🚀 DevOps Command Cheat Sheet

(Replica · Docker · Maven · Kubernetes)

🐳 1. Docker – Core Commands

🔹 Docker Information

Command	One-line Summary
`docker --version`	Show installed Docker version
`docker info`	Display Docker system details
`docker help`	Show Docker help and commands

🔹 Images

Command	One-line Summary
`docker images`	List all local Docker images
`docker pull nginx`	Download image from Docker Hub
`docker rmi <image_id>`	Delete a Docker image

🔹 Containers

Command	One-line Summary
`docker ps`	List running containers
`docker ps -a`	List all containers
`docker run -it <image>`	Run container in interactive mode
`docker start <id>`	Start a stopped container
`docker stop <id>`	Stop a running container

`docker rm <id>`	Remove a container
`docker logs <id>`	View container logs
`docker exec -it <id> bash`	Access running container shell

✅ **Important (Often Asked in Interviews)**

Command	Summary
`docker build -t app .`	Build image from Dockerfile
`docker tag app:latest app:v1`	Tag an image
`docker push app:v1`	Push image to registry

🔁 2. Replica / Scaling Containers

🔹 Docker Compose (Local Scaling)

Command	One-line Summary
`docker-compose up`	Start services from compose file
`docker-compose up --scale web=3`	Run 3 replicas of a service
`docker-compose ps`	List running services
`docker-compose down`	Stop and remove services

🔹 Docker Swarm (Production Scaling)

Command	One-line Summary
`docker swarm init`	Initialize Docker Swarm
`docker service create --replicas 3 nginx`	Create service with replicas
`docker service scale web=5`	Scale service to 5 replicas

`docker service ls`	List swarm services
`docker service ps web`	Show service replicas

🧠 **Interview Tip**

Docker alone ❌ → No replicas
Docker Swarm / Kubernetes ✅ → Supports replicas

📦 3. Maven – Build & Package

🔹 Maven Lifecycle (Very Important)

Command	One-line Summary
`mvn validate`	Validate project structure
`mvn clean`	Delete `target` folder
`mvn compile`	Compile source code
`mvn test`	Run unit tests
`mvn package`	Create JAR/WAR file
`mvn install`	Install artifact locally
`mvn deploy`	Deploy artifact to remote repo

🔹 Maven + Docker

Command	One-line Summary
`docker run -v $(pwd):/app maven mvn clean install`	Run Maven build inside Docker
`docker build -t my-maven-app .`	Build Docker image for Maven app
`docker run my-maven-app`	Run Maven-built app

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4. Kubernetes – Deployment & Replicas

🔹 Cluster Basics

Command	One-line Summary
`kubectl version`	Show kubectl version
`kubectl cluster-info`	Show cluster details
`kubectl get nodes`	List cluster nodes

🔹 Pods

Command	One-line Summary
`kubectl get pods`	List all pods
`kubectl describe pod <pod>`	Pod detailed info
`kubectl logs <pod>`	View pod logs
`kubectl exec -it <pod> -- bash`	Access pod shell

🔹 Deployments & Replicas

Command	One-line Summary
`kubectl create deployment app --image=nginx`	Create deployment
`kubectl get deployments`	List deployments
`kubectl scale deployment app --replicas=3`	Scale pods
`kubectl rollout status deployment app`	Check rollout
`kubectl rollout undo deployment app`	Rollback deployment
`kubectl delete deployment app`	Delete deployment

✅ Missing but Important

Command	Summary
`kubectl apply -f file.yml`	Apply YAML config
`kubectl delete -f file.yml`	Delete using YAML