```
01) What is Jenkins used for?
>>> Jenkins is used to build and test your product continuously, so developers can continuously integrate changes into the build

02) What is Jenkins agent? What is Jenkins executor (Build Executor)?
>>> An agent is typically a machine, or container, which connects to a Jenkins controller and executes tasks when directed by the controller.
>>> An executor is a process that runs a build/job.
    You are able to run one job at a time if you have one executor. If you have two executors, you are able to run two jobs in parallel and so forth.

03) Explain Jenkins master-slave architecture?
>>> Jenkins performs distributed build using a Master-Slave Architecture. Now let's take a look at the diagram, which represents the following three components:
  - Master
    The main Jenkins Server is the Master Server of Jenkins. This acts as a control server that arranges the defined workflow of the pipeline. The jobs of this Master are as follows:
        - scheduling jobs
        - sending builds to slaves to execute the job
        - keeping track of the slaves states (online/offline)
        - can also directly execute build jobs
  - Slave
    The slave is a part of the Jenkins environment that runs on a remote environment. The characteristics of slaves include:
        - it listens to the Master instance
        - it's job is to do as they are told to, that includes executing build jobs conveyed by the Master
```
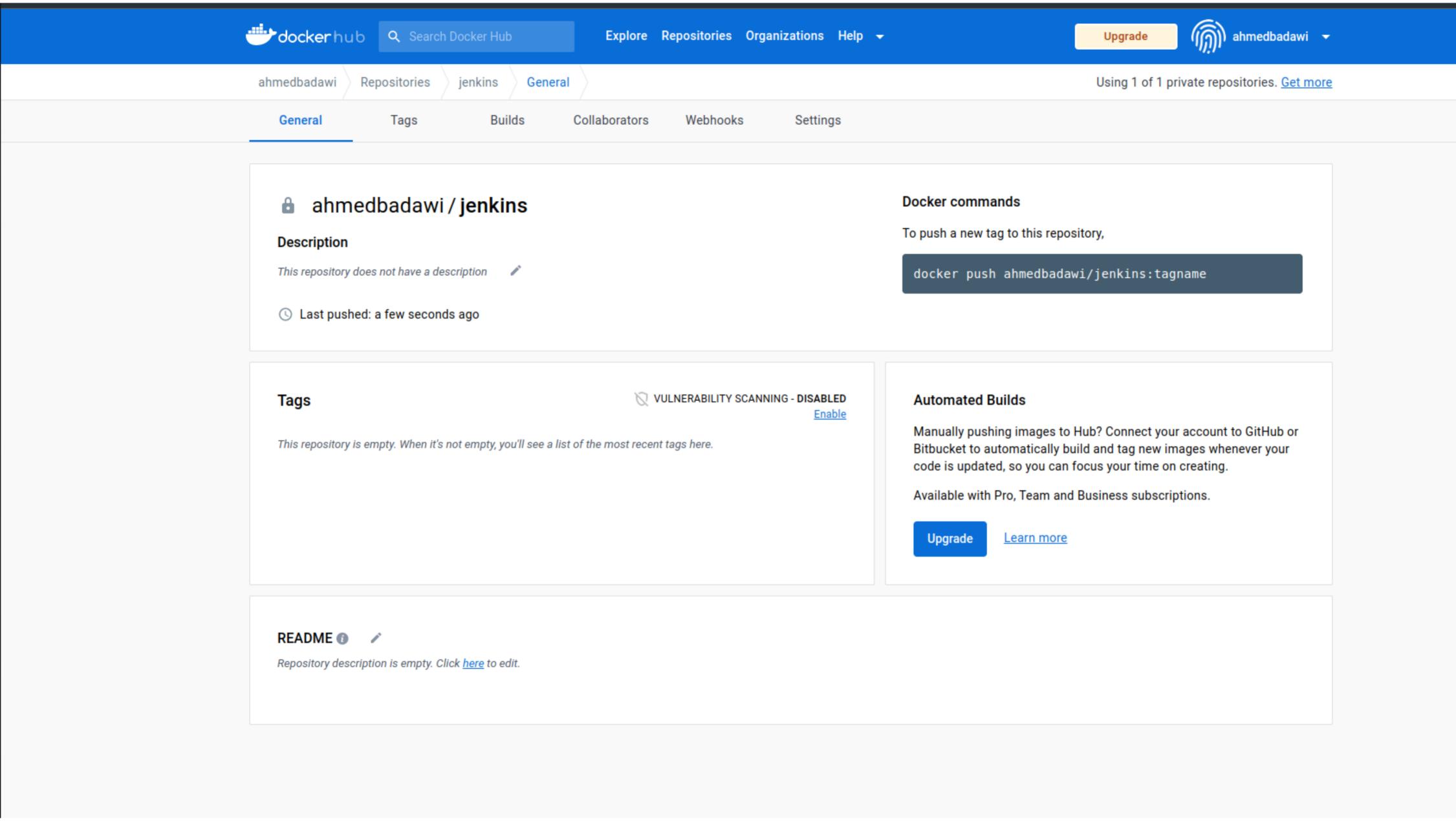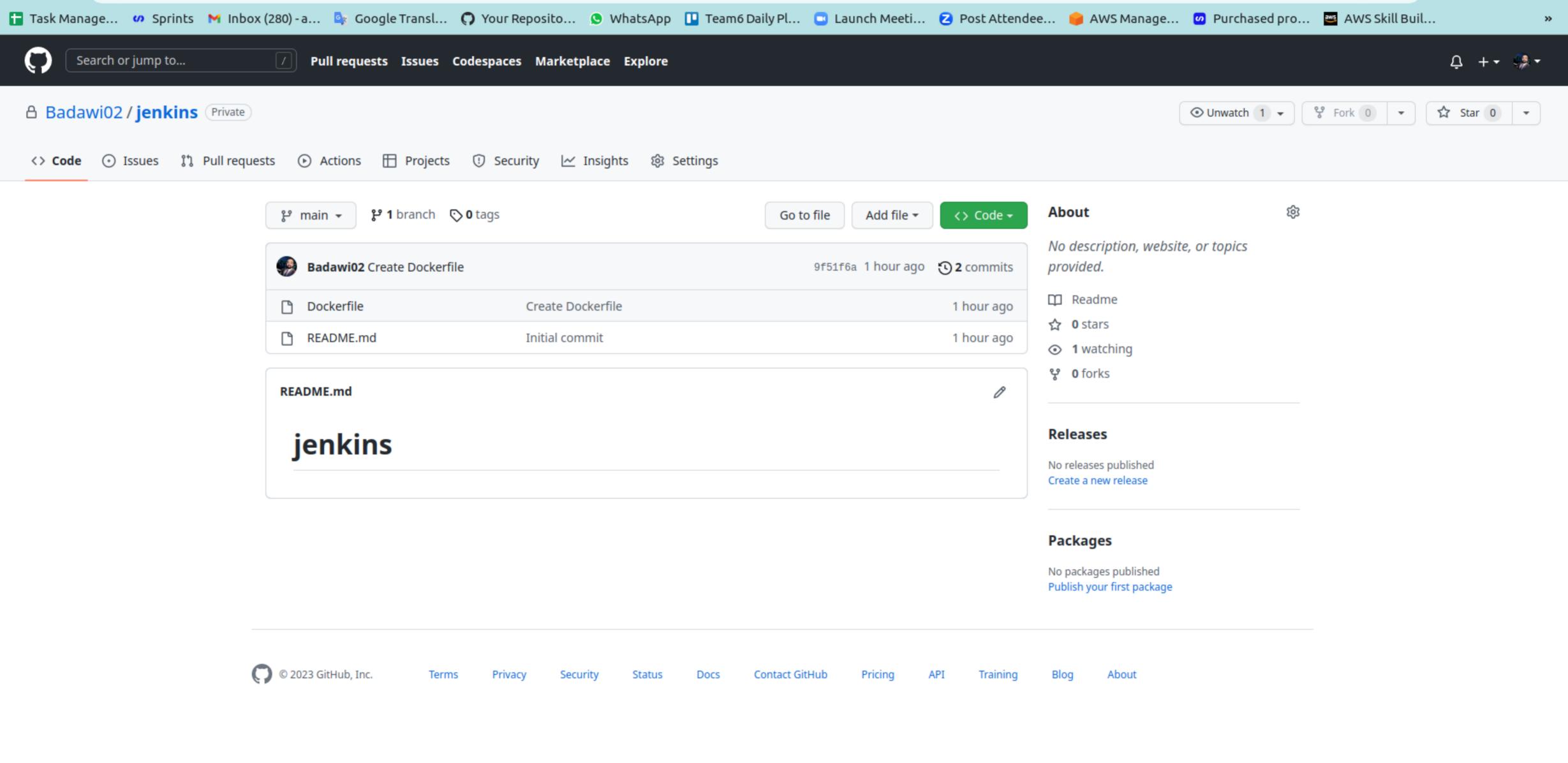
ahmedbadawi › Repositories › jenkins › General

