

## Git File URL

<https://github.com/mazg-95/product-development/blob/main/Tarea1/docker-compose.yml>

## Docker Run

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
root@marco-VirtualBox: /home/marco/Documents/ProductDev/Tarea1# docker run -p 8888:8888 jupyter/base-notebook
WARN: Jupyter Notebook deprecation notice https://github.com/jupyter/docker-stacks#jupyter-notebook-deprecation-notice.
Executing the command: jupyter notebook
[I 00:48:51.807 NotebookApp] Writing notebook server cookie secret to /home/jovyan/.local/share/jupyter/runtime/notebook_cookie_secret
[W 2021-10-30 00:48:52.540 LabApp] 'ip' has moved from NotebookApp to ServerApp. This config will be passed to ServerApp. Be sure to update your config before our next release.
[W 2021-10-30 00:48:52.540 LabApp] 'port' has moved from NotebookApp to ServerApp. This config will be passed to ServerApp. Be sure to update your config before our next release.
[W 2021-10-30 00:48:52.540 LabApp] 'port' has moved from NotebookApp to ServerApp. This config will be passed to ServerApp. Be sure to update your config before our next release.
[I 2021-10-30 00:48:52.551 LabApp] JupyterLab extension loaded from /opt/conda/lib/python3.9/site-packages/jupyterlab
[I 2021-10-30 00:48:52.551 LabApp] JupyterLab application directory is /opt/conda/share/jupyter/lab
[I 00:48:52.556 NotebookApp] Serving notebooks from local directory: /home/jovyan
[I 00:48:52.557 NotebookApp] Jupyter Notebook 6.4.5 is running at:
[I 00:48:52.557 NotebookApp] http://8b06270d73b3:8888/?token=8ee225e89f093736126f7f9e05ee59e0cceb645f70772d43
[I 00:48:52.557 NotebookApp] or http://127.0.0.1:8888/?token=8ee225e89f093736126f7f9e05ee59e0cceb645f70772d43
[I 00:48:52.557 NotebookApp] Use Control-C to stop this server and shut down all kernels (twice to skip confirmation).
[C 00:48:52.562 NotebookApp]

To access the notebook, open this file in a browser:
file:///home/jovyan/.local/share/jupyter/runtime/nbserver-8-open.html
Or copy and paste one of these URLs:
http://8b06270d73b3:8888/?token=8ee225e89f093736126f7f9e05ee59e0cceb645f70772d43
or http://127.0.0.1:8888/?token=8ee225e89f093736126f7f9e05ee59e0cceb645f70772d43
```

## Docker Display Containers List

```
run a command in a new container
root@marco-VirtualBox: /home/marco/Documents/ProductDev/Tarea1# docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
2f21d34eaf4 jupyter/base-notebook "tini -g -- start-no..." 20 seconds ago Up 19 seconds 0.0.0.0:8888->8888/tcp, :::8888->8888/tcp heuristic_lichterman
root@marco-VirtualBox: /home/marco/Documents/ProductDev/Tarea1#
```

## Docker Remove Containers

```
Error response from daemon: No such container: heuristic_literman
root@marco-VirtualBox: /home/marco/Documents/ProductDev/Tarea1# docker stop heuristic_lichterman
heuristic_lichterman
root@marco-VirtualBox: /home/marco/Documents/ProductDev/Tarea1# docker rm heuristic_lichterman
heuristic_lichterman
root@marco-VirtualBox: /home/marco/Documents/ProductDev/Tarea1#
```

## Docker Prune

```
root@marco-VirtualBox: /home/marco/Documents/ProductDev/Tarea1# docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
8b06270d73b3 jupyter/base-notebook "tini -g -- start-no..." 2 minutes ago Up 2 minutes 0.0.0.0:8888->8888/tcp, :::8888->8888/tcp dazzling_torvalds
root@marco-VirtualBox: /home/marco/Documents/ProductDev/Tarea1# docker containers prune
docker: 'containers' is not a docker command.
See 'docker --help'
root@marco-VirtualBox: /home/marco/Documents/ProductDev/Tarea1# docker container prune
WARNING! This will remove all stopped containers.
Are you sure you want to continue? [y/N] y
Deleted Containers:
c0c982ac377abf03d1f368e6cda5fef005e547c78294b897b99ca172ae0a1539
231ef0a0d6919ab7265d0c897730ccaa9da5ff563cc246cf303068f6e6a0f88
5c6f4600751dfb28ac38009da18d23aa2c8f68df1d1881d7b718d9ba24f3bf5

Total reclaimed space: 296.8MB
root@marco-VirtualBox: /home/marco/Documents/ProductDev/Tarea1#
```

## Docker Images

