Docker-Project

I developed a project on Docker the most Powerful tool in present era.

Today, I will try to answer in detail the basic question which arises in one's mind after going through this Project file in this readme file.

What is Docker?

Docker is a set of platforms as a service (PaaS) products that uses OS-level virtualization to deliver software in packages called containers. Containers are isolated from one another and bundle their own software, libraries and configuration files; they can communicate with each other through well-defined channels. All containers are run by a single operating system kernel and therefore use fewer resources than virtual machines.

What are the Requirements to have a docker setup?

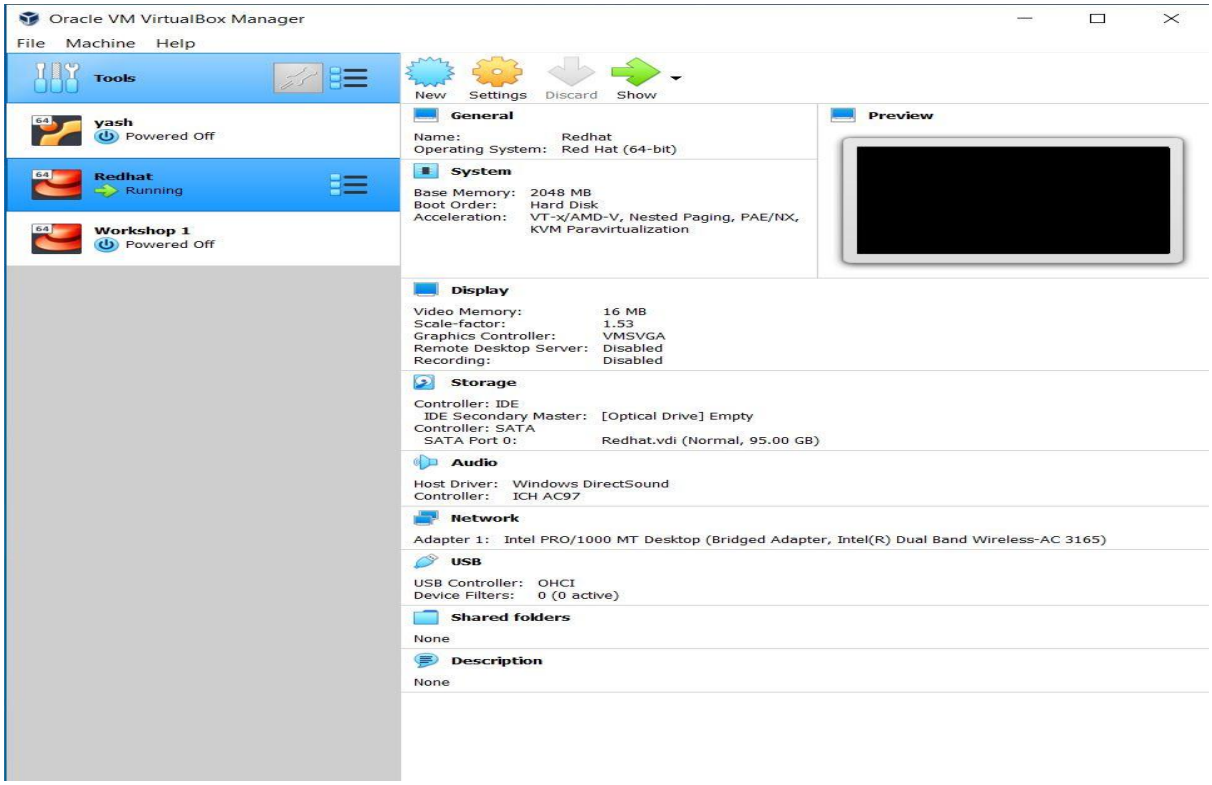
The basic requirement for the setup is Base OS. Generally, docker can be installed on any operating system but I have used Redhat 8 to configure it.

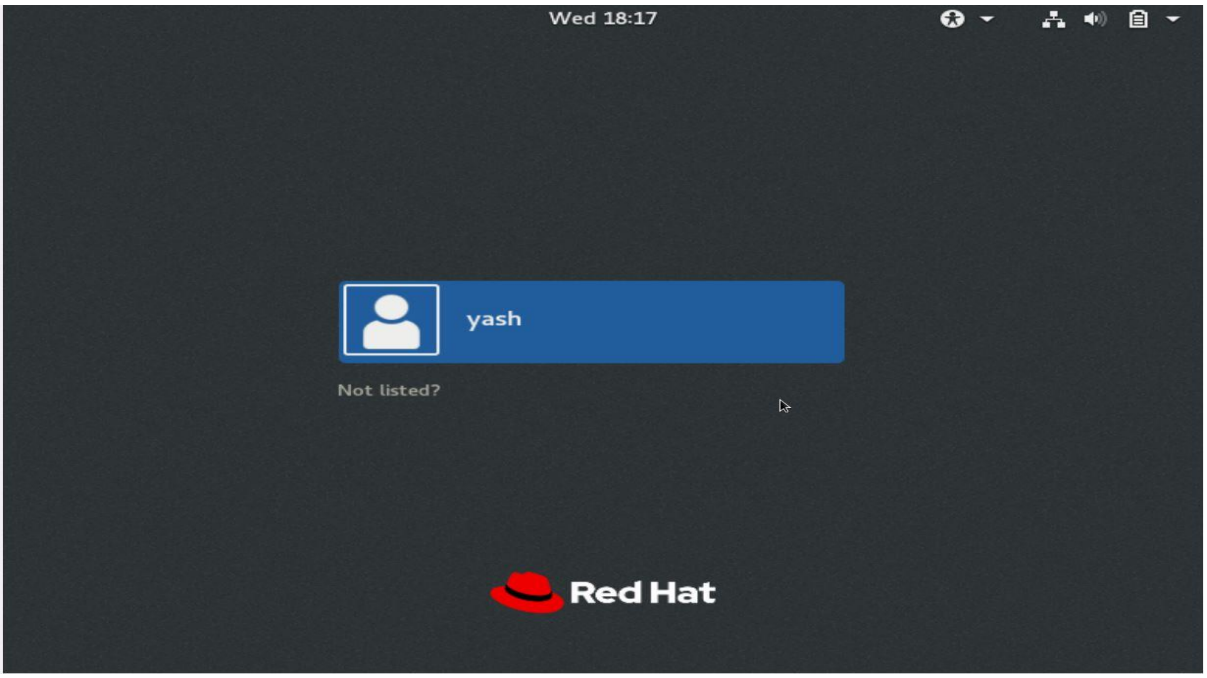
We can use any other Linux OS as well but Redhat is one of the most powerful operating system built with many features in it.

How to setup Docker on your Redhat system?

It is very simple and easy to configure Docker on your Base OS.

