UNIVERSIDAD TECNOLÓGICA DEL NORTE DE GUANAJUATO

Tecnologías de la Información y Comunicación
Programa educativo:

TSU en Infraestructura de Redes Digitales
Área académica:

Programación de Redes
Asignatura:

Unidad II: Programación de dispositivos IdC **Grupo:** GIR0441

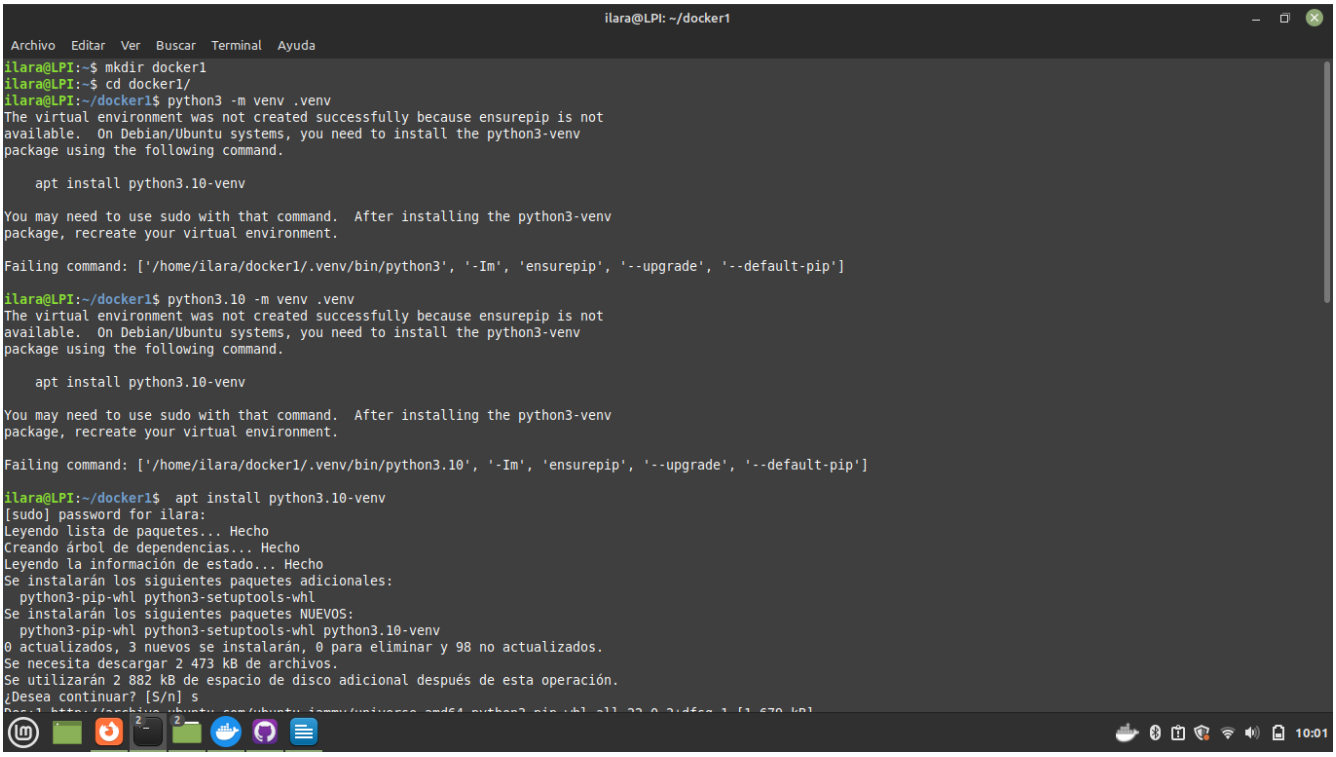
Docker and Python
Tarea:

