Docker task description.

Using docker lection2 create a docker image with Python Flask app that displays random cat pix. Installing Docker:

```
student@student-VirtualBox:~$ sudo apt-get install \
> apt-transport-https \
> ca-certificates \
> curl \
> gnupg-agent \
> software-properties-common
```

```
:tudent@student-VirtualBox:~$ curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo apt-key add
OK
 student@student-VirtualBox:~$ sudo apt-key fingerprint 0EBFCD88
       rsa4096 2017-02-22 [SCEA]

9DC8 5822 9FC7 DD38 854A E2D8 8D81 803C 0EBF CD88

[ unknown] Docker Release (CE deb) <docker@docker.com>
rsa4096 2017-02-22 [S]
bub
sub
```

```
student@student-VirtualBox:~$ sudo add-apt-repository \
> "deb [arch=amd64] https://download.docker.com/linux/ubuntu \
> $(lsb release -cs) \
> stable"
```

```
docker-buildx-plugin docker-ce-rootless-extras docker-compose-plugin git git-man (toerlor-pert pige Stap missio
Suggested packages:
aufs-tools cgroupfs-mount | cgroup-lite git-daemon-run | git-daemon-sysvinit git-doc git-el git-email git-gui gitk gitweb git-cvs git-mediawiki git-svn
The following NEW packages will be installed:
containerd to docker-buildx-plugin docker-ce docker-ce-cli docker-ce-rootless-extras docker-compose-plugin git git-man liberror-perl pigz slirp4netns
0 upgraded, 11 newly installed, 0 to remove and 172 not upgraded.
Need to get 119 MB of archives.
After this operation, 453 MB of additional disk space will be used.
Do you want to continue? [Y/n]
```

Docker test:

```
student@student-VirtualBox:~$ sudo docker run hello-world
Unable to find image 'hello-world:latest' locally
latest: Pulling from library/hello-world
719385e32844: Pull complete
Digest: sha256:dcba6daec718f547568c562956fa47e1b03673dd010fe6ee58ca806767031d1c
Status: Downloaded newer image for hello-world:latest
Hello from Docker!
This message shows that your installation appears to be working correctly.
To generate this message, Docker took the following steps:
1. The Docker client contacted the Docker daemon.
2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
    (amd64)
 3. The Docker daemon created a new container from that image which runs the
    executable that produces the output you are currently reading.
4. The Docker daemon streamed that output to the Docker client, which sent it
    to your terminal.
To try something more ambitious, you can run an Ubuntu container with:
$ docker run -it ubuntu bash
Share images, automate workflows, and more with a free Docker ID:
https://hub.docker.com/
For more examples and ideas, visit:
https://docs.docker.com/get-started/
```

```
student@student-VirtualBox: ~/dockerfiles
 GNU nano 4.8
                                                                                                                   Dockerfile
FROM python:3.8-slim
WORKDIR /dockerfiles
CMD ["python", "-c", "print('Hello, World!')"]
```

```
udent@student-VirtualBox:-/docke
] Bullding 30.7s (6/6) FINISHED
                                                                                                                            docker:default
 student@student-VirtualBox:~/dockerfiles$ sudo docker run tag
Hello, World!
Docker practice basics:
                                                                                             student@student-VirtualBox: ~/dockerfiles
 GNU nano 4.8
                                                                                                           Dockerfile
FROM ubuntu:20.04
RUM apt-get -y update
RUN apt-get -y install apache2
RUN echo 'Hi there, what is love?' > /var/www/html/index.html
RUN echo 'It is just a song ...' > /var/www/html/index.html
CMD ["/usr/sbin/apache2ctl", "-DFOREGROUND"]
EXPOSE 80
 tudestgstudest-VirtualBox:-/dockerfiles$ sudo docker build -t new_tag
+] Building 108.3s (9/9) FINISHED

>> [unternal] hand build make
 student@student-VirtualBox:~/dockerfiles$ sudo docker images
                       TAG IMAGE ID CREATED latest 3c130b20d4ea 2 minutes ago
REPOSITORY
                                                                                             SIZE
new_tag
                                                                                             232MB
                                      a61deb22edf0 17 minutes ago
                       latest
                                                                                             128MB
 tag
                       latest 9c7a54a9a43c 3 months ago
hello-world
                                                                                             13.3kB
 student@student-VirtualBox:~/dockerfiles$ sudo docker run -d -p 7777:80 new tag
7fbc3a56ab1cf7e605e25021b634e7195eadd9233d4a07633c82fe5cbc76db51
     192.168.31.246:7777/
 \leftarrow \rightarrow G
                    O & 192.168.31.246:7777
                                                                                                                            യ ഇ ≡
                                                                                                             $₹
It is just a song ...
```

student@student-VirtualBox:~/dockerfiles\$ sudo docker stop 7fbc3a56ab1c

PORTS

NAMES

student@student-VirtualBox:~/dockerfiles\$ sudo docker ps CONTAINER ID IMAGE COMMAND CREATED STATUS PO