```
To get more help with docker, check out our guides at https://docs.docker.com/go/guides/
root@marco-VirtualBox: /home/marco/Documents/ProductDev/Tarea1# docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
jupyter/base-notebook latest 8a28b7cb4a05 33 hours ago 675MB
mysql 5.7.35 8a8a506ccfdc 2 weeks ago 448MB
root@marco-VirtualBox: /home/marco/Documents/ProductDev/Tarea1#
```

## Docker Compose

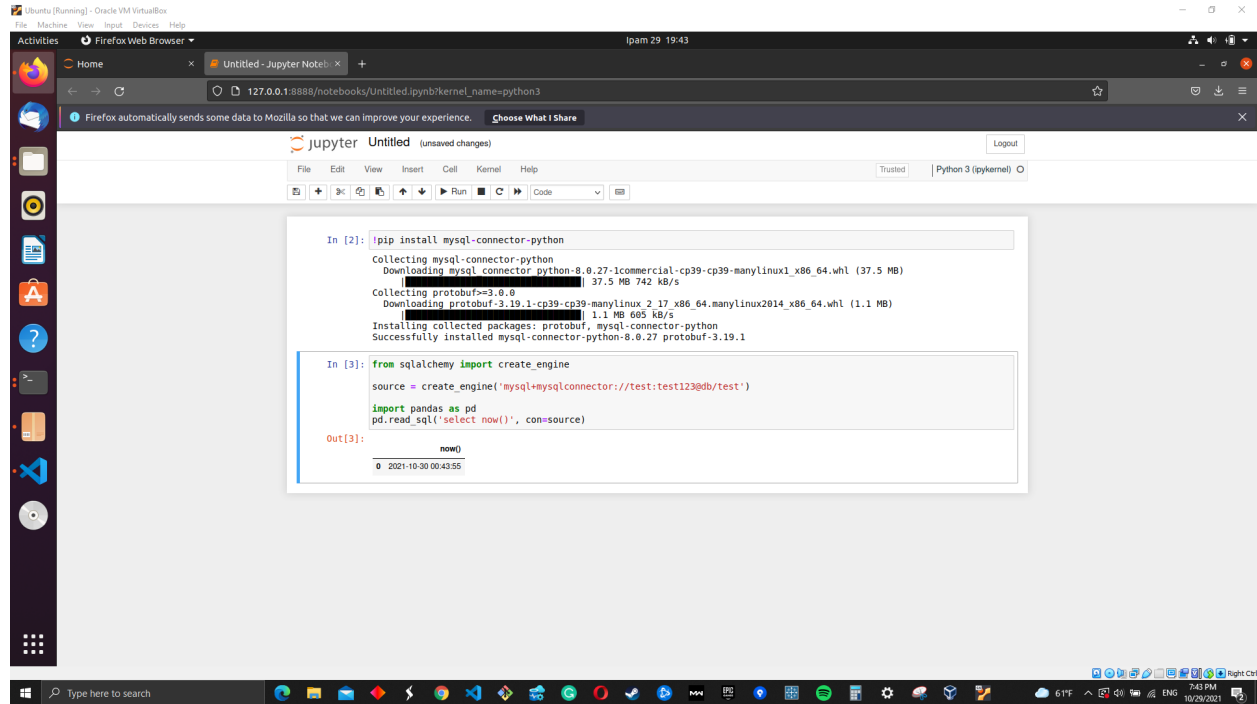
The first screenshot shows a Visual Studio Code editor with a `docker-compose.yml` file. The file defines two services: `db` (MySQL 5.7.35) and `jupyter` (JupyterLab). The `db` service is configured with a volume `data` and a restart policy of `always`. The `jupyter` service is configured with a base-notebook image and a restart policy of `always`. The terminal output shows the Docker Compose command being executed, and the services starting successfully. The output includes messages about the MySQL server configuration, including the creation of the `mysql` database and the `mysql` user.

```
version: '3.7'

services:
  db:
    image: mysql:5.7.35
    volumes:
      - db_data:/var/lib/mysql
    restart: always
    ports:
      - 3306:3306
    environment:
      MYSQL_ROOT_PASSWORD: test123
      MYSQL_DATABASE: test
      MYSQL_USER: test
      MYSQL_PASSWORD: test123
  jupyter:
    image: jupyter/base-notebook
    ports:
      - 8888:8888
```

The second screenshot shows the terminal output of the `docker ps` command, listing the running containers. The output shows two containers: `mysql` and `jupyter`. The `mysql` container is running the `mysql:5.7.35` image and is in the `Up` state. The `jupyter` container is running the `jupyter/base-notebook` image and is also in the `Up` state.

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
root@marco-VirtualBox: /home/marco/Downloads# docker ps						
CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
root@marco-VirtualBox: /home/marco/Downloads# docker ps						
CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
cb092ac377a	jupyter/base-notebook	"tini -g -- start-no..."	3 minutes ago	Up 3 minutes	0.0.0.0:8888->8888/tcp, :::8888->8888/tcp	tareal_jupyter_1
231ef0add691	mysql:5.7.35	"docker-entrypoint.s..."	3 minutes ago	Up 3 minutes	0.0.0.0:3306->3306/tcp, :::3306->3306/tcp, 33060/tcp	tareal_db_1



```
In [2]: !pip install mysql-connector-python
Collecting mysql-connector-python
  Downloading mysql-connector-python-8.0.27-1commercial-cp39-cp39-manylinux1_x86_64.whl (37.5 MB)
    |#####| 37.5 MB 742 kB/s
Collecting protobuf<=3.9.8
  Downloading protobuf-3.19.1-cp39-cp39-manylinux2014_x86_64.whl (1.1 MB)
    |#####| 1.1 MB 665 kB/s
Installing collected packages: protobuf, mysql-connector-python
Successfully installed mysql-connector-python-8.0.27 protobuf-3.19.1

In [3]: from sqlalchemy import create_engine
source = create_engine('mysql+mysqlconnector://test:test123@db/test')
import pandas as pd
pd.read_sql('select now()', con=source)

Out[3]:
      now()
0 2021-10-30 00:43:55
```