Docker Usage Report

Title: How to Use Docker Images in Containers

Objective:

To demonstrate how to download, run, and interact with containers using Docker images from Docker Hub or a custom image.

Prerequisites:

- Docker installed on your system (`docker --version` to check).

- Internet connection to pull images from Docker Hub.

- Access to command-line or terminal.

Step 1: Pull an Image from Docker Hub

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docker pull ubuntu

This command downloads the Ubuntu base image to your local system.

Step 2: Run a Container from the Image

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docker run -it ubuntu

- `run`: starts a new container

- `-it`: interactive terminal session

- `ubuntu`: name of the image

You'll be inside a container running Ubuntu and can execute shell commands like `ls`, `pwd`, etc.

Step 3: List Running Containers

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docker ps

To view all containers (even stopped ones):

docker ps -a

Step 4: Exit and Manage Containers

To exit the container:

exit

To stop a running container (by container ID or name):

docker stop <container_id>

Example: Using NGINX Image

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docker run -d -p 8080:80 nginx

- `-d`: detached mode

- `-p 8080:80`: maps host port 8080 to container port 80

Visit http://localhost:8080 in your browser to see the NGINX welcome page.

Summary:

- Docker images are templates used to create containers.

- Use `docker pull`, `docker run`, and `docker ps` to manage containers.

- You can run apps, web servers, and even full environments using these containers.