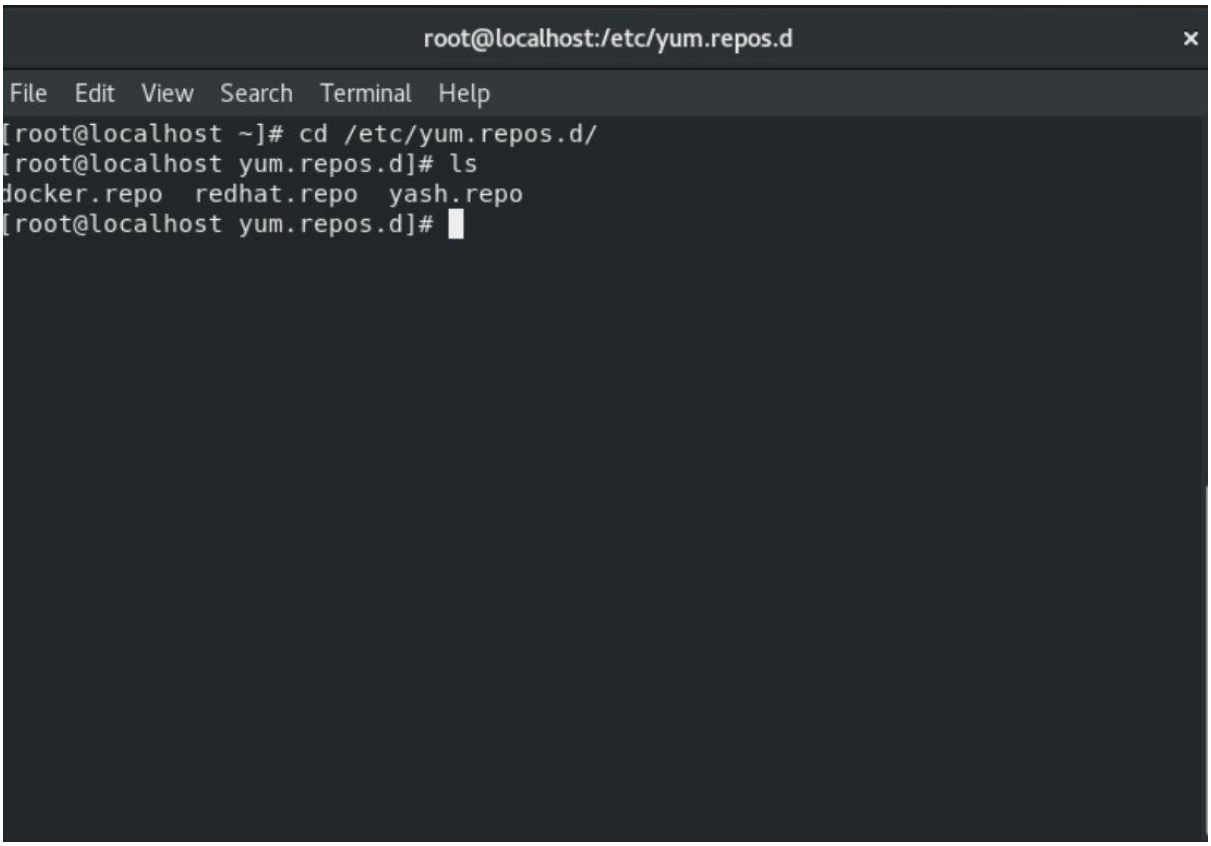
Installation of Redhat in virtual Box:

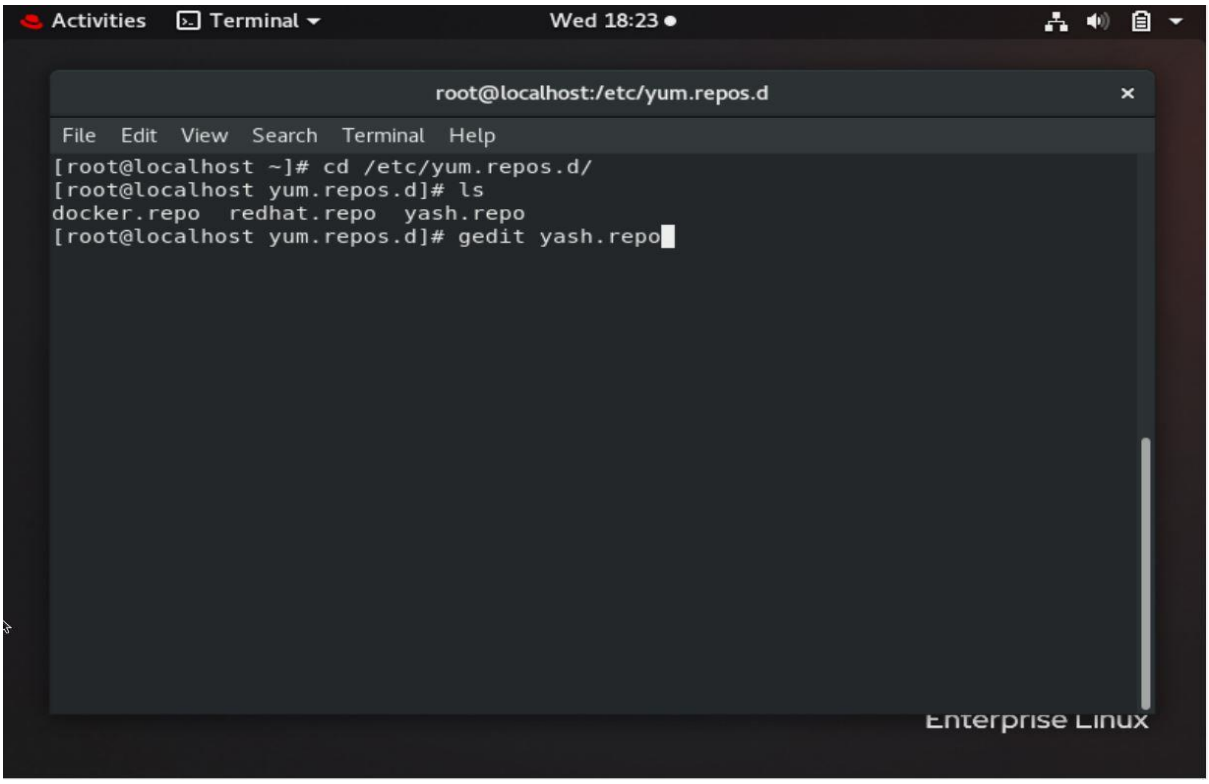




To setup Docker in your PC you need to follow these steps:

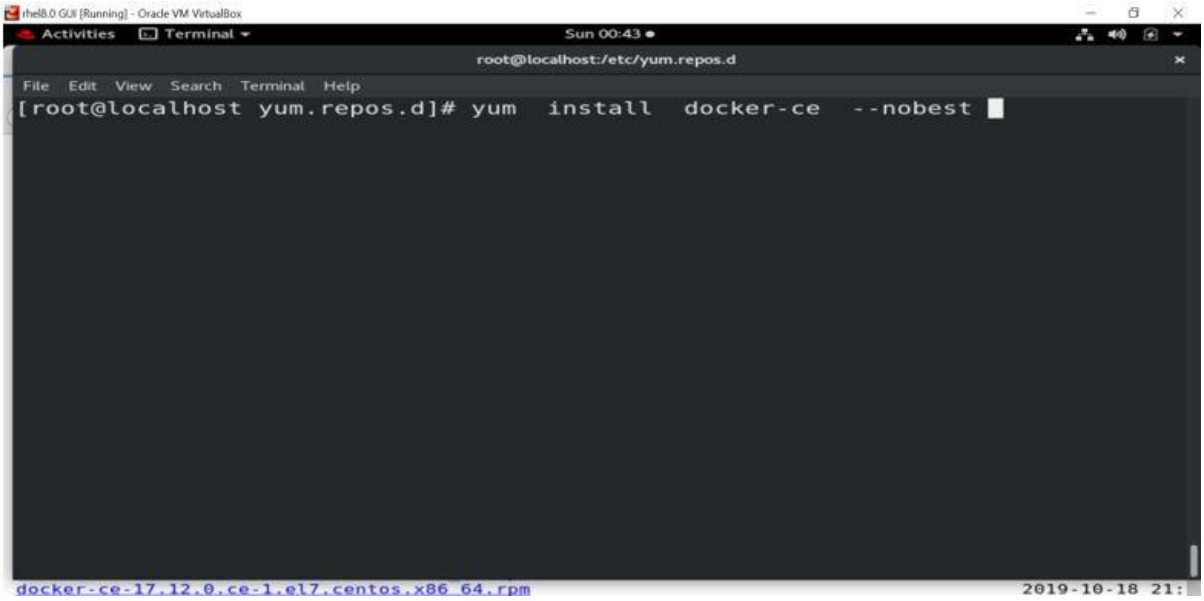
- Firstly, you need to configure Yum in your Redhat system by creating a DVD Repo in it.

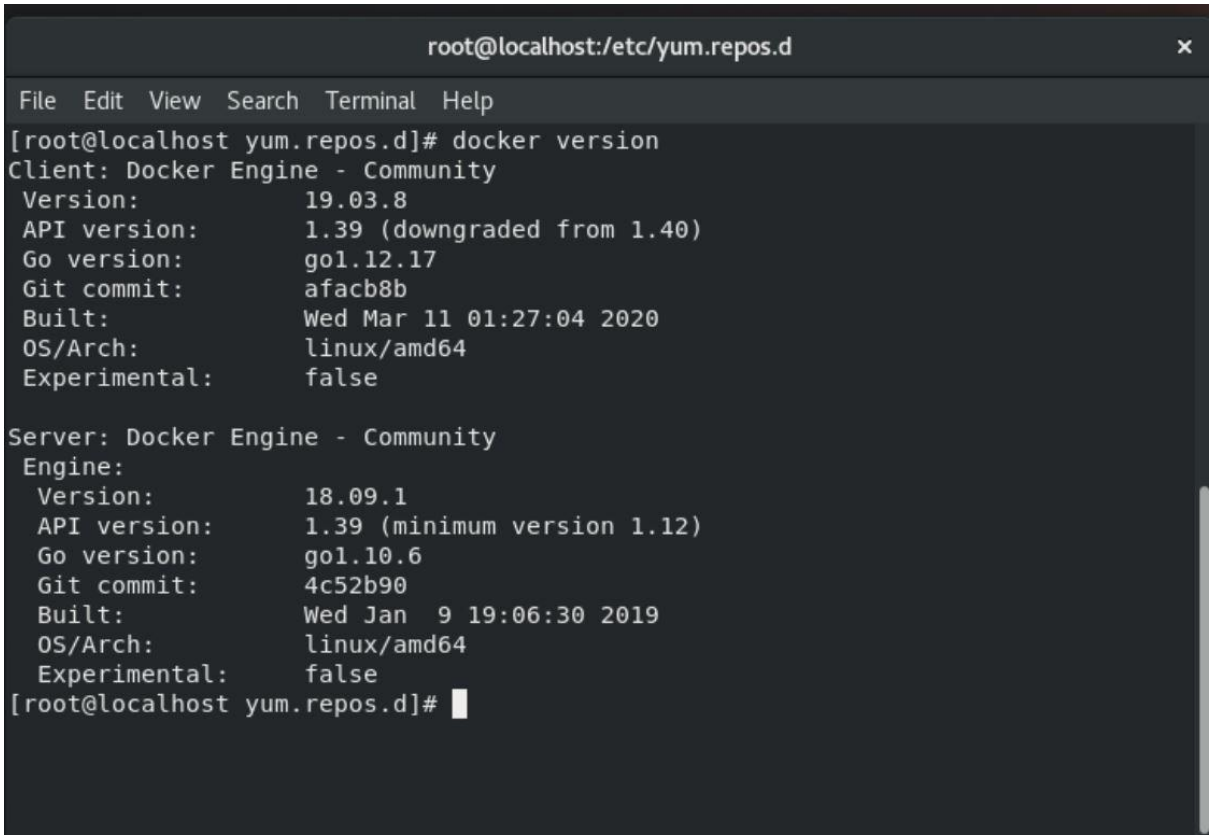




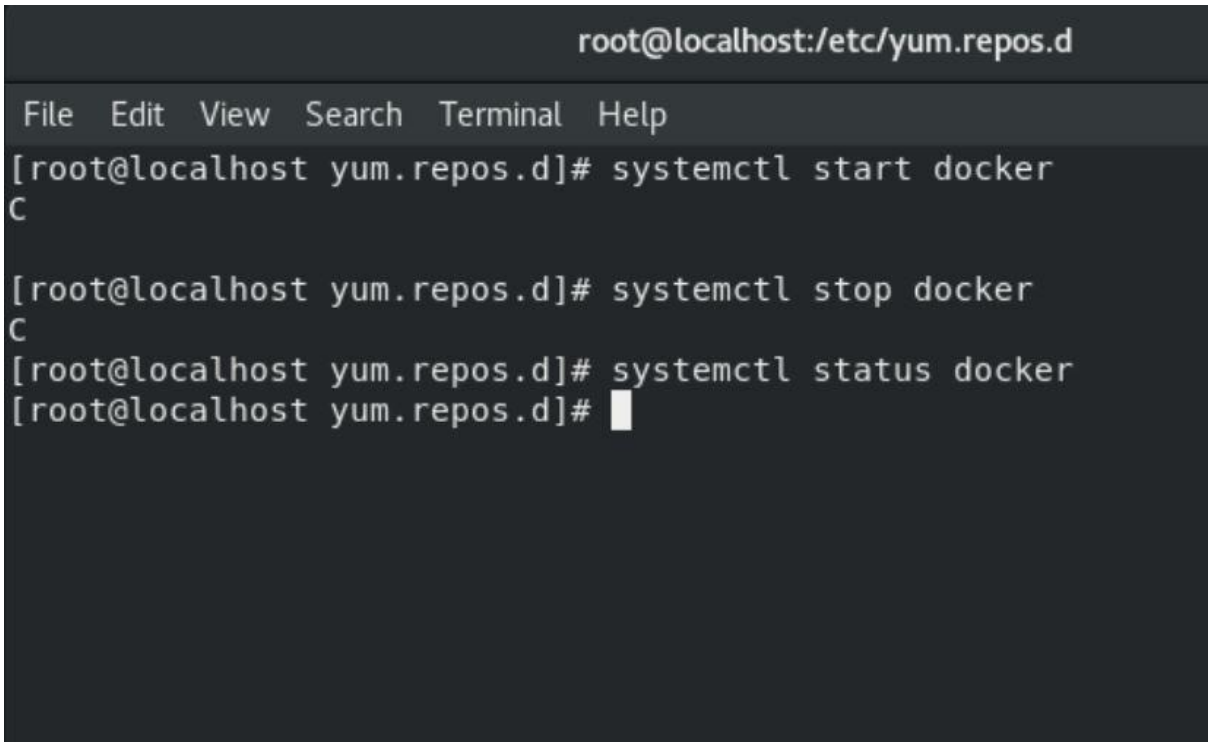
- You need to create Docker repo file inside yum to install docker.

