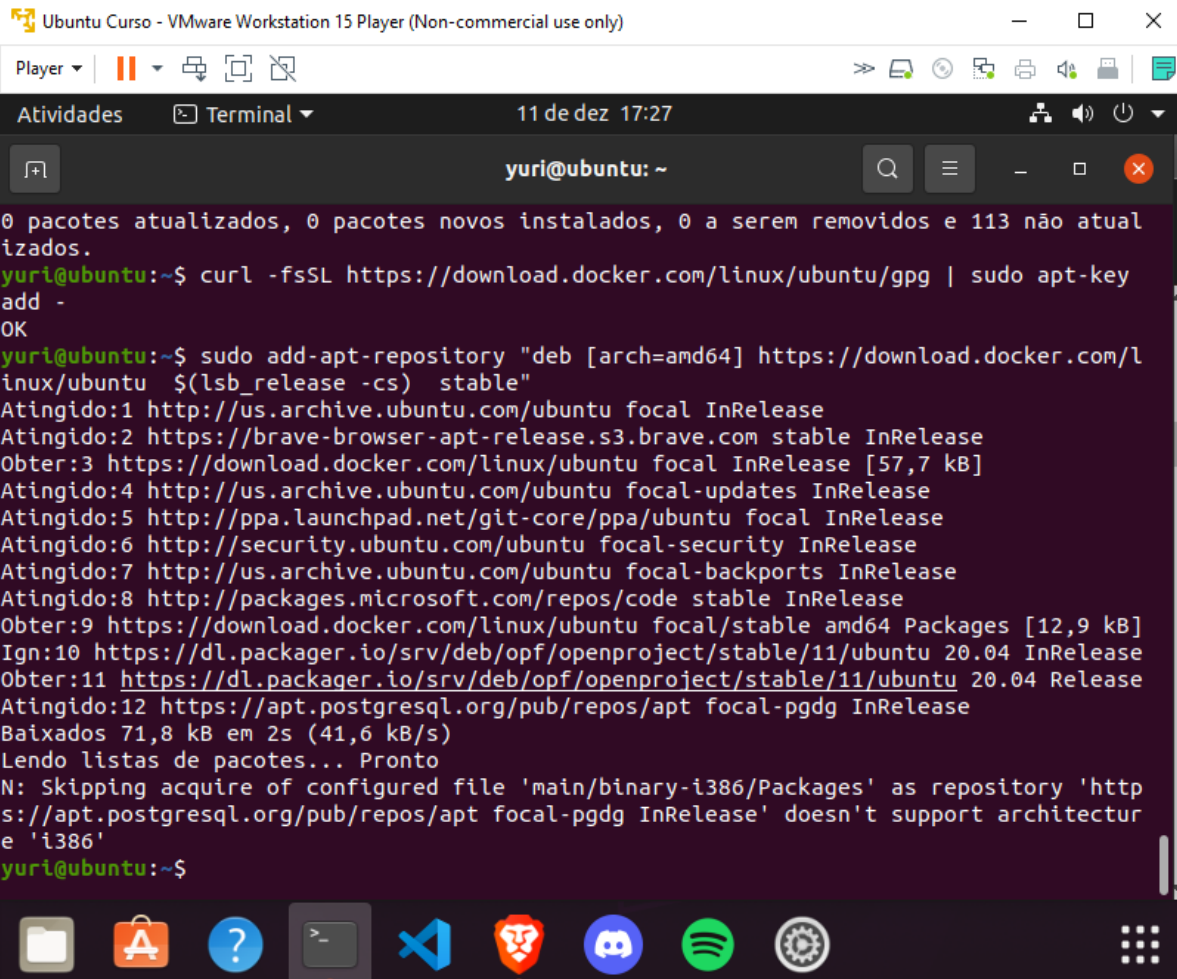
Sistemas Operacionais de Redes II

Avaliação 10

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Passo a passo do vídeo exemplificando containers, usando o Ubuntu 20.04 no VMWare.

