Day 30/50

docker

Docker Images vs Docker Containers

“📦 Understand what runs, and what it runs from.“

WHAT IS A DOCKER IMAGE?

- A blueprint for a container
- Immutable snapshot of app code + dependencies
- Built from a Dockerfile
- Can be stored in registries (like Docker Hub)

🧠 Think of it as:

- A packaged app waiting to run.

WHAT IS A DOCKER CONTAINER?

- A running instance of a Docker image
- Uses the image as its base
- Isolated from the host system
- Lightweight and portable

🧠 Think of it as:

The live app created from the image.

→

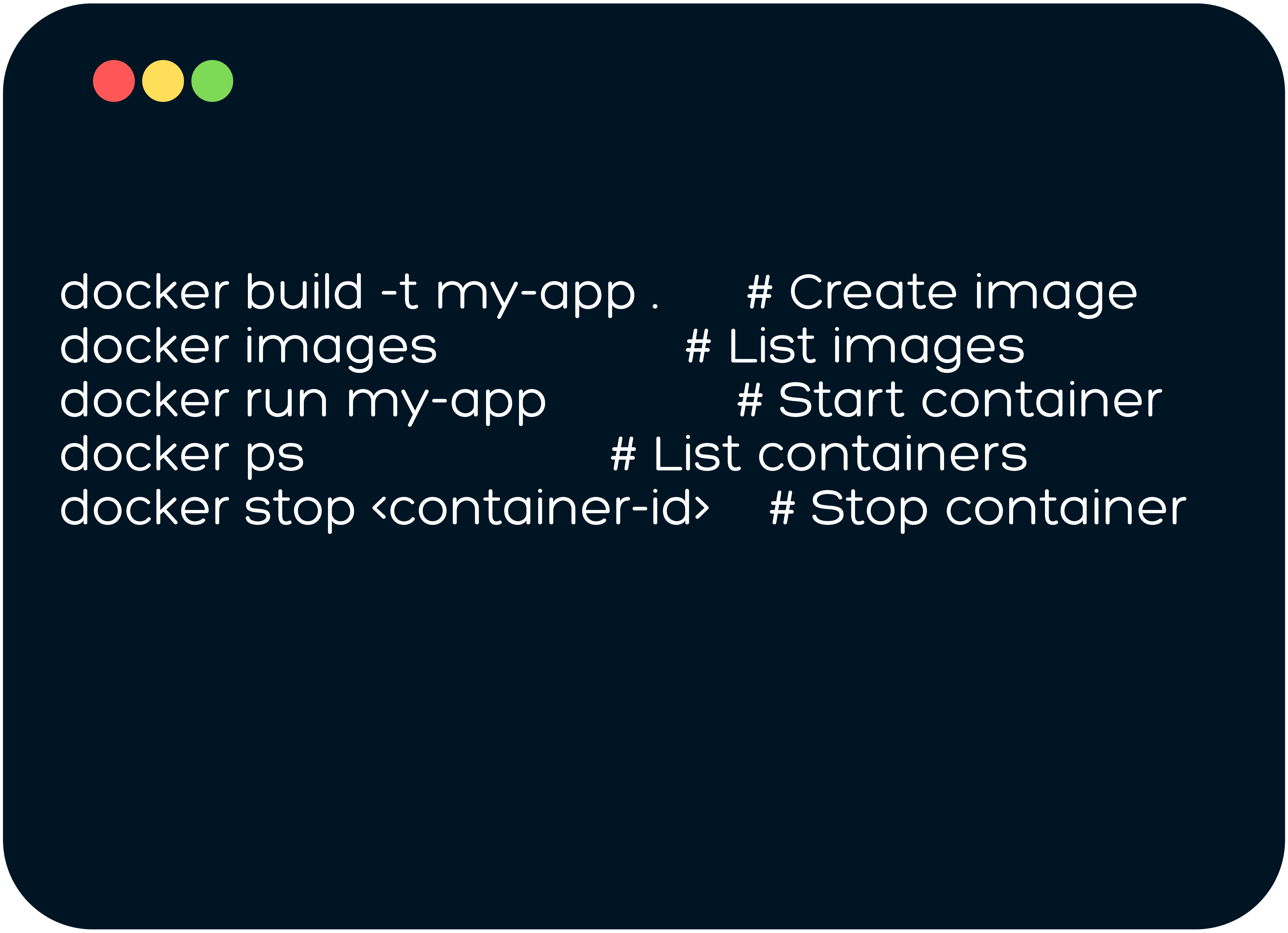
VISUAL ANALOGY

Term	Analogy
Dockerfile	Recipe
Image	Prepared meal (not served)
Container	Served dish (ready to eat)

KEY DIFFERENCES

Feature	Docker Image	Docker Container
State	Static (read-only)	Dynamic (running state)
Execution	Not executable	Executable
Location	Stored in registry	Runs on host machine
Lifecycle	Created once	Starts/stops/restarts

BASIC DOCKER COMMANDS



```
docker build -t my-app .    # Create image
docker images              # List images
docker run my-app            # Start container
docker ps               # List containers
docker stop <container-id>   # Stop container
```

📦 **One file to build a reproducible, portable app.**

REAL-WORLD USE CASE

🚀 You build a Docker image of your web app

💻 You run multiple containers from that image in dev, staging, and prod

🛠️ You update the Dockerfile → rebuild the image → redeploy containers

🔁 Fast, repeatable deployments every time.

DOCKER MASTERY STARTS WITH UNDERSTANDING IMAGES VS CONTAINERS.

This isn’t just terminology – it’s how modern infrastructure runs.

Join the ride as we break down DevOps, one day at a time!

FOLLOW ME

Let’s build, break, and learn — together. 💻🚀

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