Run the Following command in your terminal to install docker: -

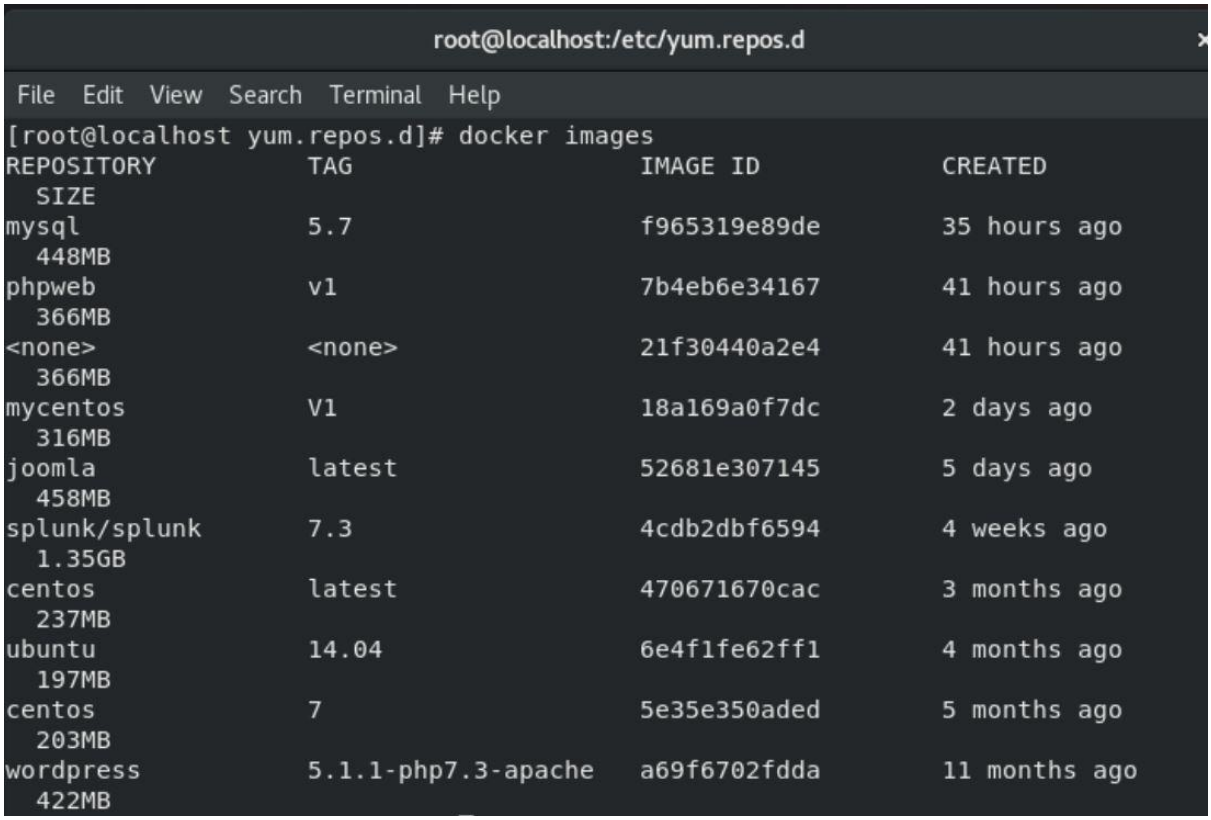




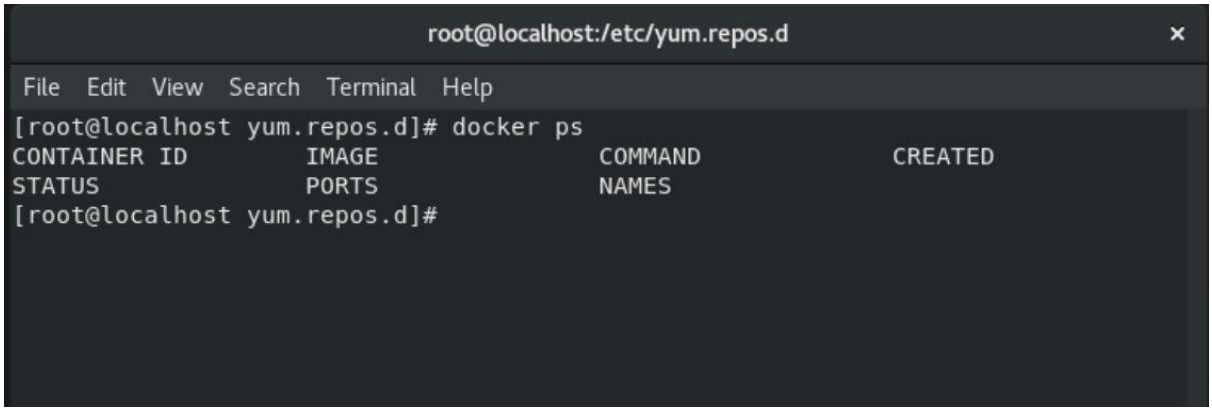
These are the various commands to start, stop or see the status of the docker.