Instalando o Docker



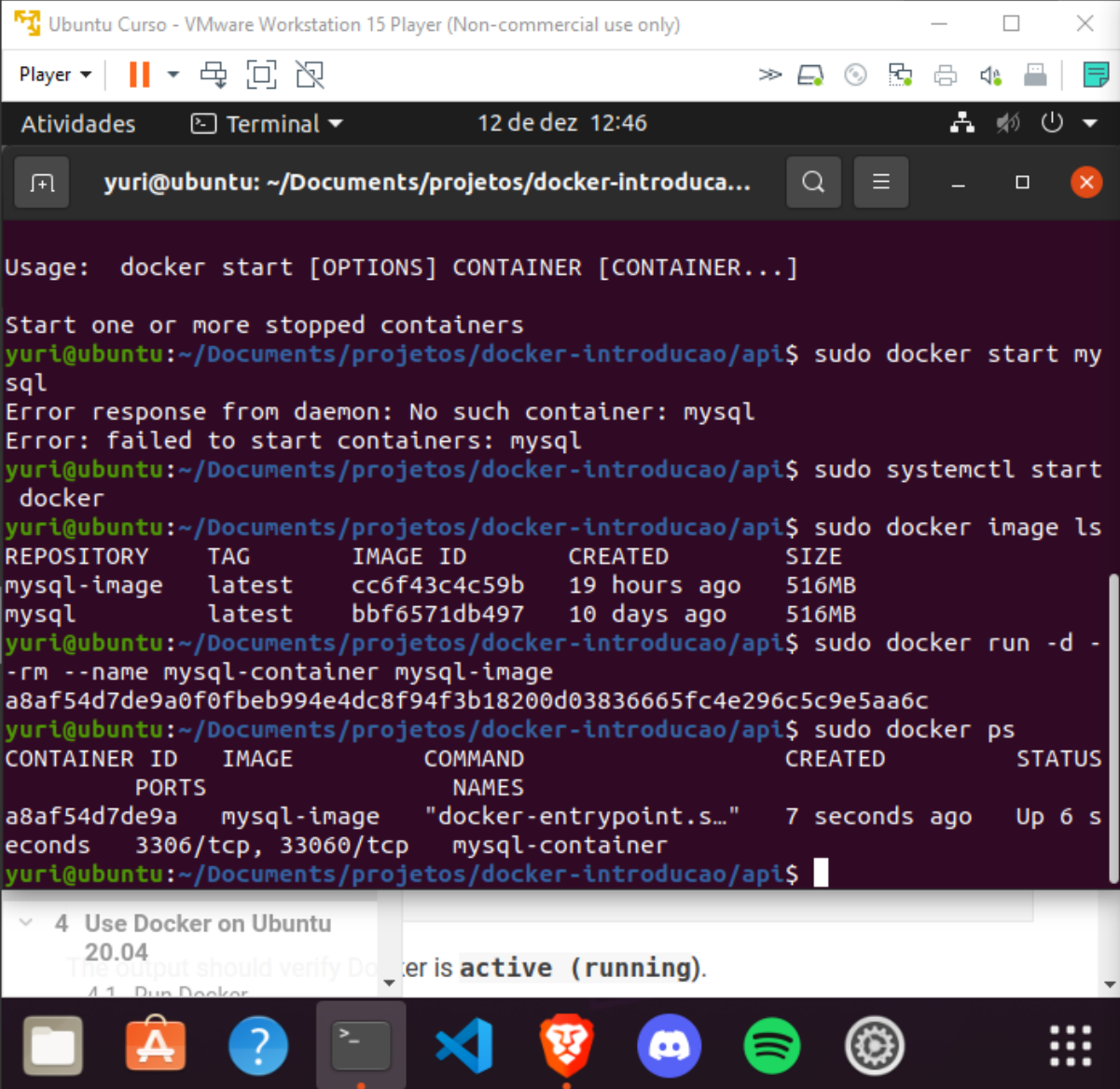
```
Ubuntu Curso - VMware Workstation 15 Player (Non-commercial use only)
Player ▾ | 11 de dez 17:27
Atividades | Terminal ▾
yuri@ubuntu: ~
0 pacotes atualizados, 0 pacotes novos instalados, 0 a serem removidos e 113 não atualizados.
yuri@ubuntu:~$ curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo apt-key add -
OK
yuri@ubuntu:~$ sudo add-apt-repository "deb [arch=amd64] https://download.docker.com/linux/ubuntu $(lsb_release -cs) stable"
Atingido:1 http://us.archive.ubuntu.com/ubuntu focal InRelease
Atingido:2 https://brave-browser-apt-release.s3.brave.com stable InRelease
Obter:3 https://download.docker.com/linux/ubuntu focal InRelease [57,7 kB]
Atingido:4 http://us.archive.ubuntu.com/ubuntu focal-updates InRelease
Atingido:5 http://ppa.launchpad.net/git-core/ppa/ubuntu focal InRelease
Atingido:6 http://security.ubuntu.com/ubuntu focal-security InRelease
Atingido:7 http://us.archive.ubuntu.com/ubuntu focal-backports InRelease
Atingido:8 http://packages.microsoft.com/repos/code stable InRelease
Obter:9 https://download.docker.com/linux/ubuntu focal/stable amd64 Packages [12,9 kB]
Ign:10 https://dl.packager.io/srv/deb/opf/openproject/stable/11/ubuntu 20.04 InRelease
Obter:11 https://dl.packager.io/srv/deb/opf/openproject/stable/11/ubuntu 20.04 Release
Atingido:12 https://apt.postgresql.org/pub/repos/apt focal-pgdg InRelease
Baixados 71,8 kB em 2s (41,6 kB/s)
Lendo listas de pacotes... Pronto
N: Skipping acquire of configured file 'main/binary-i386/Packages' as repository 'https://apt.postgresql.org/pub/repos/apt focal-pgdg InRelease' doesn't support architecture 'i386'
