Docker and Docker Compose

Recitation 2, CMU 17-313, Fall 2020

Goal: During this recitation, we'll look at the difference between Docker images and containers and then look at how we can get around the issue of developing with immutable Docker images.

Overview
1. [Docker Image vs Container: Everything You Need to Know](#)

Activity 1: Mount Contents Inside of Container
1. Run the `nginx` Docker image using the `docker run` command.
2. Access the web server and make sure you can see the default page.
3. Create a index.html page on your local computer.
4. Modify the `docker run` command to display your HTML page instead of the default page.
   - Look into how to mount external contents into the counter (e.g., volumes)
   - You may need to find out where the default index.html file is located inside of the Docker image.
   - These links might be useful:
     - [How to Mount Docker Volume into a Container](#)
     - [docker run](#)

Activity 2: Mount Contents Inside of Container with Compose
1. Using the following documentation, write a Docker Compose file to run the `nginx` container so you can run it without using the `docker run` command.
2. Make sure that the Docker Compose file mounts the volume so you see your own index.html instead of the default one.

Hints:

If you want to look inside of a running container (using a shell) to look at the filesystem or see the running processes, you can use the following command:

```
docker exec -it CONTAINER_ID /bin/bash
```

If you want to start a container and use a shell to look at the filesystem or see running processes, you can use the following command:

```
docker run -it IMAGE_NAME /bin/bash
```

If you want to find a file on a Linux filesystem, try looking at the find command.

If you want to mount volumes in Docker, you might find the -v switch helpful.