Basic Docker Commands

docker search *searchterm*	Search Docker Hub for images
docker pull *user/image*	Downloads an image from Docker Hub
docker login	Authenticate to Docker Hub (or other Docker registry)
docker push *user/image*	Uploads an image to Docker Hub. *You must be authenticated to run this command*
docker info	Retrieves docker configuration
docker version	Retrieves docker versioning

Image and Container Information

docker ps	List all running containers
docker ps -a	List all container instances, with their ID and status
docker images	Lists all images on the local machine
docker history <user>/<image>	Lists the history of an image
docker logs <container>	Displays the logs from a running container
docker port <container>	Displays the exposed port of a running container
docker diff <container>	Lists the changes made to a container
docker logs [-f] <container>	Read container stdout
docker top <container>	Show running processes
docker inspect <container>	Show container configuration
docker events	Show container events
<container> can be replaced with container **name** or **ID**	

Network Commands

docker network ls	List networks
docker network inspect <Network>	Inspect a network
docker network create <Network>	Create a network
docker network rm <Network>	Removes a network
docker network connect <Network> <Container>	Connect a container to the network
docker network connect --ip <IP> <Network> <Container>	Specify the IP address of container interface
docker network disconnect <Network_Name> <Container>	Disconnect container from network
<Network> can be replaced with the network **ID** or **NAME**	

Work With Images and Containers

docker run -it *user/image*	Runs an image, creating a container and changing the terminal to the terminal within the container
docker run -p <hostport>:<containerport> -d *user/image*	Run an image in detached mode with port forwarding
docker start <container>	Start a container
docker exec <container> [shell command]	Executes a command within a running container, e.g. /bin/bash
docker attach <container>	Changes the command prompt from the host to a running container
docker stop <container>	Stop a container
docker rm -f <container>	Delete a container
docker create <image>:<tag>	Create image
docker rmi <image>	Delete an image
docker tag <user>/<image>:<tag> <user>/<image>:<new tag>	Add a new tag to an image
ctrl+p then ctrl+q	Changes the command prompt from the host to a running container
<container> can be replaced with container **name** or **ID**	

Misc. Examples

sudo docker commit *containerID* username/imagename	Commit from container to an image
docker push username/imagename	Docker push example (after logging)
docker run -it -v /host/directory:/container/directory [options] *image* [command]	Mount a host directory in a Docker container
docker cp /host/directory/file.ext *container*:/container/directory	Copy file from host machine to docker container
docker rmi $(docker images -a -q)	Delete all Docker images
docker rm $(sudo docker ps -a -q)	Delete all stopped containers
docker rm $(sudo docker ps -a | grep Exit | cut -d ' ' -f 1)	Delete all containers in Exit state
docker save *imagename* > *filename*.tar	Export image to a file
docker load < *filename*.tar	Load image from file
docker [command] --help	Command help

Options Keywords

-p, –-publish	Host to container port mapping
--publish-all	Publish all ports
-d, –-detach	Run in background
-e, –-env	Set env vars
-v, --volume	Mount files or directories