01) What is Jenkins used for?

Jenkins is a CI/CD tool with it we can create pipelines to make sure that the software project is ready for deployments at any time during development by automatically build, test, stage and deploy it and by automating the process it reduces time to market

02) What is Jenkins agent? What is Jenkins executor (Build Executor)?

Agent: is a machine or a container that executes tasks directed by controller

Executor: governs resources allocation in Jenkins so if the server has three executors it can process three tasks concurrently

03) Explain Jenkins master-slave architecture?

Master: schedule jobs, assign and monitor slaves and send jobs to slaves to execute the tasks

Slave: hears requests from master and only executes jobs assigned to them

04) Install Jenkins with docker image.

```
ubuntu $ 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
Unable to find image 'jenkins/jenkins:lts' locally
lts: Pulling from jenkins/jenkins
699c8a97647f: Pull complete
656837bc63c3: Pull complete
81ba85001557: Pull complete
f565cdb160fe: Pull complete
7f0db80857b0: Pull complete
b51e09c8a0bd: Pull complete
a02b1ab95401: Pull complete
b113c3f8acf6: Pull complete
90c616f07a2d: Pull complete
22b926230283: Pull complete
32fdd8eaf030: Pull complete
e04af8aa1a05: Pull complete
3938fe646b55: Pull complete
Digest: sha256:8656eb80548f7d9c7be5d1f4c367ef432f2dd62f81efa86795c9155258010d99
Status: Downloaded newer image for jenkins/jenkins:lts
8232fca0db2613881d91fa670c42d516846255f5265882205b763a7745a9cb3f
```

05) Create free style project and link it to private Git repo containing any Docker file then build an image from this Docker file and push it to private docker repo

Maven Version

maven

Goals

package

Advanced...

Ahmed-Shoushaa / **prv-jenkins-start** Private

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⑂ main ▾   ⑂ 1 branch   ◌ 0 tags

Ahmed-Shoushaa Delete dockerfile

📁 jenkins installation   Add files via upload
📁 src   Add files via upload
📁 target   Add files via upload
📄 CICD with jenkins (1).pptx   Add files via upload
📄 Dockerfile   Add files via upload

☰ **Execute shell** ?

Command

See the list of available environment variables

```
docker build -t shoushaa/jenkins-first-test0:v1 .
docker login -u shoushaa -p $pass
docker push shoushaa/jenkins-first-test0:v1
```

Tags   ⊘ VULN

This repository contains 1 tag(s).

Tag	OS	Type	Pulled
● v1	🐧	Image	---

See all   Go to /

```
53a0b163e995: Mounted from library/openjdk
6b5aaff44254: Mounted from library/openjdk
bd4355f27795: Pushed
293d5db30c9f: Mounted from library/openjdk
03127cdb479b: Mounted from library/openjdk
9c742cd6c7a5: Mounted from library/openjdk
v1: digest: sha256:0df56c1addacf38eede0fc020b24f5
Finished: SUCCESS
```