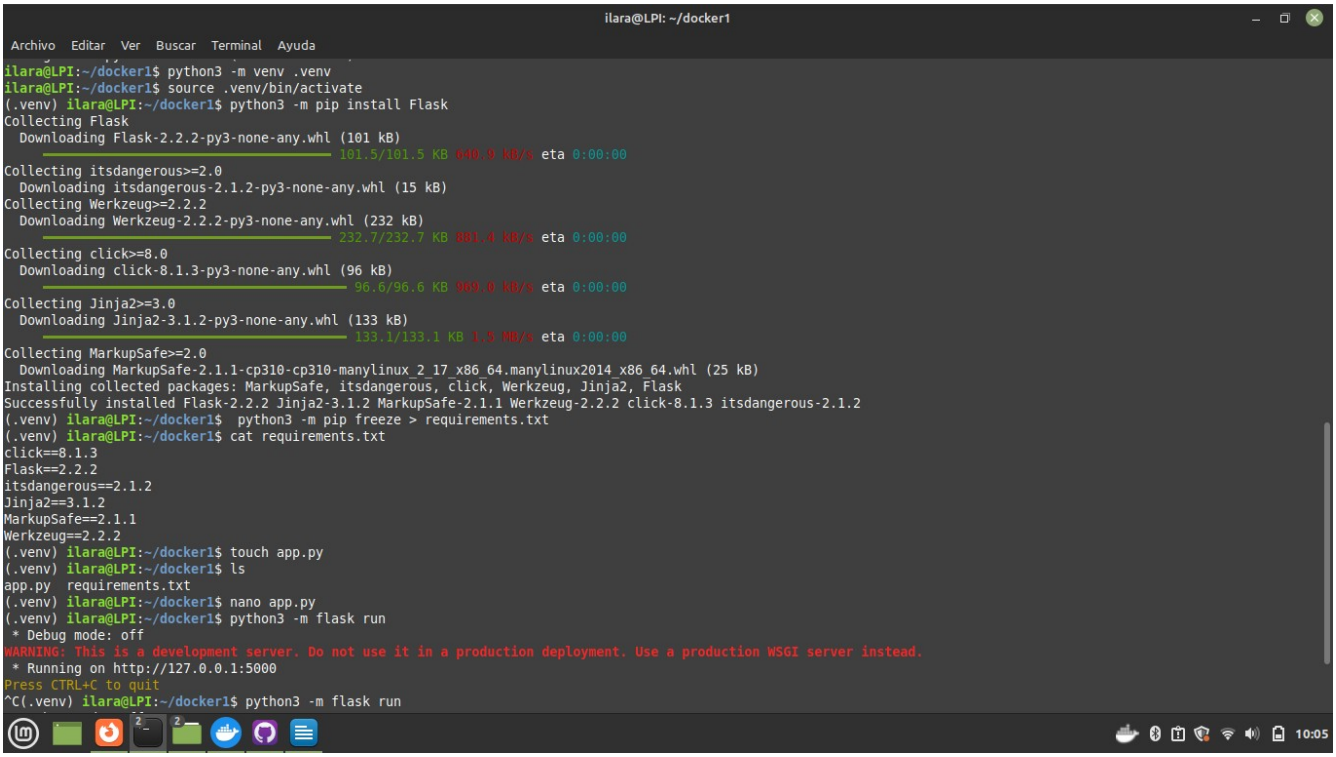
Isidro Lara Lopez
Alumno:

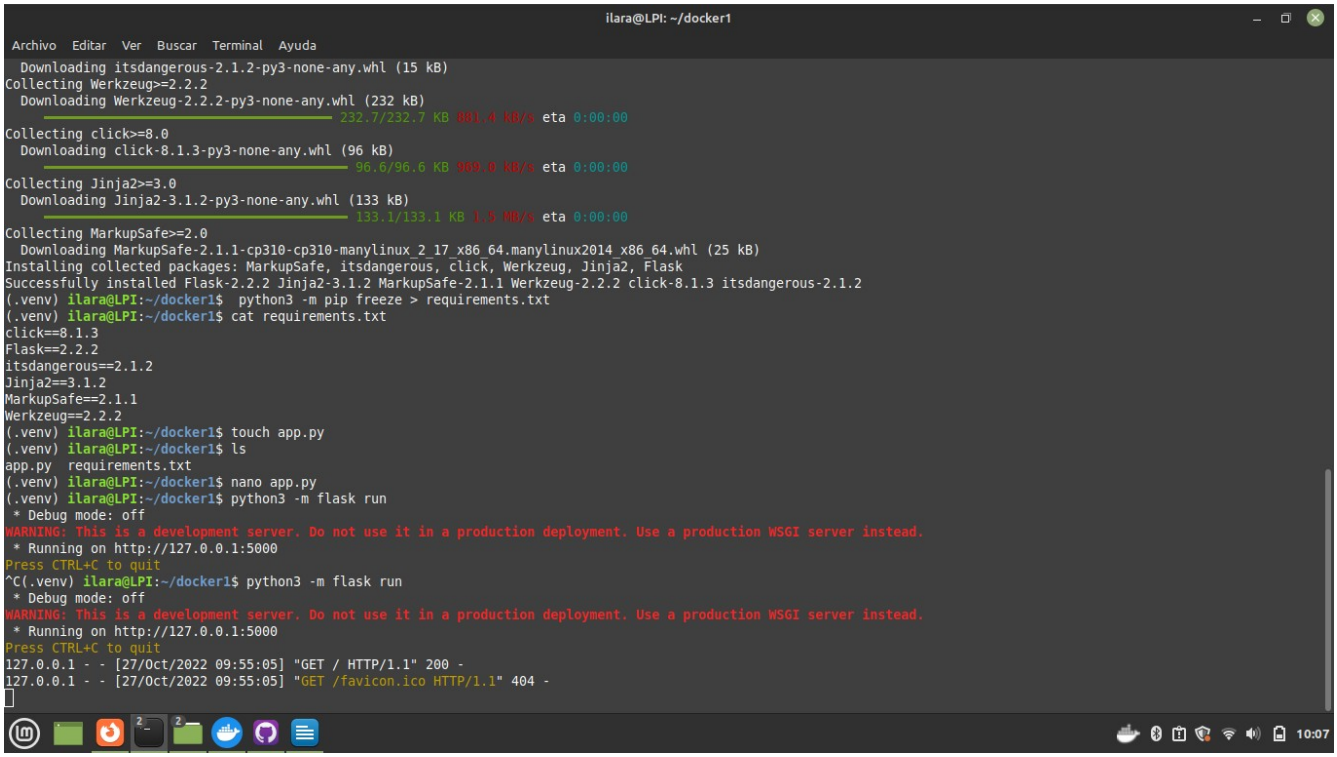
Gabriel Barrón Rodríguez
Docente:

Dolores Hidalgo, C.I.N., Gto., lunes 21 de Noviembre de 2022
Lugar y fecha:

Docker and Python




ilara@LPI: ~/docker1
Archivo Editar Ver Buscar Terminal Ayuda
ilara@LPI:~/docker1$ python3 -m venv .venv
ilara@LPI:~/docker1$ source .venv/bin/activate
(.venv) ilara@LPI:~/docker1$ python3 -m pip install Flask
Collecting Flask
Downloading Flask-2.2.2-py3-none-any.whl (101 kB)
101.5/101.5 KB 640.9 kB/s eta 0:00:00
Collecting itsdangerous>=2.0
Downloading itsdangerous-2.1.2-py3-none-any.whl (15 kB)
Collecting Werkzeug>=2.2.2
Downloading Werkzeug-2.2.2-py3-none-any.whl (232 kB)
232.7/232.7 KB 881.4 kB/s eta 0:00:00
Collecting click>=8.0
Downloading click-8.1.3-py3-none-any.whl (96 kB)
96.6/96.6 KB 969.0 kB/s eta 0:00:00
Collecting Jinja2>=3.0
Downloading Jinja2-3.1.2-py3-none-any.whl (133 kB)
133.1/133.1 KB 1.5 MB/s eta 0:00:00
Collecting MarkupSafe>=2.0
Downloading MarkupSafe-2.1.1-cp310-cp310-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (25 kB)
Installing collected packages: MarkupSafe, itsdangerous, click, Werkzeug, Jinja2, Flask
Successfully installed Flask-2.2.2 Jinja2-3.1.2 MarkupSafe-2.1.1 Werkzeug-2.2.2 click-8.1.3 itsdangerous-2.1.2
(.venv) ilara@LPI:~/docker1$ python3 -m pip freeze > requirements.txt
(.venv) ilara@LPI:~/docker1$ cat requirements.txt
click==8.1.3
Flask==2.2.2
itsdangerous==2.1.2
Jinja2==3.1.2
MarkupSafe==2.1.1
Werkzeug==2.2.2
(.venv) ilara@LPI:~/docker1$ touch app.py
(.venv) ilara@LPI:~/docker1$ ls
app.py requirements.txt
(.venv) ilara@LPI:~/docker1$ nano app.py
(.venv) ilara@LPI:~/docker1$ python3 -m flask run
* Debug mode: off
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on http://127.0.0.1:5000
Press CTRL+C to quit
^C(.venv) ilara@LPI:~/docker1$ python3 -m flask run
10:05