7fbc3a56ab1c

```
tudent@student-VirtualBox:~/dockerfiles$ sudo docker system prune -a
WARNING! This will remove:
  - all stopped containers
  - all networks not used by at least one container
  - all images without at least one container associated to them
  - all build cache
Are you sure you want to continue? [y/N] y
Deleted Containers:
7fbc3a56ab1cf7e605e25021b634e7195eadd9233d4a07633c82fe5cbc76db51
36b347da7b9108b1feac6a6381d9d141cb877bc767ddd20d3fff6f5a92a81591
94453b3c6e81be1fac7257f1635cc24c61fa4c247f3be916c4b6b8b6cb7829cf
Deleted Images:
untagged: hello-world:latest
untagged: hello-world@sha256:dcba6daec718f547568c562956fa47e1b03673dd010fe6ee58ca806767031d1c
deleted: sha256:9c7a54a9a43cca047013b82af109fe963fde787f63f9e016fdc3384500c2823d
deleted: sha256:01bb4fce3eb1b56b05adf99504dafd31907a5aadac736e36b27595c8b92f07f1
untagged: tag:latest
deleted: sha256:a61deb22edf0350c7c901ab33d7ad5b25c54613f8b8ac3dd165c94be59d1deaf
untagged: new_tag:latest
deleted: sha256:3c130b20d4ea22760bc21c455b899154b63020bab54f5356495aefef65bf70db
Deleted build cache objects:
lvhc2cptyy42a5efbk1ranwb1
oue0jb693d7kvybtwp3o1rltb
m5qj9c3q3cc16ori8rqvw55ea
opduzwcykl56apc2m6f2hkw73
j3475piis050wt6r9smnr6kjl
m6iv2df405u7wwxlxqrya6qtq
zpeidlymmc86ibxnx7x8qzl2i
tzvke5ic6w0byjyzilpf48h4p
r67n9g9aa7bjap351i2b1mbs0
gpucy6gythxfsxc0u1qb3l3lw
ofsocc9ulf1u1u8c1iu8idpsu
ncsjf0diy6wje46yf3qoi80lh
o30q50hn7urfvd3jopqrkq92v
tqihuppuktta87mbw6649nyjm
Total reclaimed space: 204.1MB
student@student-VirtualBox:~/dockerfiles$ sudo docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
```

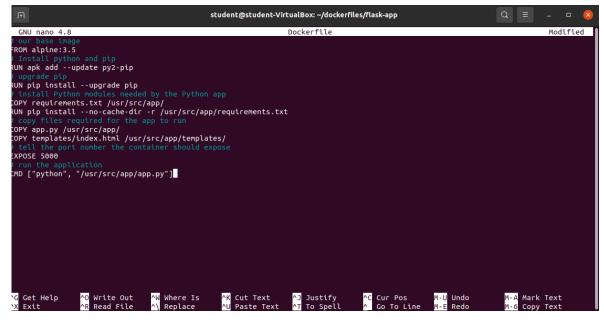
Creating flask-app:

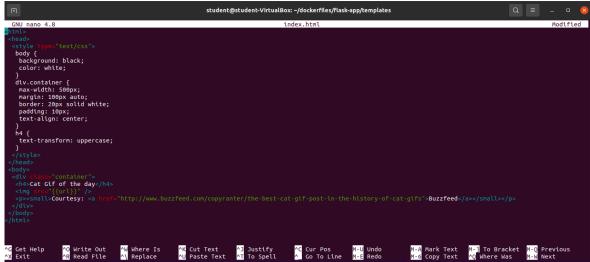
```
student@student-VirtualBox:~/dockerfiles$ ls
Dockerfile flask-app
student@student-VirtualBox:~/dockerfiles$ cd flask-app/
student@student-VirtualBox:~/dockerfiles/flask-app$ touch app.py
student@student-VirtualBox:~/dockerfiles/flask-app$ touch requirements.txt
student@student-VirtualBox:~/dockerfiles/flask-app$ mkdir templates
student@student-VirtualBox:~/dockerfiles/flask-app$ touch Dockerfile
student@student-VirtualBox:~/dockerfiles/flask-app$ ls
app.py Dockerfile requirements.txt templates
student@student-VirtualBox:~/dockerfiles/flask-app$ cd templates/
student@student-VirtualBox:~/dockerfiles/flask-app/templates$ touch index.html
student@student-VirtualBox:~/dockerfiles/flask-app/templates$ cd ..
```