Using 1 of 1 private repositories. Get more

**General**    Tags    Builds    Collaborators    Webhooks    Settings

🔒 **ahmedbadawi / jenkins**

### Description

*This repository does not have a description*  ✎

🕓 Last pushed: a few seconds ago

### Docker commands

To push a new tag to this repository,

```
docker push ahmedbadawi/jenkins:tagname
```

### Tags

🛡 VULNERABILITY SCANNING - **DISABLED**
Enable

*This repository is empty. When it's not empty, you'll see a list of the most recent tags here.*

### Automated Builds

Manually pushing images to Hub? Connect your account to GitHub or Bitbucket to automatically build and tag new images whenever your code is updated, so you can focus your time on creating.

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### README ⓘ ✎

*Repository description is empty. Click here to edit.*

Search or jump to...

Pull requests    Issues    Codespaces    Marketplace    Explore

Badawi02 / jenkins    Private

Unwatch 1    Fork 0    Star 0

<> Code    Issues    Pull requests    Actions    Projects    Security    Insights    Settings

main    1 branch    0 tags

Go to file    Add file    <> Code

Badawi02 Create Dockerfile    9f51f6a 1 hour ago    2 commits

| Dockerfile | Create Dockerfile | 1 hour ago |
| README.md | Initial commit | 1 hour ago |

README.md

# jenkins

## About

No description, website, or topics provided.

Readme
0 stars
1 watching
0 forks

## Releases

No releases published
Create a new release

## Packages

No packages published
Publish your first package

```
root@ahmed-Lenovo-Y520-15IKBN:/home/ahmed# sudo docker run -p 8080:8080 -p 50000:50000 -d \
 -v jenkins_home:/var/jenkins_home \
 -v /var/run/docker.sock:/var/run/docker.sock \
 -v $(which docker):/usr/bin/docker jenkins/jenkins:lts
7c1b4fea809f20a9269c833a47abe53469bbd02a3b6e893729095f5f2b32a6b0
root@ahmed-Lenovo-Y520-15IKBN:/home/ahmed# 
```

# New credentials

Kind

Username with password ▾

Scope ?

Global (Jenkins, nodes, items, all child items, etc) ▾

Username ?

Badawi02

☐ Treat username as secret ?

Password ?

●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●

ID ?

git_token

Description ?

Create

## New credentials

Kind

Username with password

Scope ?

Global (Jenkins, nodes, items, all child items, etc)

Username ?

ahmedbadawi

☐ Treat username as secret ?

Password ?

•••••••••••••••••••••••••••••

ID ?

dockerHub_token

Description ?

Create

Search (CTRL+K)

ahmed badawi    log out

# Global credentials (unrestricted)

+ Add Credentials

Credentials that should be available irrespective of domain specification to requirements matching.

| ID | Name | Kind | Description |
|---|---|---|---|
| git_token | Badawi02/****** | Username with password | |
| dockerHub_token | ahmedbadawi/****** | Username with password | |

Icon:    S    M    L

# Configure

- None
- Git ?

