

## Projet Web – Kubernetes

- 1) Un seul service local
  - a. Mini application qui affiche mon nom :

```
(kali㉿kali)-[~/Desktop/web]
$ cat myname.java
public class myname {
    public static void main(String[] args) {
        System.out.println("Je m'appelle Mario");
    }
}
```

code

```
(kali㉿kali)-[~/Desktop/web]
$ javac myname.java
Picked up _JAVA_OPTIONS: -Dawt.useSystemAAFontSettings=on -Dswing.aatext=true
```

compilation du code

```
(kali㉿kali)-[~/Desktop/web]
$ java myname
Picked up _JAVA_OPTIONS: -Dawt.useSystemAAFontSettings=on -Dswing.aatext=true
Je m'appelle Mario
```

lancement du code

```
(kali㉿kali)-[~]
$ java --version
Picked up _JAVA_OPTIONS: -Dawt.useSystemAAFontSettings=on -Dswing.aatext=true
openjdk 17.0.9 2023-10-17
OpenJDK Runtime Environment (build 17.0.9+9-Debian-2)
OpenJDK 64-Bit Server VM (build 17.0.9+9-Debian-2, mixed mode, sharing)
```

Version Java

- b. Creation image docker – faire un Dockerfile

```
File Actions Edit View Help
(kali㉿kali)-[~/Desktop/web]
$ cat Dockerfile
FROM openjdk:17-jdk
COPY . /app
WORKDIR /app
RUN javac myname.java
CMD ["java", "myname"]
```

Dockerfile

Mario El Dahdah  
22311542  
Master Cyber

```
(kali@kali)-[~/Desktop/web]
$ sudo docker build -t prenom .
Sending build context to Docker daemon 4.096kB
Step 1/5 : FROM openjdk:17-jdk
17-jdk: Pulling from library/openjdk
38a980f2cc8a: Pull complete
de849f1cfbe6: Pull complete
a7203ca35e75: Pull complete
Digest: sha256:528707081fdb9562eb819128a9f85ae7fe000e2fbaeaf9f87662e7b3f38cb7d8
Status: Downloaded newer image for openjdk:17-jdk
   -> 5e28ba2b4cdb
Step 2/5 : COPY . /app
   -> a482ac28da40
Step 3/5 : WORKDIR /app
   -> Running in f5928ddcd9bc
Removing intermediate container f5928ddcd9bc
   -> f8fd9544f062
Step 4/5 : RUN javac myname.java
   -> Running in b710dbf1547a
Removing intermediate container b710dbf1547a
   -> 3cb0c39d9e2a
Step 5/5 : CMD ["java", "myname"]
   -> Running in 6bd4405f9a0f
Removing intermediate container 6bd4405f9a0f
   -> 78e3f2678ed5
Successfully built 78e3f2678ed5
Successfully tagged prenom:latest
```

### Construction du Dockerfile

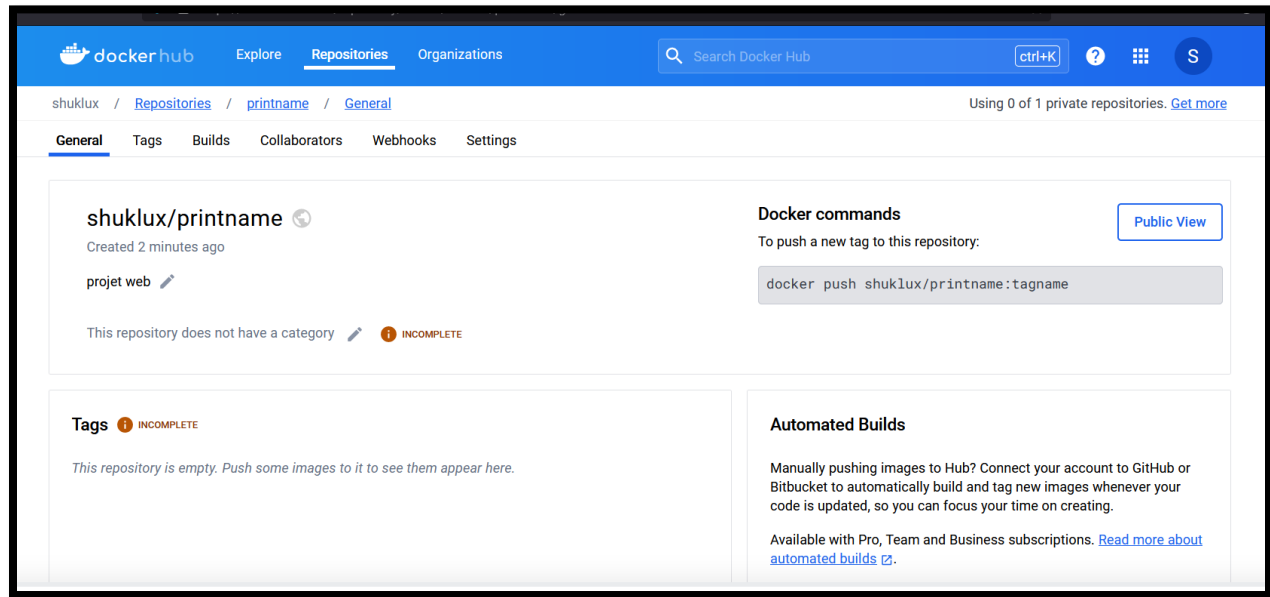
c. Publier l'image docker :

```
(kali@kali)-[~/Desktop/web]
$ 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: shuklux
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
```

