

[0] What is docker-compose?

==> It is a tool for defining and running multi-container docker applications.

We can use Docker compose to run multiple containers and define their properties inside a YAML file.

These containers are known as services. It's helpful when your application has multiple stacks,
such as a web server and a database server.

[1] What is the difference between Dockerfile and docker-compose.yml ?

==> yml files are used for defining and running multi-container Docker applications, whereas Dockerfiles are simple text files that contain the commands to assemble an image that will be used to deploy containers.

[2] Explain each and every line present in your docker-compose.yml

==>

Version: '3' :

First, we are using a version tag to define the Compose file format, which is 3.

Services:

We follow our version tag by the services hash. Inside this, we have to define the services we want to use for our application. For our application, we have multiple services called **db1**, **db2**, **db3**.

db1:

image: mysql

ports:

- "4040:80"

stdin_open: true

tty: true

In above code,

db1 is the name of an image of mysql.

To make our setup process quick and easy, we are using the pre-built official image of mysql for the image tag.

Ports : The port tag is used to define both host and container ports. It maps the port 4040,4050,4060 on the host 81,82,83 respectively.

Stdin_open : It opens the standard input of the shell.

Tty : A tty is essentially a text output environment of a shell.

[3] Github repository link of your assignment repo.

https://github.com/sandipwani/Devops_Sql

[4] How clustering is important and how it solves our problems?

We can achieve the concept of multiple runtime nodes. It is often desired to use containers instead of virtual machines or hardware.

Using clustering we can reduce load of mysql server. In above code i create a 3 copies of mysql servers. If load increase at any particular node then load will be divided with nearest node. That is the main motto of clustering.