ilara@LPI: ~/docker1
Archivo Editar Ver Buscar Terminal Ayuda
Downloading itsdangerous-2.1.2-py3-none-any.whl (15 kB)
Collecting Werkzeug>=2.2.2
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232.7/232.7 KB 881.4 kB/s eta 0:00:00
Collecting click>=8.0
Downloading click-8.1.3-py3-none-any.whl (96 kB)
96.6/96.6 KB 969.0 kB/s eta 0:00:00
Collecting Jinja2>=3.0
Downloading Jinja2-3.1.2-py3-none-any.whl (133 kB)
133.1/133.1 KB 1.5 MB/s eta 0:00:00
Collecting MarkupSafe>=2.0
Downloading MarkupSafe-2.1.1-cp310-cp310-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (25 kB)
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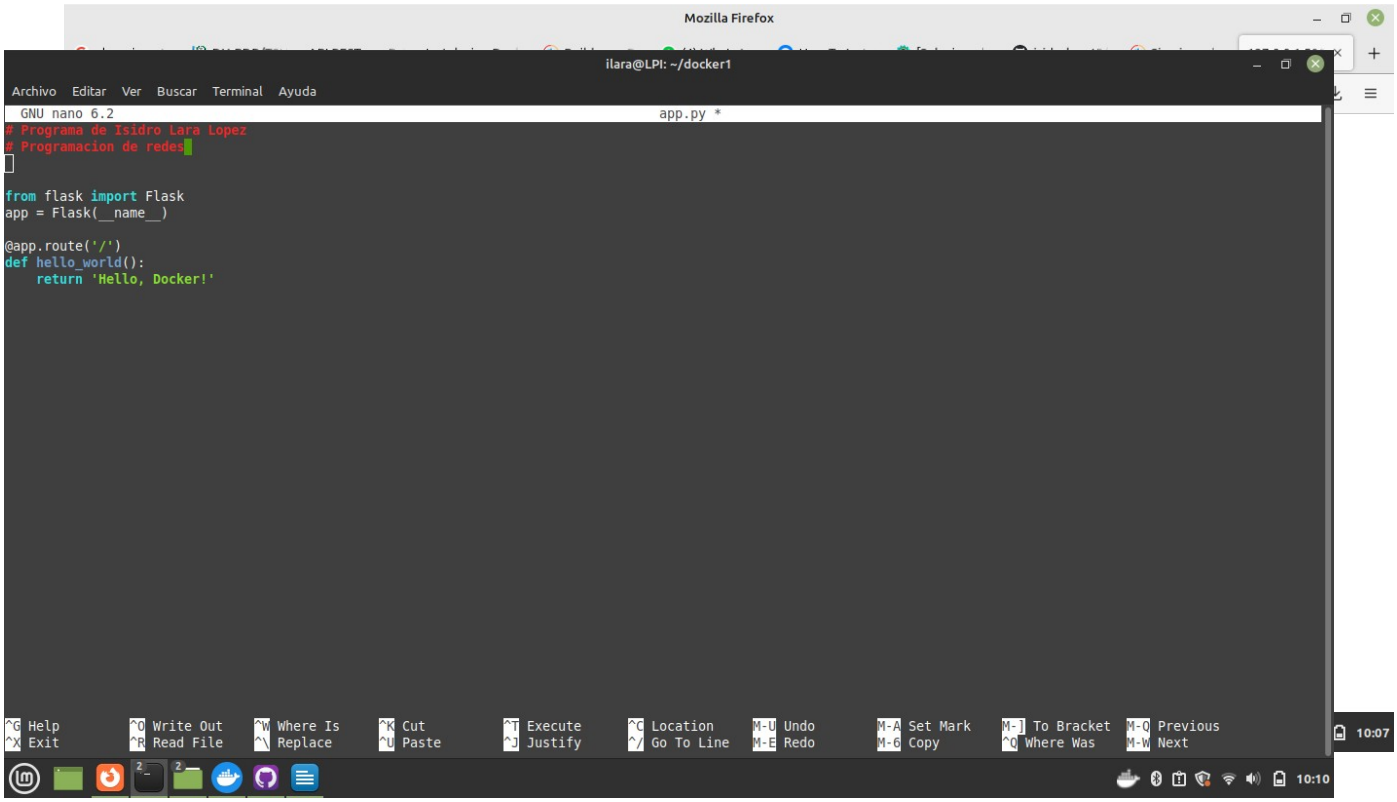
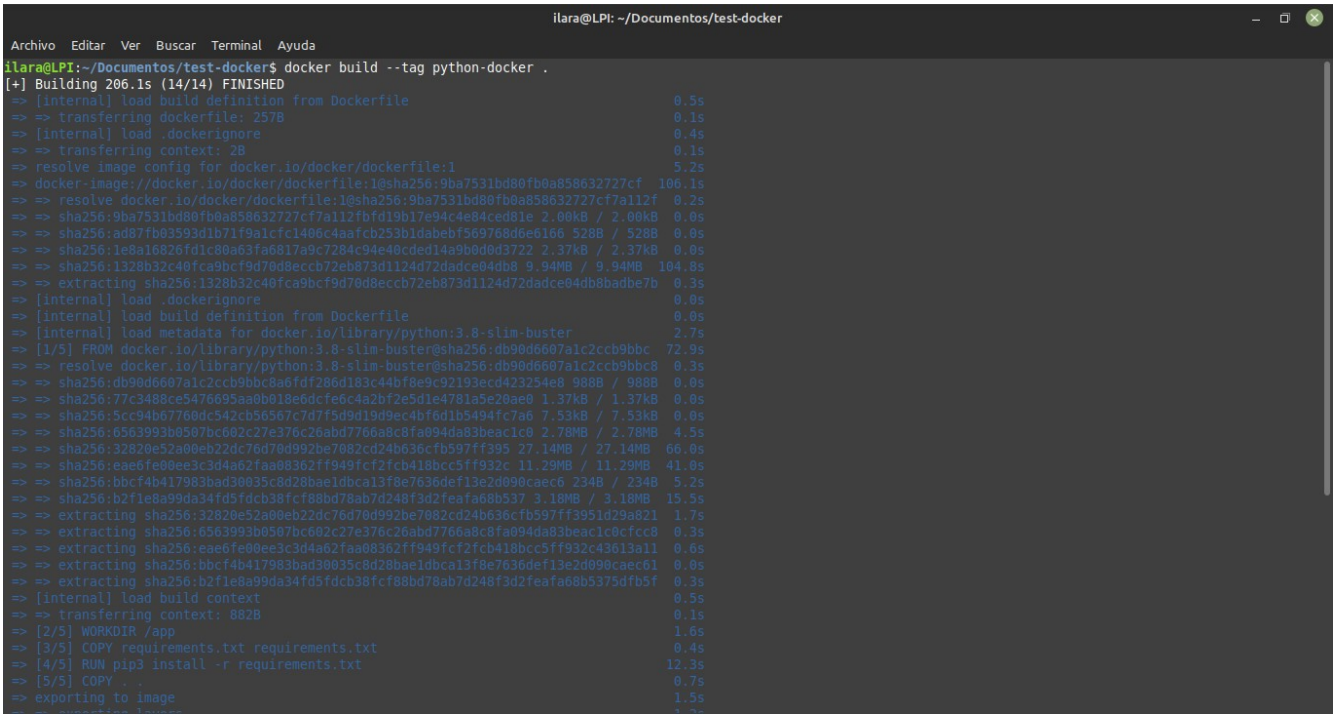