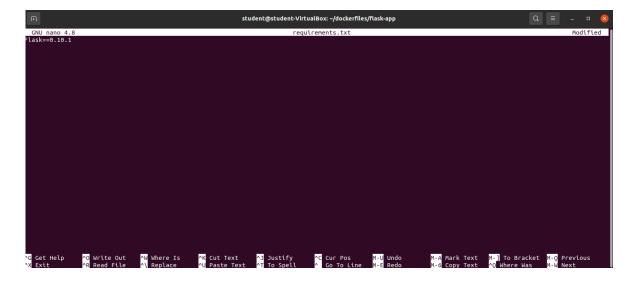
```
CNU pano 4.8

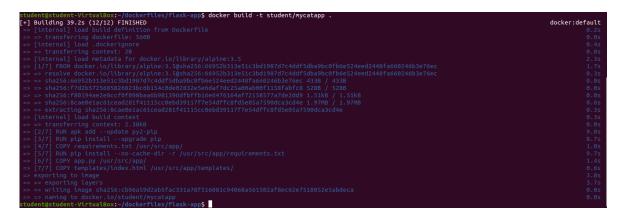
from flask import Flask, render_template

images = [
    "http://ak.hdl.buzzfed.com/static/2013-10/enhanced/webdr05/15/9/anigif_enhanced-buzz-26388-1381844103-11.gif",
    "http://ak.hdl.buzzfed.com/static/2013-10/enhanced/webdr05/15/9/anigif_enhanced-buzz-31540-1381844335-a.gif",
    "http://ak.hdl.buzzfed.com/static/2013-10/enhanced/webdr05/15/9/anigif_enhanced-buzz-31540-1381844335-a.gif",
    "http://ak.hdl.buzzfed.com/static/2013-10/enhanced/webdr05/15/9/anigif_enhanced-buzz-31540-138184410-11.gif",
    "http://ak.hdl.buzzfed.com/static/2013-10/enhanced/webdr06/15/10/anigif_enhanced-buzz-3391-1381844336-26.gif",
    "http://ak.hdl.buzzfed.com/static/2013-10/enhanced/webdr06/15/10/anigif_enhanced-buzz-2391-1381844336-20.gif",
    "http://ak.hdl.buzzfed.com/static/2013-10/enhanced/webdr06/15/10/anigif_enhanced-buzz-391-138184452-13.gif",
    "http://ak.hdl.buzzfed.com/static/2013-10/enhanced/webdr05/15/9/anigif_enhanced-buzz-309-138184452-13.gif",
    "http://ak.hdl.buzzfed.com/static/2013-10/enhanced/webdr05/15/9/anigif_enhanced-buzz-26380-1381845043-13.gif",
    "http://ak.hdl.buzzfed.com/static/2013-10/enhanced/webdr06/15/9/anigif_enhanced-buzz-26380-1381845043-13.gif",
    "http://ak.hdl.buzzfed.com/static/2013-10/enhanced/webdr06/15/9/anigif_enhanced-buzz-26380-1381845043-13.gif",
    "http://ak.hdl.buzzfed.com/static/2013-10/enhanced/webdr06/15/9/anigif_enhanced-buzz-26380-1381845043-13.gif",
    "http://ak.hdl.buzzfed.com/static/2013-10/enhanced/webdr06/15/9/anigif_enhanced-buzz-26380-1381845043-13.gif",
    "http://ak.hdl.buzzfed.com/static/2013-10/enhanced/webdr06/15/9/anigif_enhanced-buzz-26380-1381845043-13.gif",
    "http://ak.hdl.buzzfed.com/static/2013-10/enhanced/webdr06/15/9/anigif_enhanced-buzz-26380-1381845043-13.gif",
    "http://ak.hdl.buzzfed.com/static/2013-10/enhanced/webdr06/15/9/anigif_enhanced-buzz-26380-138184669-1.gif",
    "http://ak.hdl.buzzfed.com/static/2013-10/enhanced/webdr06/15/9/anigif_enhanced-buzz-26380-138184669-1.gif",
    "http://ak.hdl.buzzfed.com/stati
```









student@student-VirtualBox:~/dockerfiles/flask-app\$ docker run -p 8888:5000 --name mycatapp student/mycatapp
 * Running on http://0.0.0.0:5000/ (Press CTRL+C to quit)