- To see the docker images installed within docker: -

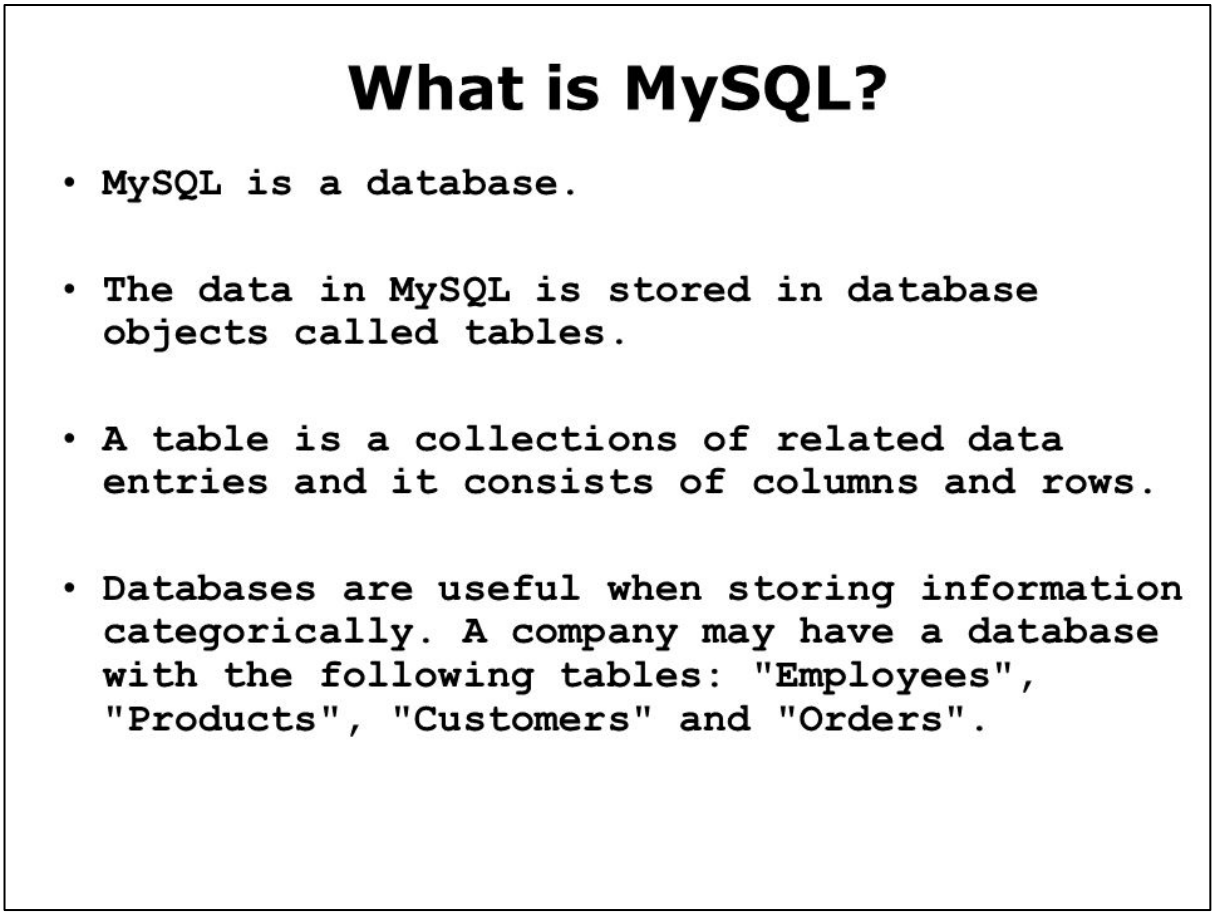


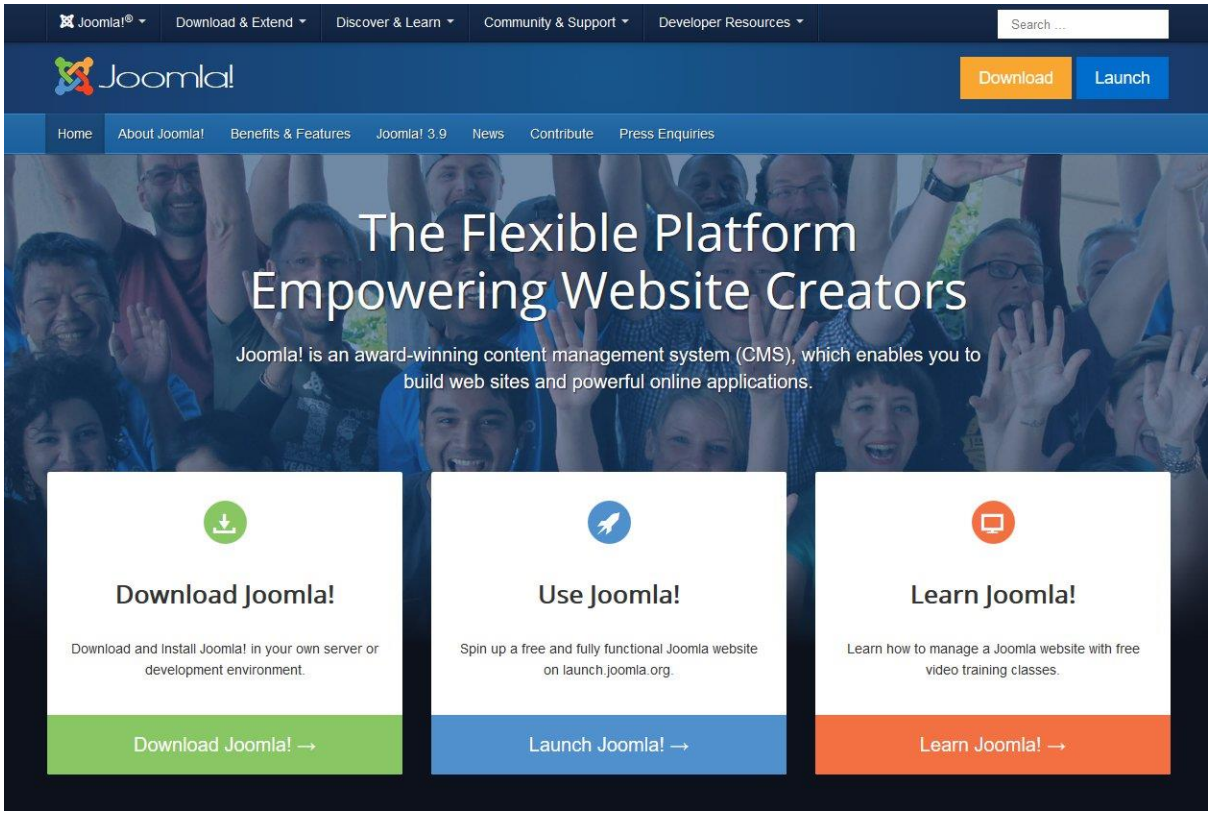
- To see the Container running inside the Docker: -



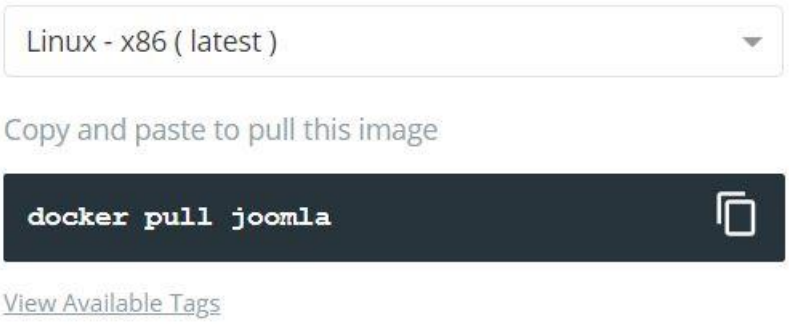
Project Structure: -

This Project is built on MYSQL image for database and Joomla image for Web Application.