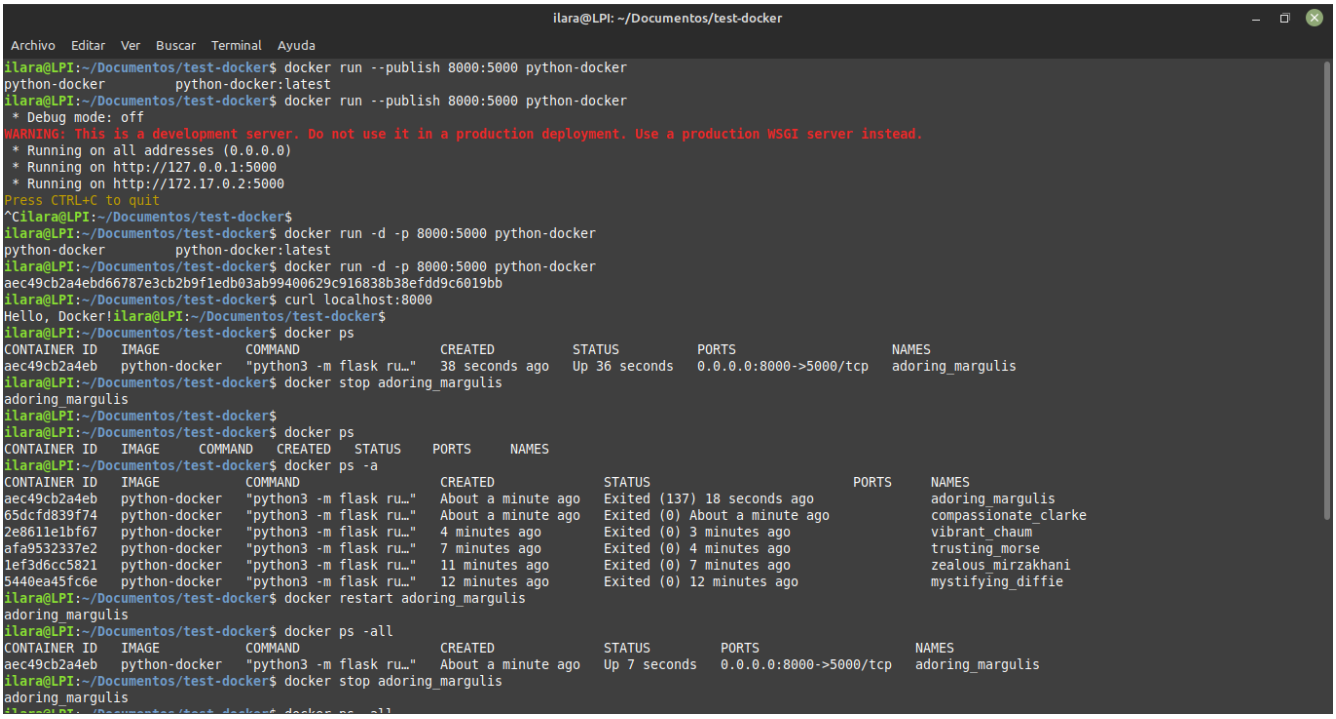
Flask==2.2.2
itsdangerous==2.1.2
Jinja2==3.1.2
MarkupSafe==2.1.1
Werkzeug==2.2.2
(.venv) ilara@LPI:~/docker1$ touch app.py
(.venv) ilara@LPI:~/docker1$ ls
app.py requirements.txt
(.venv) ilara@LPI:~/docker1$ nano app.py
(.venv) ilara@LPI:~/docker1$ python3 -m flask run
* Debug mode: off
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on http://127.0.0.1:5000
Press CTRL+C to quit
^C(.venv) ilara@LPI:~/docker1$ python3 -m flask run
* Debug mode: off
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on http://127.0.0.1:5000
Press CTRL+C to quit
127.0.0.1 - - [27/Oct/2022 09:55:05] "GET / HTTP/1.1" 200 -
127.0.0.1 - - [27/Oct/2022 09:55:05] "GET /favicon.ico HTTP/1.1" 404 -
10:07



