# What is Docker?

# Docker is an open source standalone application which works as an engine used to run containerized applications. It is installed on your operating system, preferably on Linux, but can be also installed on windows and MacOS.

# An application running in a container is isolated from the rest of the system and from other containers, but gives the illusion of running in its own OS instance.

# Multiple Docker container can be run on the single operating system simultaneously, you can manage those containers with Docker.

# Docker applications run in containers that can be used on any system: a laptop, on premises, or in the cloud.

# Simply we can say Docker is a container management service.

# What is a Docker container?

# A container is a standard unit of software that packages up code and all its dependencies so the application runs quickly and reliably from one computing environment to another.

# Containerization been around for a long time, but it was introduced in a different way by Docker.

# It packages applications as images that contain everything needed to run them: code, runtime environment, libraries and configuration.

# A Docker container image is a lightweight, standalone, executable package of software that includes everything needed to run an application: code, runtime, system tools, system libraries and setting.

# Who is Docker for?

# Docker is a tool that is designed to benefit both developers and system administratos, making it a part of many DevOps.

# Do you have to use Docker to use containers?

# No. Docker is just one set of tools that work with the container features provided by Linux and Windows. Support for containers has been part of Linux for a long time and has matured into a stable and reliable feature.

# Is Docker free?

# Docker community edition (CE) is free for anyone to use. This version of Docker is open source and can be used on a variety of platforms including Windows, Mac and Linux.

# Docker Architecture

# Image

# An image is a read-only template which instructions for creating a Docker container. You may build, an image which is based on the Ubuntu image or SQL server.

# Container

# A container is a runnable instance of an image. You can create, start, stop, move or delete a container using the Docker API of CLI.

# Registry

# A Docker registry stores Docker images. Docker Hub is a public registry that anyone can use, and Docker is configured to look for images on Docker Hub by default. You can even run your own private registry.

# Client

# The Docker client is the primary way that many Docker users interact with Docker. When you use commands such as docker run, the client sends these commands to dockerd, which carries them out. The docker command uses the Docker API.

# Docker daemon

# The Docker daemon listens for Docker API requests and manages Docker objects such as images, containers, networks, and volumes.