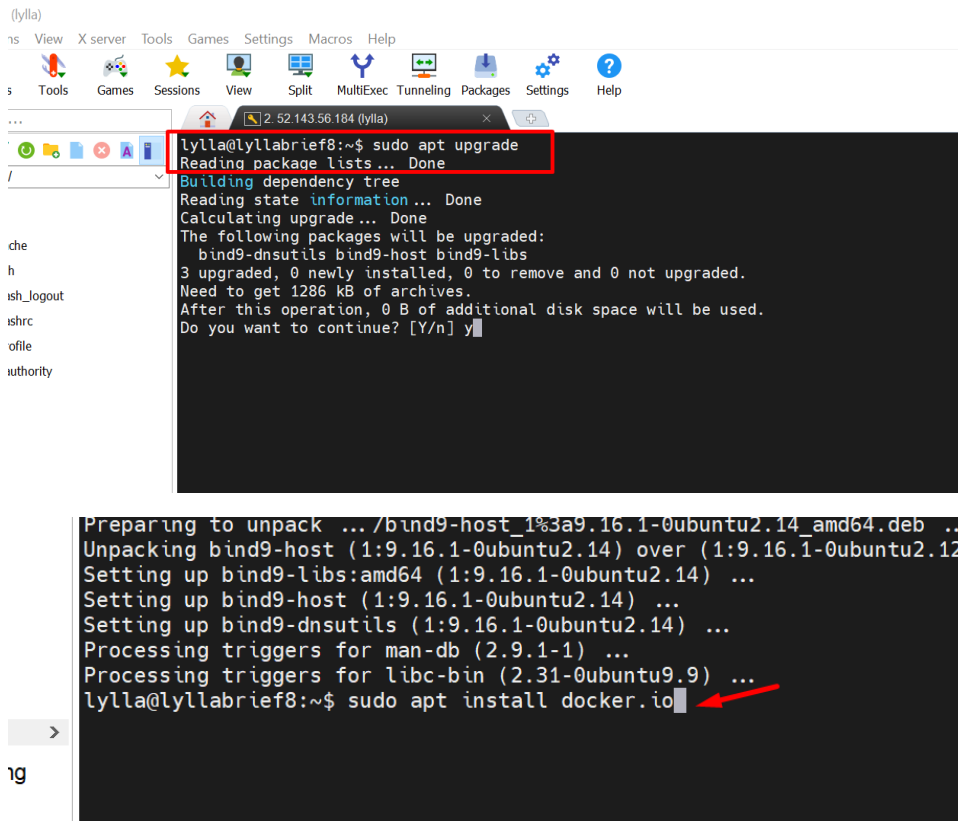# Brief 8 : Créer une application avec docker

**Création d'une VM avec clé SSH, puis se connecter sur Mobaxtern pour travailler sur le terminal.
Connection session, introduction chemin clé.**

Installation Docker **sudo apt install docker.io on, sudo apt upgrade** On peut vérifier la version **via sudo docker version**
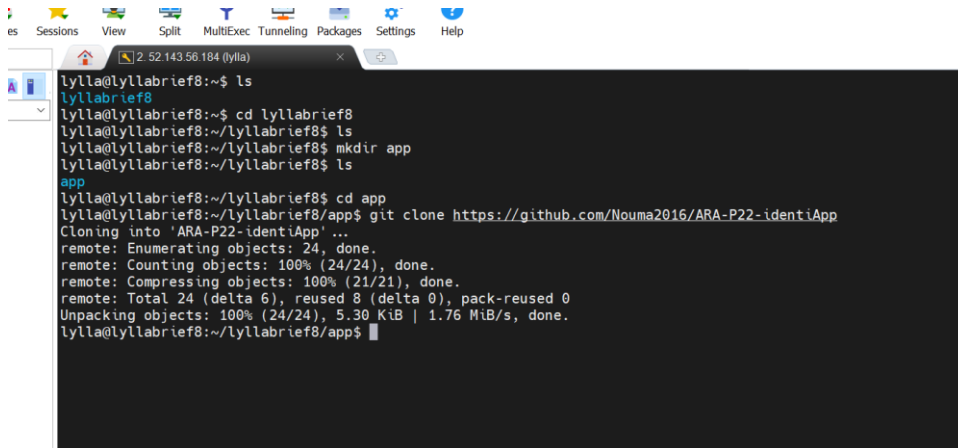

Cloner le dossier ARA-P22-identiapp DIRECTEMENT au bon endroit via **git clone https://github.com….**

Voici le **dockerfile** dans vim via **sudo vim Dockerfile**

```
lylla@lyllabrief8:~/lyllabrief8/app/ARA-P22-identiApp$ cat Dockerfile
FROM python:3.7

RUN groupadd -r uwsgi && useradd -r -g uwsgi uwsgi
RUN pip install Flask uWSGI requests redis
WORKDIR /app
COPY app/my-app.py /app

EXPOSE 9090 9191
USER uwsgi
CMD ["uwsgi", "--http", "0.0.0.0:9090", "--wsgi-file", "/app/my-app.py", \
"--callable", "app", "--stats", "0.0.0.0:9191"]
lylla@lyllabrief8:~/lyllabrief8/app/ARA-P22-identiApp$ sudo docker build -t
```

