

01) What is Jenkins used for?

Jenkins is an open source continuous integration/continuous delivery and deployment (CI/CD) automation software DevOps tool written in the Java programming language. It is used to implement CI/CD workflows, called pipelines.

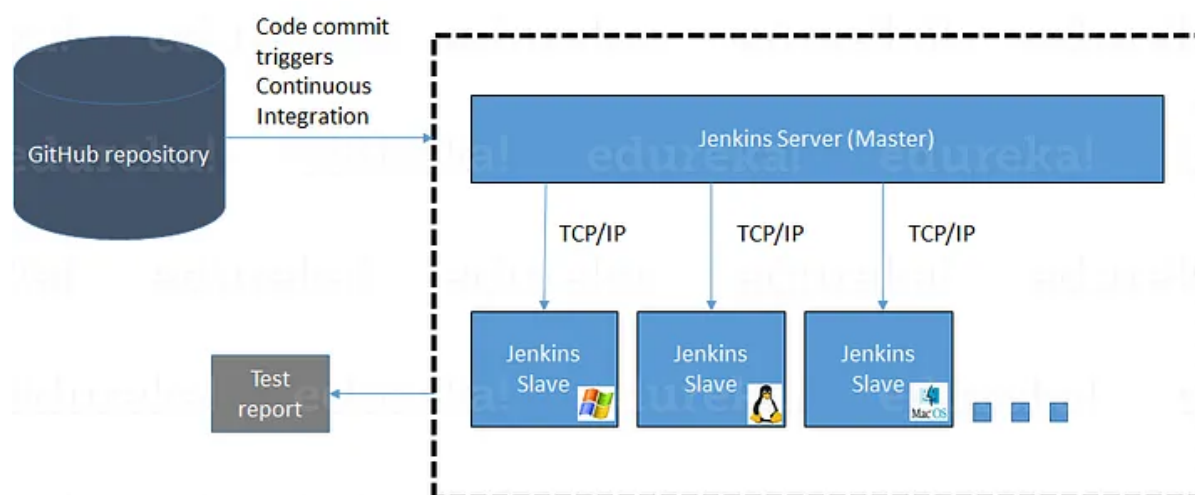
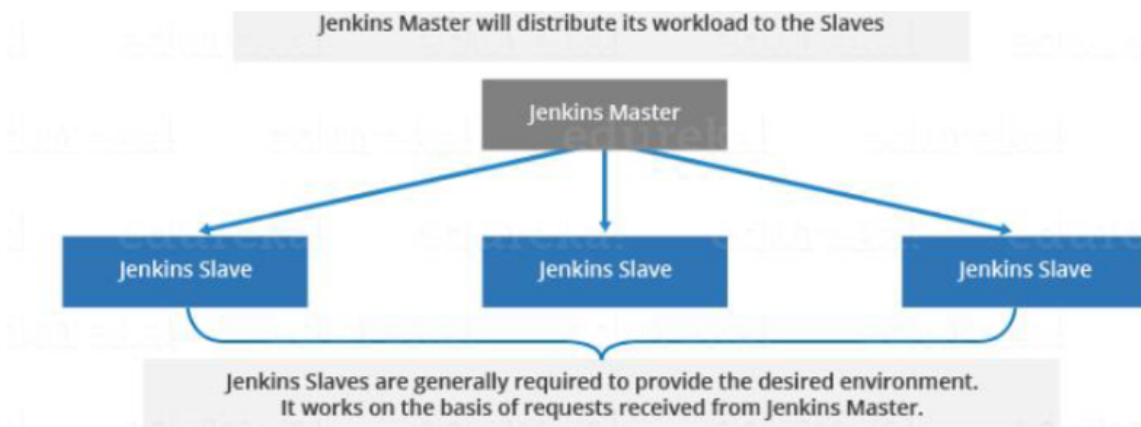
02) What is Jenkins agent?

An agent is typically a machine, or container, which connects to a Jenkins controller and executes tasks when directed by the controller.

What is Jenkins executor (Build Executor)?

A Jenkins executor is one of the basic building blocks which allow a build to run on a node/agent (e.g. build server).

03) Explain Jenkins master-slave architecture?



