

docker build:

- **Command:** `docker build -t <image_name> <path_to_Dockerfile>`
- **Explanation:** Builds a Docker image from a Dockerfile located at the specified path (`<path_to_Dockerfile>`) and tags it with the provided name (`<image_name>`). The `-t` flag is used to specify the image name and tag.

docker run:

- **Command:** `docker run <image_name>`
- **Explanation:** Creates and starts a new container based on the specified Docker image (`<image_name>`). This command runs the default command specified in the Dockerfile's `CMD` instruction.

docker pull:

- **Command:** `docker pull <image_name>`
- **Explanation:** Pulls a Docker image from a registry (such as Docker Hub) to the local machine. This command downloads the specified image if it's not already available locally.

docker push:

- **Command:** `docker push <image_name>`
- **Explanation:** Pushes a Docker image from the local machine to a registry (such as Docker Hub). This command uploads the specified image to the registry so that it can be accessed and pulled by others.

docker ps:

- **Command:** `docker ps`
- **Explanation:** Lists all running containers. This command provides information such as the container ID, names, status, and ports.

docker images:

- **Command:** `docker images`
- **Explanation:** Lists all Docker images available on the local machine. This command provides information such as the image ID, repository, tag, and size.

docker stop:

- **Command:** `docker stop <container_id>`
- **Explanation:** Stops a running container specified by its ID (`<container_id>`). This command sends a `SIGTERM` signal to the container, giving it time to shut down gracefully.

docker rm:

- **Command:** `docker rm <container_id>`
- **Explanation:** Removes a stopped container specified by its ID (`<container_id>`). This command permanently deletes the container, freeing up resources.

docker rmi:

- **Command:** `docker rmi <image_id>`
- **Explanation:** Removes a Docker image specified by its ID (<image_id>). This command permanently deletes the image from the local machine.