yuri@ubuntu:~$
```

```
Ubuntu Curso - VMware Workstation 15 Player (Non-commercial use only)
Player
Atividades Terminal 11 de dez 17:28
yuri@ubuntu: ~
s://apt.postgresql.org/pub/repos/apt focal-pgdg InRelease' doesn't support architecture 'i386'
yuri@ubuntu:~$ sudo apt update
Atingido:1 http://us.archive.ubuntu.com/ubuntu focal InRelease
Atingido:2 https://brave-browser-apt-release.s3.brave.com stable InRelease
Atingido:3 https://download.docker.com/linux/ubuntu focal InRelease
Atingido:4 http://us.archive.ubuntu.com/ubuntu focal-updates InRelease
Atingido:5 http://security.ubuntu.com/ubuntu focal-security InRelease
Atingido:6 http://ppa.launchpad.net/git-core/ppa/ubuntu focal InRelease
Atingido:7 http://us.archive.ubuntu.com/ubuntu focal-backports InRelease
Atingido:8 http://packages.microsoft.com/repos/code stable InRelease
Ign:9 https://dl.packager.io/srv/deb/opf/openproject/stable/11/ubuntu 20.04 InRelease
Obter:10 https://dl.packager.io/srv/deb/opf/openproject/stable/11/ubuntu 20.04 Release
Atingido:11 https://apt.postgresql.org/pub/repos/apt focal-pgdg InRelease
Baixados 1.221 B em 2s (720 B/s)
Lendo listas de pacotes... Pronto
Construindo árvore de dependências
Lendo informação de estado... Pronto
113 pacotes podem ser atualizados. Corra 'apt list --upgradable' para vê-los.
N: Skipping acquire of configured file 'main/binary-i386/Packages' as repository 'http
s://apt.postgresql.org/pub/repos/apt focal-pgdg InRelease' doesn't support architecture
e 'i386'
yuri@ubuntu:~$ sudo apt-get install docker-ce
Lendo listas de pacotes... Pronto
Construindo árvore de dependências
Lendo informação de estado... Pronto
```

