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Lab 1 Part 1

Assignment 1:

- By using separate containers for different parts of an application, library dependencies will not need to be rebuilt from the ground up. WE can use different containers for the CV task and the PID controller.
- Docker has version control built-in which means that if a library breaks a module, we can always revert changes.
- A docker container will work on top of any OS meaning that a container works exactly the same across platforms. Therefore, libraries native to one OS should work just fine on a different OS.
- Using separate containers for different parts of an application can help avoid dependency clashes.

Assignment 2:

- There are four images on the server. The lab file image, a cuda image, an opency image and a random hello-world image.
- First you need a dockerfile, which is a text configuration file written in a markup language called YAML. The dockerfile should contain instructions on how to assemble a docker image. Once a dockerfile is written, you can build an image by using the docker build command. If there are no errors in the dockerfile, this command should build a new image.
- The file is no longer there as I did not commit the changes I made to the container.

Assignment 3:

Immutable images are portable and predictable. The image will therefore always have the same behavior and it can be used to run tests and deploy very easily. Similar to git commits, docker images cannot be modified and can be reverted if the user wants to do so.