@CODE.CLASH

Docker Basics

```
// Check Docker version.
docker --version or docker -v

// Display system-wide information about Docker.
docker info

// Download an image from Docker Hub.
docker pull <image_name>

// List local Docker images.
docker images or docker image ls

// List running containers.
docker ps or docker container ls

// List all containers (including stopped ones docker ps -a or docker container ls -a

// Create and start a new container from an image.
docker run <options> <image_name>
```

Container Lifecycle

```
// Start a stopped container.
docker start <container_name/id>

// Stop a running container gracefully.
docker stop <container_name/id>

// Forcefully stop a running container.
docker kill <container_name/id>

// Restart a container.
docker restart <container_name/id>

// Remove a stopped container.
docker rm <container_name/id>
```

Images

```
// Build a Docker image from a Dockerfile
docker build -t <image_name> <path_to_Dockerfile>
// Remove an image
docker rmi <image_name>
// Remove all unused images.
docker image prune
```

Docker Compose

```
// Start services defined in a Docker Compose file
docker-compose up

// Stop and remove services defined in a Docker Compose file.
docker-compose down

// List services in a Compose file and their status.
docker-compose ps

// View logs for a specific service.
docker-compose logs <service_name>

// Run a command in a running service container.
docker-compose exec <service_name> <command>
```

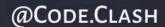
Volumes

```
// Create a named volume
docker volume create <volume_name>

// Mount a volume to a container.
docker run -v <volume_name>:<container_path>

// List volumes
docker volume ls

// Remove a volume
docker volume rm <volume_name>
```



Docker Registry and Hub

```
// Log in to a Docker registry.
docker login

// Push an image to a registry.
docker push <image_name>

// Pull an image from a registry.
docker pull <image_name>
```

Networks

```
// Create a user-defined network.
docker network create <network_name>

// List networks.
docker network ls

// Connect a container to a network.
docker network connect <network_name> <container_name/id>

// Disconnect a container from a network.
docker network disconnect <network_name> <container_name/id>
```

Logs and Debugging

```
// View container logs.
docker logs <container_name/id>

// Start an interactive shell in a running container.
docker exec -it <container_name/id> /bin/bash

// Display real-time container resource usage.
docker stats <container_name/id>
```

Cleanup

```
// Remove all stopped containers, unused networks, and images.
docker system prune

// Remove all stopped containers.
docker container prune

// Remove all unused images.
docker image prune

// Remove all unused volumes
docker volume prune
```