Puis construction de l'image via **sudo docker build –t ara-p22-lylla .** (cad le nom de l'image, le . Signifie qu'il est à cette endroit précis)
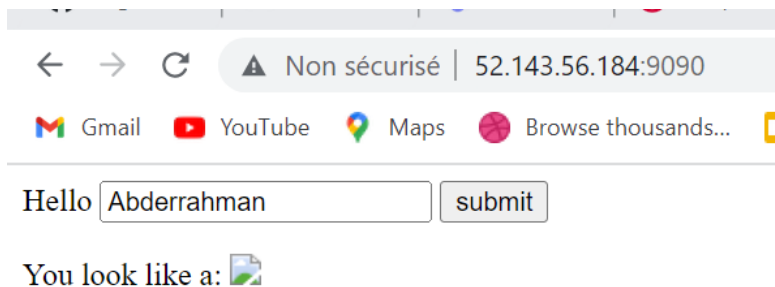


```
Build an image from a Dockerfile
lylla@lyllabrief8:~/ARA-P22-identiApp$ sudo docker build -t ara-p22-lylla .
Sending build context to Docker daemon  94.72kB
Step 1/8 : FROM python:3.7
 ---> 46d78515df2a
Step 2/8 : RUN groupadd -r uwsgi && useradd -r -g uwsgi uwsgi
 ---> Using cache
 ---> 58f8aeafac34
Step 3/8 : RUN pip install Flask uWSGI requests redis
 ---> Using cache
 ---> 823d31df4db3
Step 4/8 : WORKDIR /app
 ---> Using cache
 ---> 01dd938e8195
Step 5/8 : COPY app/my-app.py /app
 ---> 5dbd54bcfb39
Step 6/8 : EXPOSE 9090 9191
 ---> Running in a1c2ebb0bfe0
Removing intermediate container a1c2ebb0bfe0
 ---> 37a23953861c
Step 7/8 : USER uwsgi
 ---> Running in aa83e4ce57f4
Removing intermediate container aa83e4ce57f4
 ---> ee94f8bbd030
Step 8/8 : CMD ["uwsgi", "--http", "0.0.0.0:9090", "--wsgi-file", "/app/my-app.py", "--calla
 ---> Running in d91a290f1c21
Removing intermediate container d91a290f1c21
 ---> 44fc2418ce1c
Successfully built 44fc2418ce1c
Successfully tagged ara-p22-lylla:latest
lylla@lyllabrief8:~/ARA-P22-identiApp$ sudo docker image
```



```
^C
lylla@lyllabrief8:~$ pwd
/home/lylla
lylla@lyllabrief8:~$
lylla@lyllabrief8:~$ git clone https://github.com/Nouma2016/ARA-P22-identiApp
Cloning into 'ARA-P22-identiApp'...
remote: Enumerating objects: 24, done.
remote: Counting objects: 100% (24/24), done.
remote: Compressing objects: 100% (21/21), done.
remote: Total 24 (delta 6), reused 8 (delta 0), pack-reused 0
Unpacking objects: 100% (24/24), 5.30 KiB | 1.76 MiB/s, done.
lylla@lyllabrief8:~$ ls
ARA-P22-identiApp  lyllabrief8
lylla@lyllabrief8:~$ cd ARA-P22-identiApp/
lylla@lyllabrief8:~/ARA-P22-identiApp$ ls
Dockerfile  README.md  my-app.py
lylla@lyllabrief8:~/ARA-P22-identiApp$ mkdir app
lylla@lyllabrief8:~/ARA-P22-identiApp$ ls
Dockerfile  README.md  app  my-app.py
lylla@lyllabrief8:~/ARA-P22-identiApp$ cp my-app.py app
lylla@lyllabrief8:~/ARA-P22-identiApp$ ls
Dockerfile  README.md  app  my-app.py
lylla@lyllabrief8:~/ARA-P22-identiApp$ rm -r my-app.py
lylla@lyllabrief8:~/ARA-P22-identiApp$ cd app
lylla@lyllabrief8:~/ARA-P22-identiApp/app$ ls
my-app.py
lylla@lyllabrief8:~/ARA-P22-identiApp/app$ ls
my-app.py
lylla@lyllabrief8:~/ARA-P22-identiApp/app$ cat my-app.py
from flask import Flask, Response, request
import requests
import hashlib
import redis
```

Sudo docker run –d –name lyllapp –p 9090:9090 ara-p22-lylla (nom de l'image)

```
lylla@lyllabrief8:~/ARA-P22-identiApp$ sudo docker run -d --name lyllapp -p 9090:9090 ara-p22-lylla
bf20b7bb2bef09e474d36a7c783922dad3978d56094fcbb2ee5a36eccff5f826
lylla@lyllabrief8:~/ARA-P22-identiApp$
```

Adresse localhost **ip:port** pour voir l'appli sur le nav ou sur terminal **curl localhost:port**

← → C ⚠ Non sécurisé | 52.143.56.184:9090

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You look like a:

Il faut tagger l'image avant de le push sur dockerhub via **sudo docker tag "IdImage" "UserNameDockerhub"/Nom Image: NomDuTag**


```
lylla@lyllabrief8:~/ARA-P22-identiApp$ sudo docker images
REPOSITORY        TAG       IMAGE ID       CREATED        SIZE
ara-p22-lylla1    latest    44fc2418ce1c   2 hours ago    927MB
ara-p22-lylla     latest    44fc2418ce1c   2 hours ago    927MB
python            3.7       46d78515df2a   4 days ago     905MB
lylla@lyllabrief8:~/ARA-P22-identiApp$ sudo docker tag  44fc2418ce1c lyllabani/ara-p22-lylla:lyltag
lylla@lyllabrief8:~/ARA-P22-identiApp$
```

Login docker pour se connecter à Docker hub via **sudo docker login/ Username/ password à remplir**


```
lylla@lyllabrief8:~/ARA-P22-identiApp$ sudo docker images
REPOSITORY        TAG       IMAGE ID       CREATED        SIZE
ara-p22-lylla1    latest    44fc2418ce1c   2 hours ago    927MB
ara-p22-lylla     latest    44fc2418ce1c   2 hours ago    927MB
python            3.7       46d78515df2a   4 days ago     905MB
lylla@lyllabrief8:~/ARA-P22-identiApp$ sudo docker tag  44fc2418ce1c lyllabani/ara-p22-lylla:lyltag
lylla@lyllabrief8:~/ARA-P22-identiApp$ sudo docker login
Login with your Docker ID to push and pull images from Docker Hub. If you don't have
a Docker ID, head over to https://hub.docker.com to create one.
Username: lyllabani
Password:
WARNING! Your password will be stored unencrypted in /root/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credentials-store

Login Succeeded
lylla@lyllabrief8:~/ARA-P22-identiApp$
```

On envoie l'image sur Dockerhub via **sudo docker push lyllabani/ara-p22-lylla:lyltag** (username docker/NomImage:NomTag


```
lylla@lyllabrief8:~/ARA-P22-identiApp$ sudo docker images
REPOSITORY        TAG       IMAGE ID       CREATED        SIZE
ara-p22-lylla1    latest    44fc2418ce1c   2 hours ago    927MB
ara-p22-lylla     latest    44fc2418ce1c   2 hours ago    927MB
python            3.7       46d78515df2a   4 days ago     905MB
lylla@lyllabrief8:~/ARA-P22-identiApp$ sudo docker tag  44fc2418ce1c lyllabani/ara-p22-lylla:lyltag
lylla@lyllabrief8:~/ARA-P22-identiApp$ sudo docker login
Login with your Docker ID to push and pull images from Docker Hub. If you don't have
a Docker ID, head over to https://hub.docker.com to create one.
Username: lyllabani
Password:
WARNING! Your password will be stored unencrypted in /root/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credentials-store

Login Succeeded
lylla@lyllabrief8:~/ARA-P22-identiApp$ sudo docker push lyllabani/ara-p22-lylla:lyltag
The push refers to repository [docker.io/lyllabani/ara-p22-lylla]
0459a74d442e: Pushed
0f89f90a14fa: Pushed
357f6b04731f: Pushed
0c0e2bb61f69: Pushed
6b9978aaf199: Mounted from library/python
351fddb2c26e: Mounted from library/python
ff67c0f48a1e: Mounted from library/python
5c563cc8b216: Mounted from library/python
d4514f8b2aac: Mounted from library/python
5ab567b9150b: Mounted from library/python
a90e3914fb92: Mounted from library/python
053a1f71007e: Mounted from library/python
ec09eb83ea03: Mounted from library/python
```

Localhost:9191

2. 52.143.56.184 (lylla)

```
lylla@lyllabrief8:~/ARA-P22-identiApp$ curl localhost:9191
curl: (1) Received HTTP/0.9 when not allowed

lylla@lyllabrief8:~/ARA-P22-identiApp$ vim Dockerfile
lylla@lyllabrief8:~/ARA-P22-identiApp$
```

2. 52.143.56.184 (lylla)

```
lylla@lyllabrief8:~/ARA-P22-identiApp$ sudo vim  Dockerfile
lylla@lyllabrief8:~/ARA-P22-identiApp$ sudo docker container ls
CONTAINER ID   IMAGE          COMMAND              CREATED          STATUS            PORTS
               NAMES
db44c8352f0b   44fc2418ce1c   "uwsgi --http 0.0.0…"  About an hour ago  Up About an hour   9090/tcp, 0.0.0.0:9191→9191/tcp, :::
9191→9191/tcp   lyllapp1
bf20b7bb2bef   ara-p22-lylla  "uwsgi --http 0.0.0…"  About an hour ago  Up About an hour   0.0.0.0:9090→9090/tcp, :::9090→9090
/tcp, 9191/tcp   lyllapp
lylla@lyllabrief8:~/ARA-P22-identiApp$ sudo docker inspect lyllapp | grep uwsgi
        "Path": "uwsgi",
            "User": "uwsgi",
                "uwsgi",
lylla@lyllabrief8:~/ARA-P22-identiApp$
```