Buid da imagem mysql

```
Ubuntu Curso - VMware Workstation 15 Player (Non-commercial use only)
Player
Atividades Terminal 11 de dez 18:02
Dockerfile - projetos - Visual Studio Code
Arquivo Editar Seleção Ver Acessar Executar Terminal Ajuda
EXTENSÕES...
@id.ms-azuretools.vscode-do
Docker 319ms
Makes it easy to create, ...
Micr... Instalado
docker-introducao > api > db > Dockerfile > ...
1 FROM mysql
2 ENV MYSQL_ROOT_PASSWORD yuri
yuri@ubuntu: ~/Documents/projetos/docker-intro...
Sending build context to Docker daemon 3.072kB
Step 1/2 : FROM mysql
latest: Pulling from library/mysql
ffbb094f4f9e: Downloading 2.526MB/27.15MB
df186527fc46: Download complete
fa362a6aa7bd: Downloading 2.685MB/4.179MB
5af7cb1a200e: Download complete
949da226cc6d: Waiting
bce007079ee9: Waiting
eab9f076e5a3: Waiting
8a57a7529e8d: Waiting
b1ccc6ed0fc7: Waiting
b4af75e64169: Waiting
3aed0a9cd681: Waiting
23390142f76f: Waiting
```

Run da imagem mysql

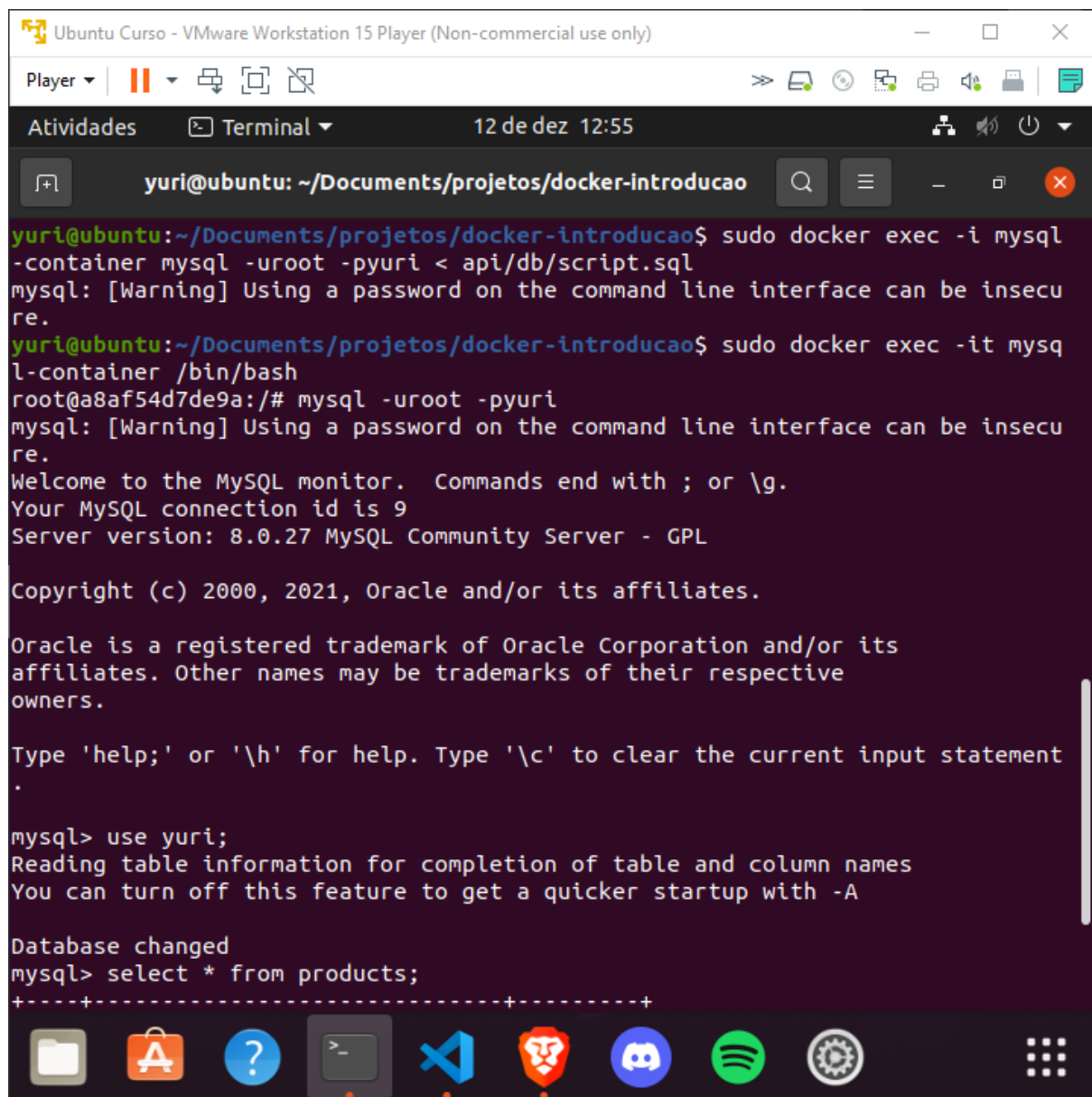


```
Usage: docker start [OPTIONS] CONTAINER [CONTAINER...]

Start one or more stopped containers
yuri@ubuntu:~/Documents/projetos/docker-introducao/api$ sudo docker start mysql
Error response from daemon: No such container: mysql
Error: failed to start containers: mysql
yuri@ubuntu:~/Documents/projetos/docker-introducao/api$ sudo systemctl start docker
yuri@ubuntu:~/Documents/projetos/docker-introducao/api$ sudo docker image ls
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
mysql-image    latest    cc6f43c4c59b   19 hours ago   516MB
mysql          latest    bbf6571db497   10 days ago    516MB
yuri@ubuntu:~/Documents/projetos/docker-introducao/api$ sudo docker run -d --rm --name mysql-container mysql-image a8af54d7de9a0f0fbeb994e4dc8f94f3b18200d03836665fc4e296c5c9e5aa6c
yuri@ubuntu:~/Documents/projetos/docker-introducao/api$ sudo docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS
PORTS          NAMES
a8af54d7de9a   mysql-image    "docker-entrypoint.s..." 7 seconds ago   Up 6 seconds
3306/tcp, 33060/tcp   mysql-container
yuri@ubuntu:~/Documents/projetos/docker-introducao/api$
```