Run your image as a container:




```
Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them
ilara@LPI:~/Documentos/test-docker$ docker images
REPOSITORY      TAG       IMAGE ID       CREATED              SIZE
python-docker   latest    5fa5ad997440   About a minute ago   128MB
ilara@LPI:~/Documentos/test-docker$ docker tag python-docker:latest python-docker:v1.0.0
ilara@LPI:~/Documentos/test-docker$ docker images
REPOSITORY      TAG       IMAGE ID       CREATED         SIZE
python-docker   latest    5fa5ad997440   2 minutes ago   128MB
python-docker   v1.0.0    5fa5ad997440   2 minutes ago   128MB
ilara@LPI:~/Documentos/test-docker$ docker rmi python-docker:v1.0.0
Untagged: python-docker:v1.0.0
ilara@LPI:~/Documentos/test-docker$ docker images
REPOSITORY      TAG       IMAGE ID       CREATED         SIZE
python-docker   latest    5fa5ad997440   4 minutes ago   128MB
ilara@LPI:~/Documentos/test-docker$
```


ilara@LPI: ~/Documentos/test-docker
Archivo Editar Ver Buscar Terminal Ayuda
ilara@LPI:~/Documentos/test-docker$ docker run --publish 8000:5000 python-docker
python-docker python-docker:latest
ilara@LPI:~/Documentos/test-docker$ docker run --publish 8000:5000 python-docker
* Debug mode: off
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on all addresses (0.0.0.0)
* Running on http://127.0.0.1:5000
* Running on http://172.17.0.2:5000
Press CTRL+C to quit
^Cilara@LPI:~/Documentos/test-docker$
ilara@LPI:~/Documentos/test-docker$ docker run -d -p 8000:5000 python-docker
python-docker python-docker:latest
ilara@LPI:~/Documentos/test-docker$ docker run -d -p 8000:5000 python-docker
aec49cb2a4ebd66787e3cb2b9f1edb03ab99400629c916838b38efdd9c6019bb
ilara@LPI:~/Documentos/test-docker$ curl localhost:8000
Hello, Docker!ilara@LPI:~/Documentos/test-docker$
ilara@LPI:~/Documentos/test-docker$ docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
aec49cb2a4eb python-docker "python3 -m flask ru…" 38 seconds ago Up 36 seconds 0.0.0.0:8000->5000/tcp adoring_margulis
ilara@LPI:~/Documentos/test-docker$ docker stop adoring_margulis
adoring_margulis
ilara@LPI:~/Documentos/test-docker$
ilara@LPI:~/Documentos/test-docker$ docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
ilara@LPI:~/Documentos/test-docker$ docker ps -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
aec49cb2a4eb python-docker "python3 -m flask ru…" About a minute ago Exited (137) 18 seconds ago adoring_margulis
65dcfd839f74 python-docker "python3 -m flask ru…" About a minute ago Exited (0) About a minute ago compassionate_clarke
2e8611e1bf67 python-docker "python3 -m flask ru…" 4 minutes ago Exited (0) 3 minutes ago vibrant_chaum
afa9532337e2 python-docker "python3 -m flask ru…" 7 minutes ago Exited (0) 4 minutes ago trusting_morse
1ef3d6cc5821 python-docker "python3 -m flask ru…" 11 minutes ago Exited (0) 7 minutes ago zealous_mirzakhani
5440ea45fc6e python-docker "python3 -m flask ru…" 12 minutes ago Exited (0) 12 minutes ago mystifying_diffie
ilara@LPI:~/Documentos/test-docker$ docker restart adoring_margulis
adoring_margulis
ilara@LPI:~/Documentos/test-docker$ docker ps -all
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
aec49cb2a4eb python-docker "python3 -m flask ru…" About a minute ago Up 7 seconds 0.0.0.0:8000->5000/tcp adoring_margulis
ilara@LPI:~/Documentos/test-docker$ docker stop adoring_margulis
adoring_margulis