### Docker login

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### Creation repository sur dockerhub

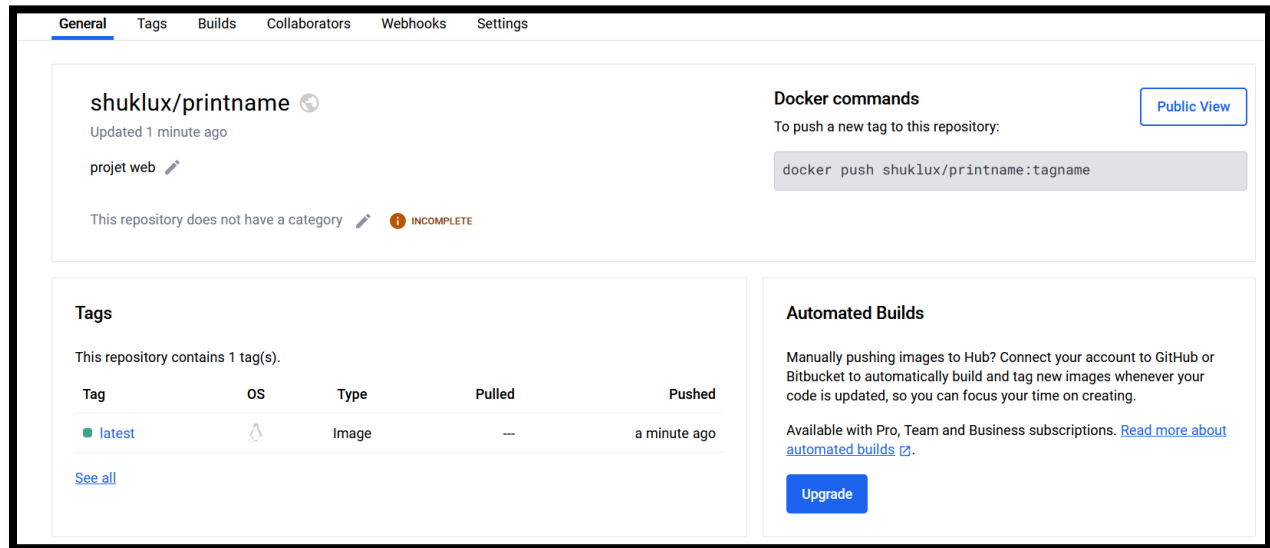
```
(kali㉿kali)-[~/Desktop/web]
$ sudo docker tag prenom shuklux/printname
(kali㉿kali)-[~/Desktop/web]
```

### Tag de l'image docker

```
(kali㉿kali)-[~/Desktop/web]
$ sudo docker push shuklux/printname
Using default tag: latest
The push refers to repository [docker.io/shuklux/printname]
bdd01f2987e7: Pushed
6690bba87f6e: Pushed
dc9fa3d8b576: Pushed
27ee19dc88f2: Pushed
c8dd97366670: Pushed
latest: digest: sha256:f008c9eb9d77018e28c5c131d3fa057d725dfa5f52992981b8f7f0d5daf65596 size: 1368
(kali㉿kali)-[~/Desktop/web]
```

### Push de l'image

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### Nouveau tag sur dockerhub

- d. Créer un déploiement Kubernetes

```
FILE ACTIONS EDIT VIEW HELP
(kali㉿kali)-[~/Desktop/web]
$ cat deployment.yaml
apiVersion: apps/v1
kind: Deployment
metadata:
  name: launchv1
spec:
  replicas: 1
  selector:
    matchLabels:
      app: appli
  template:
    metadata:
      labels:
        app: appli
    spec:
      containers:
      - name: appli
        image: prenom:tag
        ports:
        - containerPort: 8080
Devices
(kali㉿kali)-[~/Desktop/web]
$
```

deployment.yaml