4 Use Docker on Ubuntu
20.04
The output should verify Docker is active (running).
4.1 Run Docker

Comandos do mysql



The screenshot shows a terminal window titled "yuri@ubuntu: ~/Documents/projetos/docker-introducao". The user has executed the following commands:

```
yuri@ubuntu:~/Documents/projetos/docker-introducao$ sudo docker exec -i mysql -container mysql -uroot -pyuri < api/db/script.sql
mysql: [Warning] Using a password on the command line interface can be insecure.
yuri@ubuntu:~/Documents/projetos/docker-introducao$ sudo docker exec -it mysql -container /bin/bash
root@a8af54d7de9a:/# mysql -uroot -pyuri
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 9
Server version: 8.0.27 MySQL Community Server - GPL

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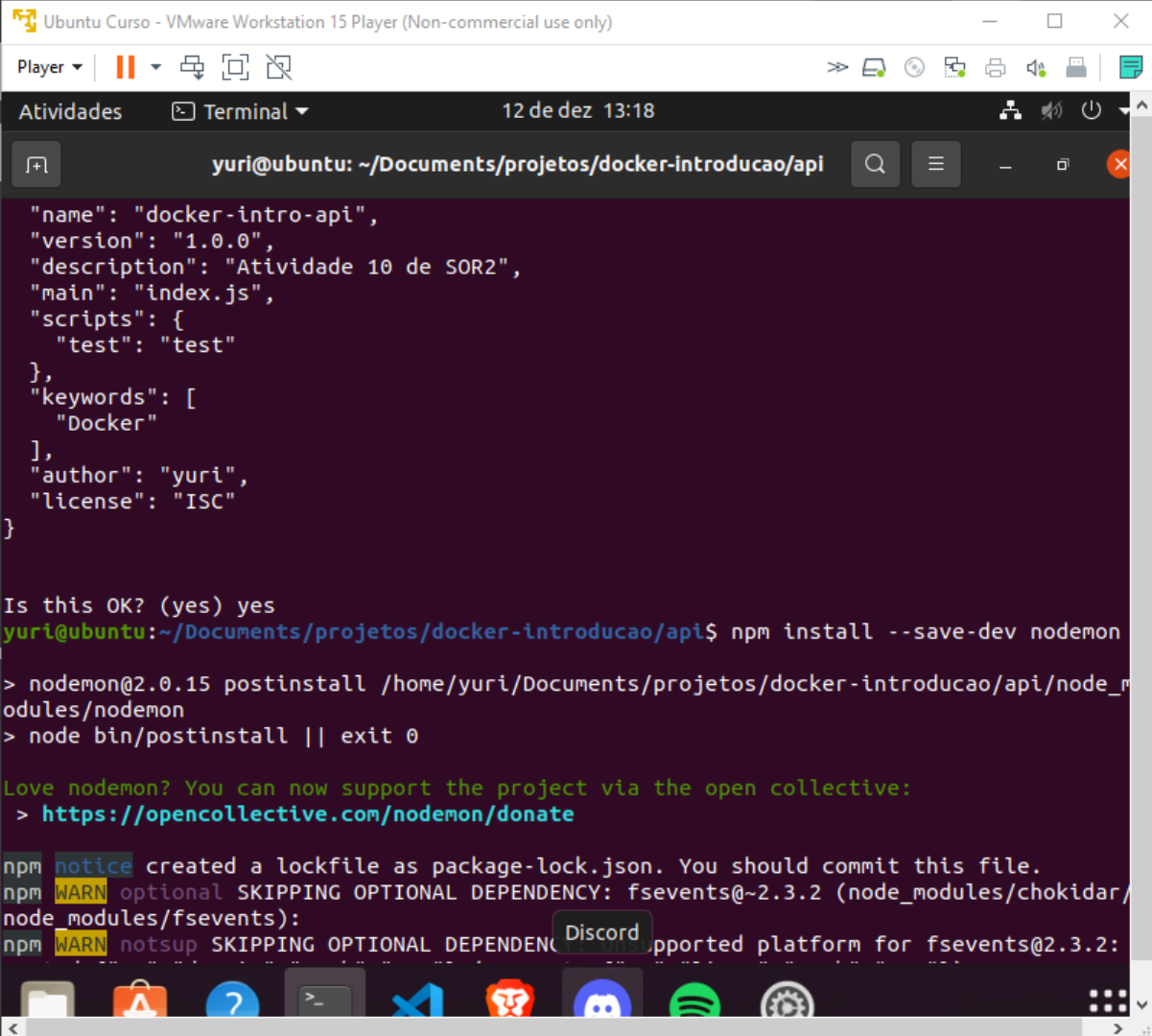
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement .

mysql> use yuri;
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;
```

The output of the last command shows a table with columns: id, name, price, and category. The table contains 10 rows of data.