- General
- Source Code Management
- Build Triggers
- Build Environment
- Build Steps
- Post-build Actions

## Repositories ?

### Repository URL ?

https://github.com/Badawi02/jenkins.git

### Credentials ?

Badawi02/******

+ Add

Advanced...

Add Repository

## Branches to build ?

### Branch Specifier (blank for 'any') ?

*/main

Add Branch

## Repository browser ?

(Auto)

## Additional Behaviours

Add ▾

Save    Apply

Build Environment

# Configure

- General
- Source Code Management
- Build Triggers
- **Build Environment**
- Build Steps
- Post-build Actions

☐ Delete workspace before build starts

☑ Use secret text(s) or file(s) ?

## Bindings

☰ Username and password (separated) ?  ✕

Username Variable ?

```
USER
```

Password Variable ?

```
PASSWORD
```

Credentials ?

🔘 Specific credentials ⚪ Parameter expression

```
ahmedbadawi/******                                      ⌄
```

➕ Add

Add ⌄

☐ Add timestamps to the Console Output

☐ Inspect build log for published build scans

☐ Terminate a build if it's stuck

☐ With Ant ?

## Build Steps

Add build step ⌄

**Save**   Apply

# Configure

- General
- Source Code Management
- Build Triggers
- Build Environment
- **Build Steps**
- Post-build Actions

☐ Add timestamps to the Console Output

☐ Inspect build log for published build scans

☐ Terminate a build if it's stuck

☐ With Ant  ?

## Build Steps

≡  **Execute shell**  ?                                                    ✕

Command

See **the list of available environment variables**

```
docker build -t ahmedbadawi/jenkins:v1
docker login -u $USER -p $PASSWORD
docker push ahmedbadawi/jenkins:v1
```

[ Advanced... ]

[ Add build step ▾ ]

## Post-build Actions

[ Add post-build action ▾ ]

[ Save ]  [ Apply ]

```
Sending build context to Docker daemon  33.12kB

Step 1/2 : FROM ubuntu:latest
latest: Pulling from library/ubuntu
677076032cca: Pulling fs layer
677076032cca: Verifying Checksum
677076032cca: Download complete
677076032cca: Pull complete
Digest: sha256:f05532b6a1dec5f7a77a8d684af87bc9cd1f2b32eab301c109f8ad151b5565d1
Status: Downloaded newer image for ubuntu:latest
 ---> 58db3edaf2be
Step 2/2 : RUN echo "Hello from jenkins"
 ---> Running in 9c1998dbb3c0
Hello from jenkins
Removing intermediate container 9c1998dbb3c0
 ---> f2260e1e0c3e
Successfully built f2260e1e0c3e
Successfully tagged ahmedbadawi/jenkins:v3
+ docker login -u ahmedbadawi -p ****
WARNING! Using --password via the CLI is insecure. Use --password-stdin.
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 push ahmedbadawi/jenkins:v3
The push refers to repository [docker.io/ahmedbadawi/jenkins]
c5ff2d88f679: Preparing
c5ff2d88f679: Mounted from library/ubuntu
v3: digest: sha256:f1f47974d56b1cbf0546d031b2f0bffb4acab88a8f03bed3d9c870f5f268e73a size: 529
Finished: SUCCESS
```

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🔒 ahmedbadawi / **jenkins**

**Description**

*This repository does not have a description* ✏️

🕐 Last pushed: a few seconds ago

**Docker commands**

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```
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```

**Tags**

🛡️ VULNERABILITY SCANNING - DISABLED
Enable

This repository contains 1 tag(s).

| Tag | OS | Type | Pulled | Pushed |
|-----|-----|------|--------|--------|
| 🟢 v3 | 🐧 | Image | --- | a few seconds ago |

See all

Go to Advanced Image Management

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**README** ℹ️ ✏️

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