- We can Pull images for both of them inside docker: -



- We need to configure Compose for docker: -

Overview of Docker Compose

Estimated reading time: 5 minutes

> **Looking for Compose file reference?** Find the latest version here.

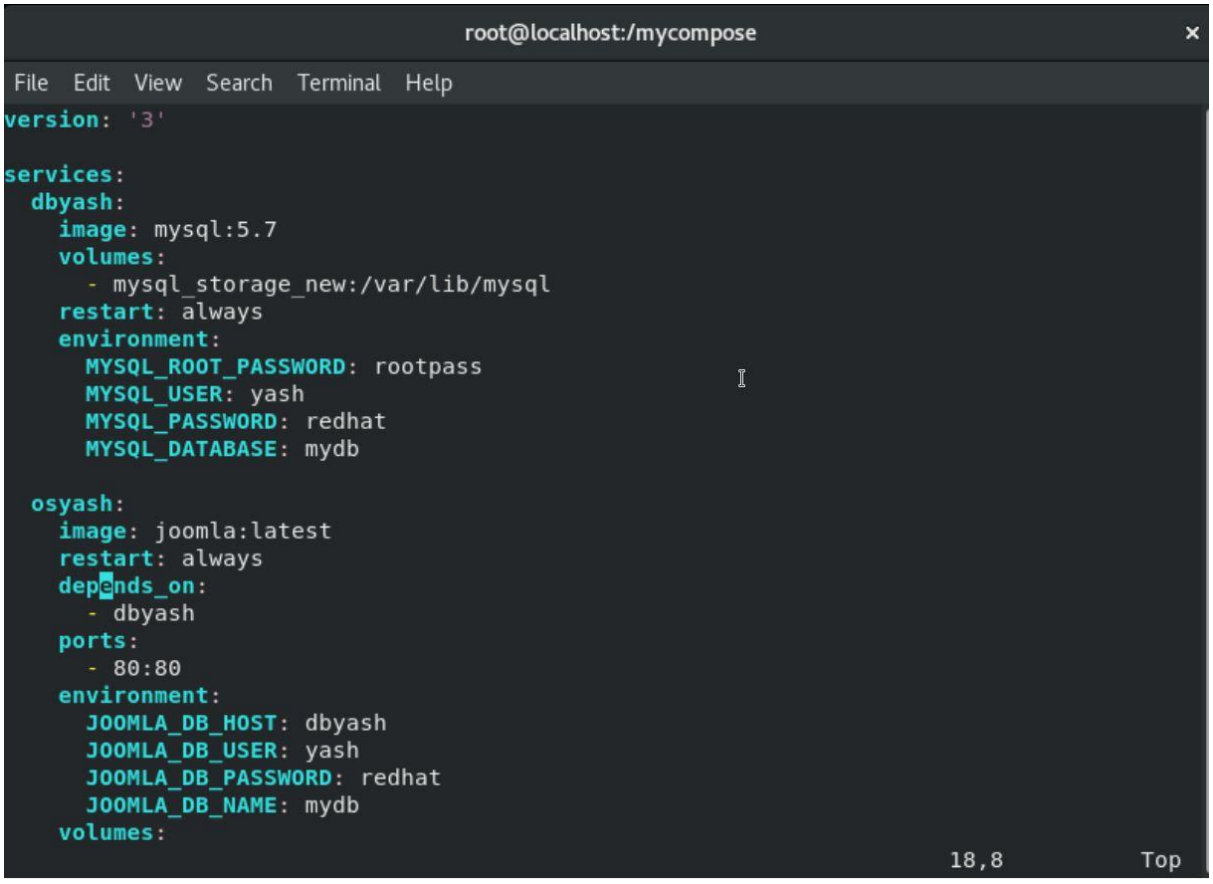
Compose is a tool for defining and running multi-container Docker applications. With Compose, you use a YAML file to configure your application's services. Then, with a single command, you create and start all the services from your configuration. To learn more about all the features of Compose, see the list of features.

Compose works in all environments: production, staging, development, testing, as well as CI workflows. You can learn more about each case in Common Use Cases.

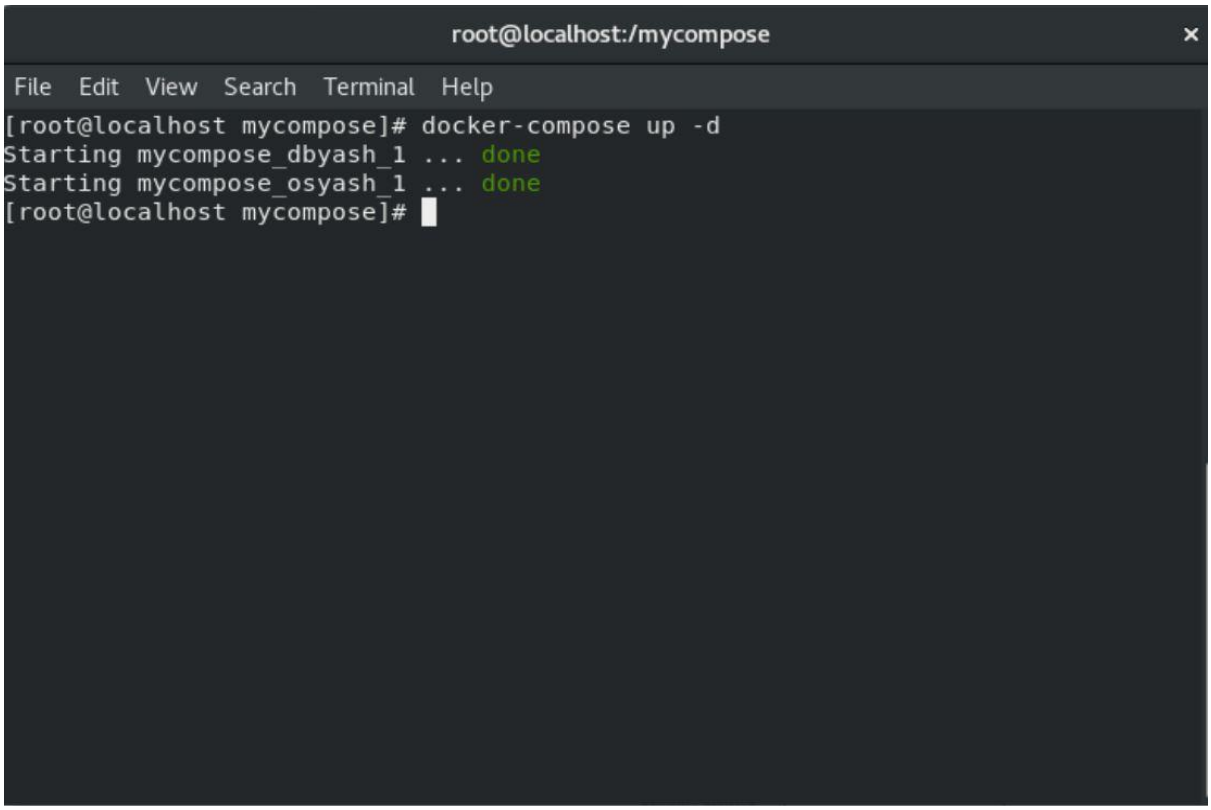
Using Compose is basically a three-step process:

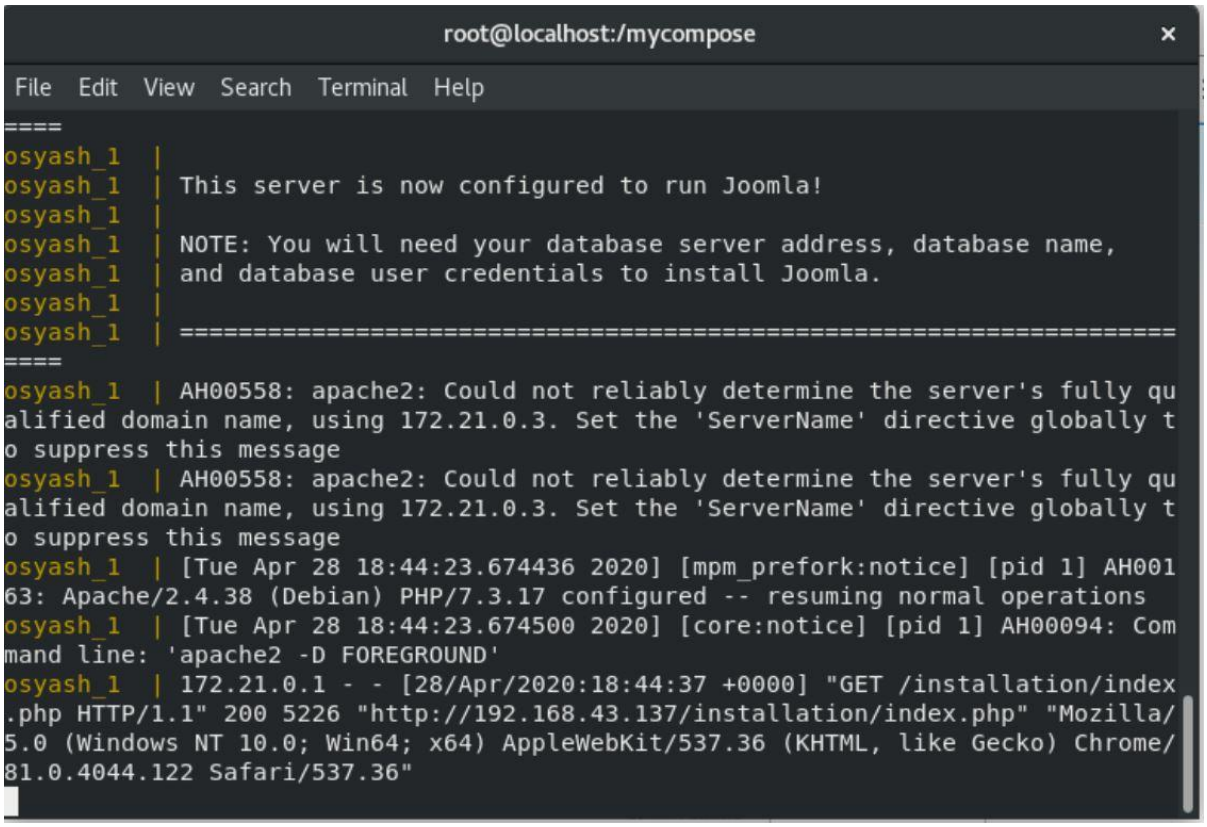
1. Define your app's environment with a `Dockerfile` so it can be reproduced anywhere.
2. Define the services that make up your app in `docker-compose.yml` so they can be run together in an isolated environment.
3. Run `docker-compose up` and Compose starts and runs your entire app.

- Just Create yml file using docker compose for creating two containers linked with each other using ports and have some volumes as well created on docker



