Docker is a platform or ecosystem for creating and running containers. DOCKER HUB, DOCKER IMAGES, DOCKER CLIENT, DOCKER COMPOSE, DOCKER SERVER, DOCKER MACHINE.

What is DOCKER? - Example.
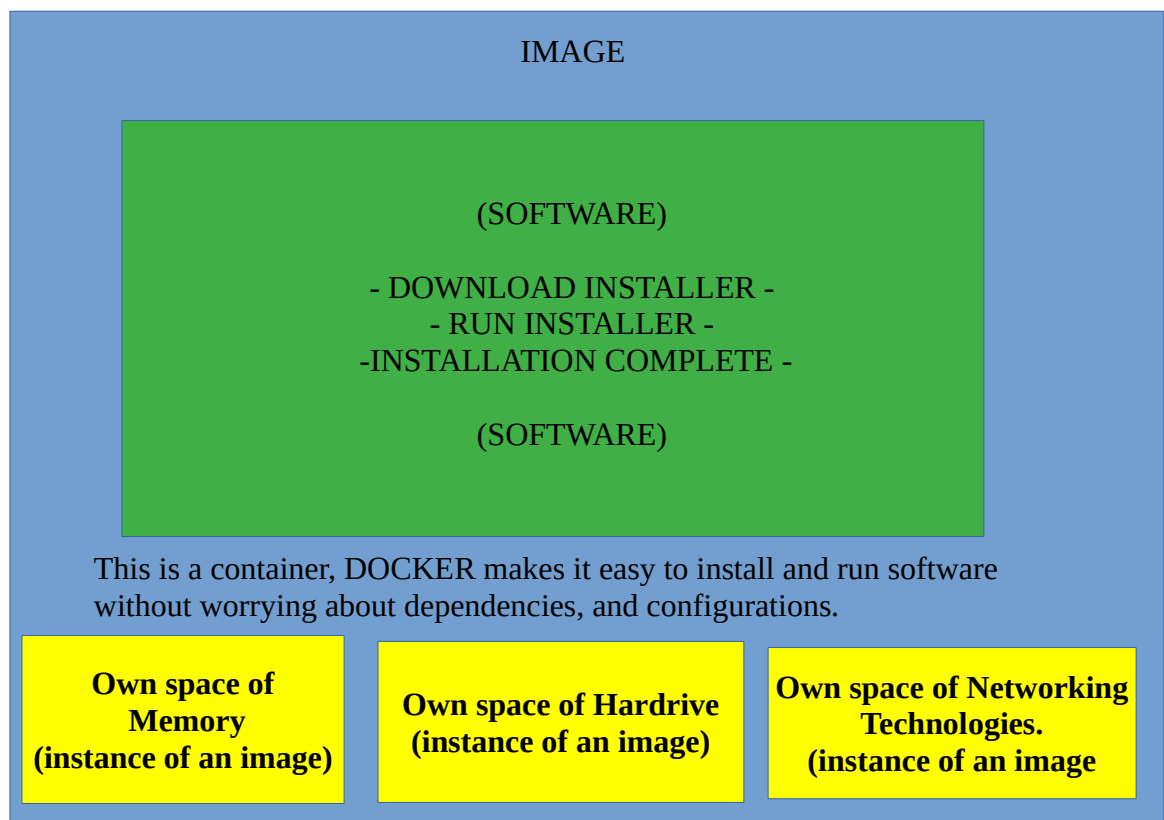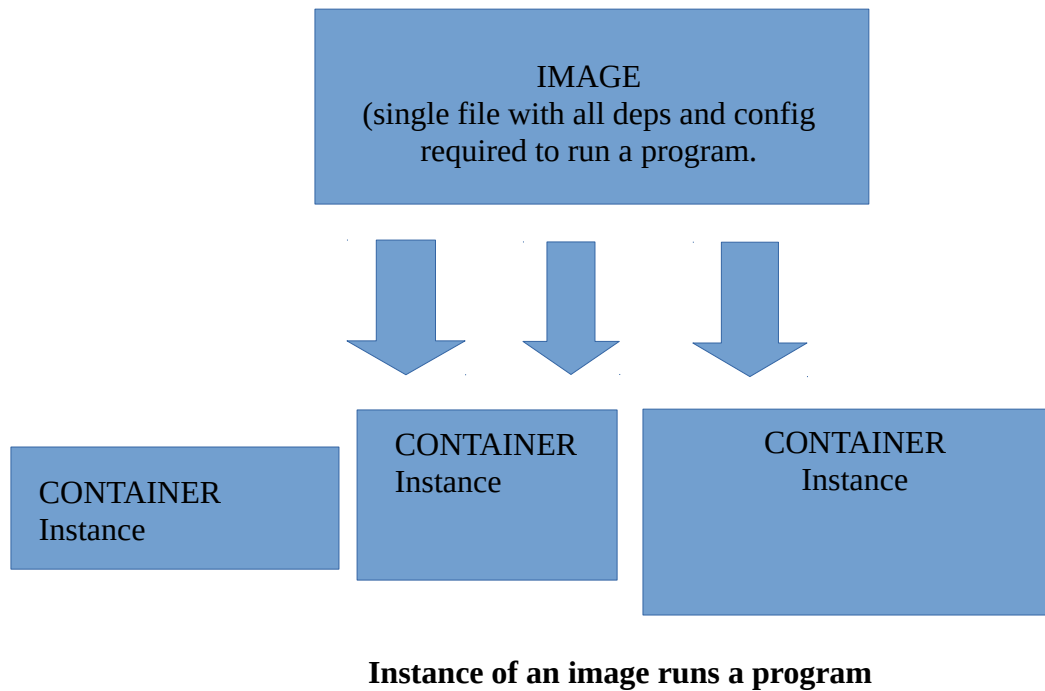
INSTALLING SOFTWARE

FLOW

Download installer
Run Installer
Get an ERROR alert during installation
Troubleshoot issue
Re-run installer
Get another error!!

On the diagram above we can see your typical program download, but at some point the installer encounters errors. Docker on the other hand is there to avoid these errors by using **CONTAINERS**.

DOCKER IN ACTION
An isolated program configured with its own resources.

IMAGE

(SOFTWARE)

- DOWNLOAD INSTALLER -
- RUN INSTALLER -
-INSTALLATION COMPLETE -

(SOFTWARE)

This is a container, DOCKER makes it easy to install and run software without worrying about dependencies, and configurations.

Own space of Memory (instance of an image)

Own space of Hardrive (instance of an image)

Own space of Networking Technologies. (instance of an image

```
                    ┌─────────────────────────────────┐
                    │             IMAGE               │
                    │  (single file with all deps and │
                    │    config required to run a     │
                    │           program.              │
                    └─────────────────────────────────┘
                         │         │         │
                         ▼         ▼         ▼
```

CONTAINER Instance   **CONTAINER** Instance   **CONTAINER** Instance

Instance of an image runs a program

Docker Client (docker CLI) & Docker Server (docker DAEMON)

Docker Client: Tool that we will use to issue commands. (CLI)

Docker Server: Tool that is responsible for creating images, running containers etc. (DAEMON)