Criando as dependências do Node



The screenshot shows a terminal window titled "yuri@ubuntu: ~/Documents/projetos/docker-introducao/api". The terminal displays the contents of a package.json file, followed by the command to install nodemon. The output shows the successful installation of nodemon@2.0.15, including postinstall instructions and a notice about creating a lockfile. The terminal also shows warnings about optional dependencies being skipped.

```
"name": "docker-intro-api",
"version": "1.0.0",
"description": "Atividade 10 de SOR2",
"main": "index.js",
"scripts": {
  "test": "test"
},
"keywords": [
  "Docker"
],
"author": "yuri",
"license": "ISC"
}

Is this OK? (yes) yes
yuri@ubuntu:~/Documents/projetos/docker-introducao/api$ npm install --save-dev nodemon

> nodemon@2.0.15 postinstall /home/yuri/Documents/projetos/docker-introducao/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/fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@2.3.2:
```

Build da imagem do Node

Ubuntu Curso - VMware Workstation 15 Player (Non-commercial use only)

Player ▾ | 12 de dez 13:35

Atividades ▾ Terminal ▾

yuri@ubuntu: ~/Documents/projetos/docker-introducao

```
yuri@ubuntu:~/Documents/projetos/docker-introducao$ sudo docker build -t node-image -f api/Dockerfile .
Sending build context to Docker daemon 211.7MB
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 4aec7c152c8a
Removing intermediate container 4aec7c152c8a
---> 92e9b457ab01
Step 3/3 : CMD npm start
---> Running in 4d1ba9df620c
Removing intermediate container 4d1ba9df620c
---> 031bae6da35b
Successfully built 031bae6da35b
Successfully tagged node-image:latest
yuri@ubuntu:~/Documents/projetos/docker-introducao$ sudo docker image ls
```

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
node-image	latest	031bae6da35b	12 seconds ago	134MB
mysql-image	latest	cc6f43c4c59b	19 hours ago	516MB
mysql	latest	bbf6571db497	10 days ago	516MB
node	10-slim	6fbcbbb5c603	8 months ago	134MB

Mostrar aplicativos

Run do container Node

Ubuntu Curso - VMware Workstation 15 Player (Non-commercial use only)

Player ▾ | 12 de dez 13:45

Atividades ▾ Terminal ▾

yuri@ubuntu: ~/Documents/projetos/docker-introducao

```
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
yuri@ubuntu:~/Documents/projetos/docker-introducao$ sudo socker ps
sudo: socker: comando não encontrado
yuri@ubuntu:~/Documents/projetos/docker-introducao$ sudo docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS
PORTS         NAMES
547bbf090b2e   node-image     "docker-entrypoint.s..." 48 seconds ago Up 47 se
conds         node-container
0.0.0.0:9001->9001/tcp, :::9001->9001/tcp
f21c073b352b   mysql-image    "docker-entrypoint.s..." 35 minutes ago Up 35 mi
nutes         mysql-container
3306/tcp, 33060/tcp
yuri@ubuntu:~/Documents/projetos/docker-introducao$
yuri@ubuntu:~/Documents/projetos/docker-introducao$ docker stop node-container
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/node-container/stop": dial unix /var/run/docker.sock: connect: permission denied
yuri@ubuntu:~/Documents/projetos/docker-introducao$ sudo docker stop node-container
node-container
yuri@ubuntu:~/Documents/projetos/docker-introducao$
yuri@ubuntu:~/Documents/projetos/docker-introducao$ sudo docker run -d -v $(pwd)/api:/home/node/app -p 9001:9001 --link mysql-container --rm --name node-container node-image
45e5116115eb5e6a0457444c7a787bd347f49acfd16b08e7389815a1cb8397e
yuri@ubuntu:~/Documents/projetos/docker-introducao$
```

Build da imagem PHP e Run do Container