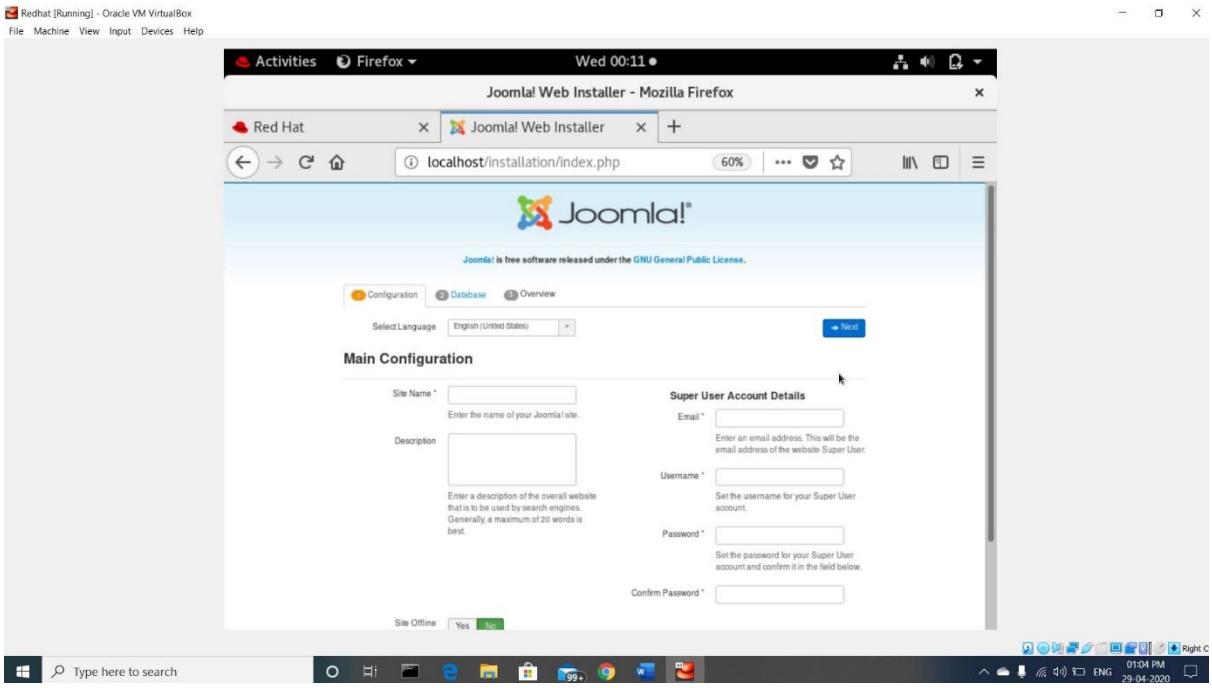
PROJECT OUTPUT: -

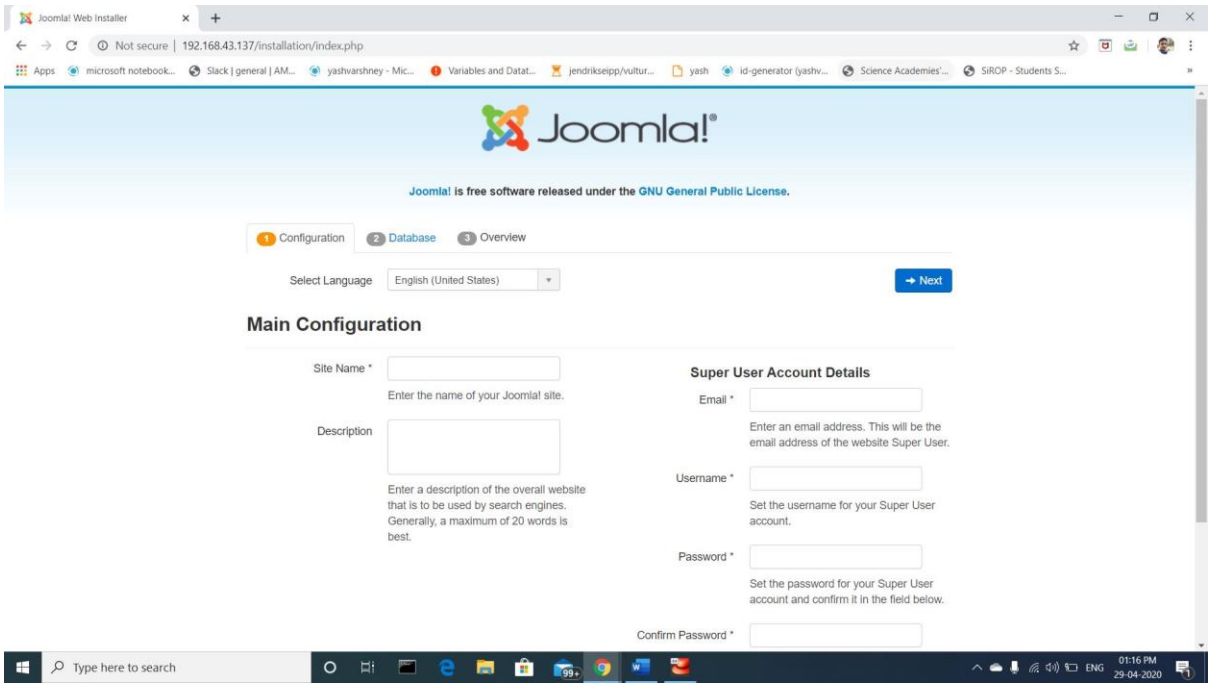


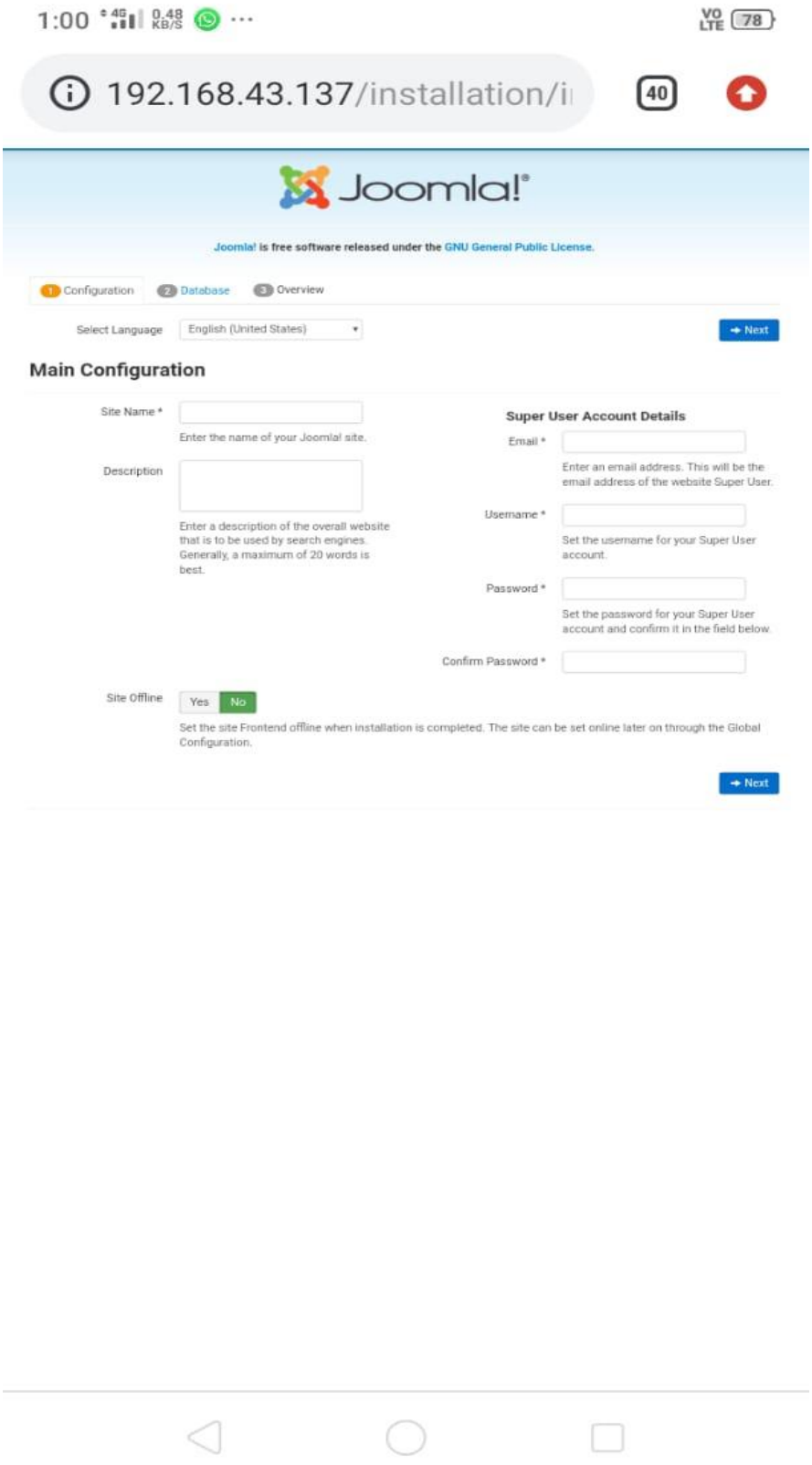


This site can be accessed from Redhat (Base OS), Chrome (External OS with same network) as well as from mobile browser.

I have attached the screenshot for each case.







I have tried my best to explain you about Docker and my project. If you need to learn about docker in detail,

Go through the Following IIEC RISE link: -

https://www.youtube.com/watch?v=3Kn6_b-1mK4&list=PLAi9X1uG6jZ30QGz7FZ55A27jPeY8EwkE

I would like to thank **Mr. Vimal Daga** Sir who taught me about docker. I would like to thank IIEC Community for carrying out the free docker training.

According to me, Vimal Sir is one of the best mentors across the world. He has a great knowledge in each and every field of Computer Science. I am grateful to got the opportunity to learn from him.

He just taught about the entire docker in just 24 hrs of learning. His teaching skills are great.