lll

```
ilara@LPI:~/Documentos/test-docker$ docker restart adoring_margulis
adoring_margulis
ilara@LPI:~/Documentos/test-docker$ docker ps -all
CONTAINER ID   IMAGE           COMMAND                  CREATED              STATUS         PORTS                    NAMES
aec49cb2a4eb   python-docker   "python3 -m flask ru…"   About a minute ago   Up 7 seconds   0.0.0.0:8000->5000/tcp   adoring_margulis
ilara@LPI:~/Documentos/test-docker$ docker stop adoring_margulis
adoring_margulis
ilara@LPI:~/Documentos/test-docker$ docker ps -all
CONTAINER ID   IMAGE           COMMAND                  CREATED         STATUS                       PORTS     NAMES
aec49cb2a4eb   python-docker   "python3 -m flask ru…"   2 minutes ago   Exited (137) 3 seconds ago             adoring_margulis
ilara@LPI:~/Documentos/test-docker$ docker rm adoring_margulis compassionate_clarke vibrant_chaum trusting_morse zealous_mirzakhani mystifying_diffie
adoring_margulis
compassionate_clarke
vibrant_chaum
trusting_morse
zealous_mirzakhani
mystifying_diffie
ilara@LPI:~/Documentos/test-docker$ docker ps -all
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS     NAMES
ilara@LPI:~/Documentos/test-docker$ docker run -d -p 8000:5000 --name rest-server python-docker
9e455e86fac2971a9d9b20b8344f3469aa8694ec830e82cabe7d554402c7c064
ilara@LPI:~/Documentos/test-docker$
```