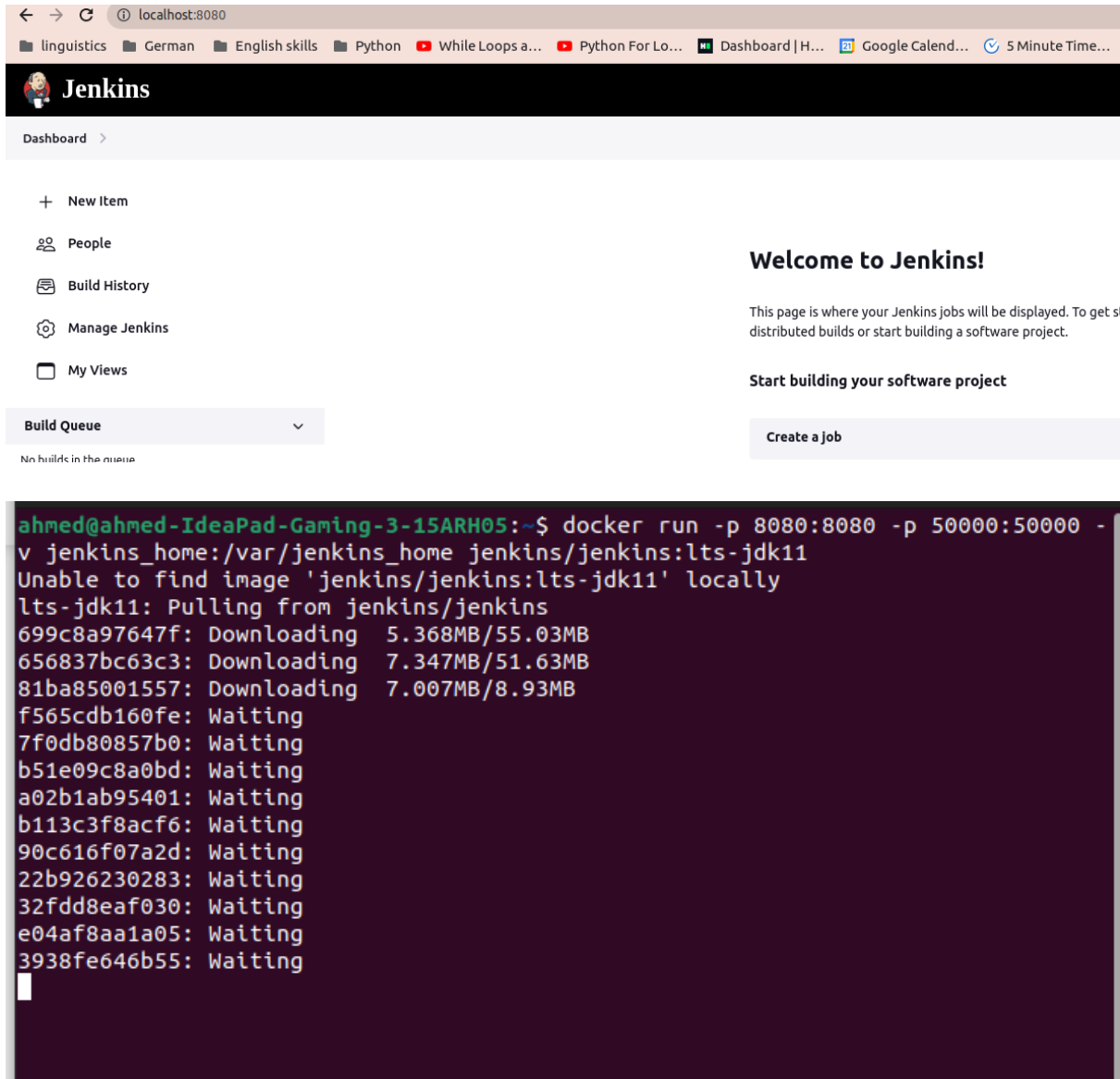
The above image represents the following functions:

Jenkins checks the Git repository at periodic intervals for any changes made in the source code.

Each build requires a different testing environment which is not possible for a single Jenkins server. In order to perform testing in different environments, Jenkins uses various Slaves as shown in the diagram.

Jenkins Master requests these Slaves to perform testing and to generate test reports.

04) Install Jenkins with docker image.



The image shows the Jenkins dashboard in a web browser at localhost:8080. The dashboard has a sidebar with links: New Item, People, Build History, Manage Jenkins, and My Views. The main area displays 'Welcome to Jenkins!' and 'Start building your software project' with a 'Create a job' button. Below the dashboard, a terminal window shows the command to run Jenkins in a Docker container. The terminal output indicates that the image 'jenkins/jenkins:lts-jdk11' was not found locally and is being pulled from the Jenkins registry. The download progress for several layers is shown, followed by a list of layers that are waiting to be pulled.

ahmed@ahmed-IdeaPad-Gaming-3-15ARH05:~\$ docker run -p 8080:8080 -p 50000:50000 -v jenkins_home:/var/jenkins_home jenkins/jenkins:lts-jdk11
Unable to find image 'jenkins/jenkins:lts-jdk11' locally
lts-jdk11: Pulling from jenkins/jenkins
699c8a97647f: Downloading 5.368MB/55.03MB
656837bc63c3: Downloading 7.347MB/51.63MB
81ba85001557: Downloading 7.007MB/8.93MB
f565cdb160fe: Waiting
7f0db80857b0: Waiting
b51e09c8a0bd: Waiting
a02b1ab95401: Waiting
b113c3f8acf6: Waiting
90c616f07a2d: Waiting
22b926230283: Waiting
32fdd8eaf030: Waiting
e04af8aa1a05: Waiting
3938fe646b55: Waiting

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



No changes.



Started by user [Ahmed Fawzy](#)



Revision: 01f111cfcc83809123c306946e32cb506d875eaa

Repository: <https://github.com/Ahmed-Fawzy-Deovps/new.git>

- refs/remotes/origin/main



Ahmed-Fawzy-Deovps [Add files via upload](#)



dockercompose.yml

Add files via upload

Add files via upload

Add a README with an overview of your project.

