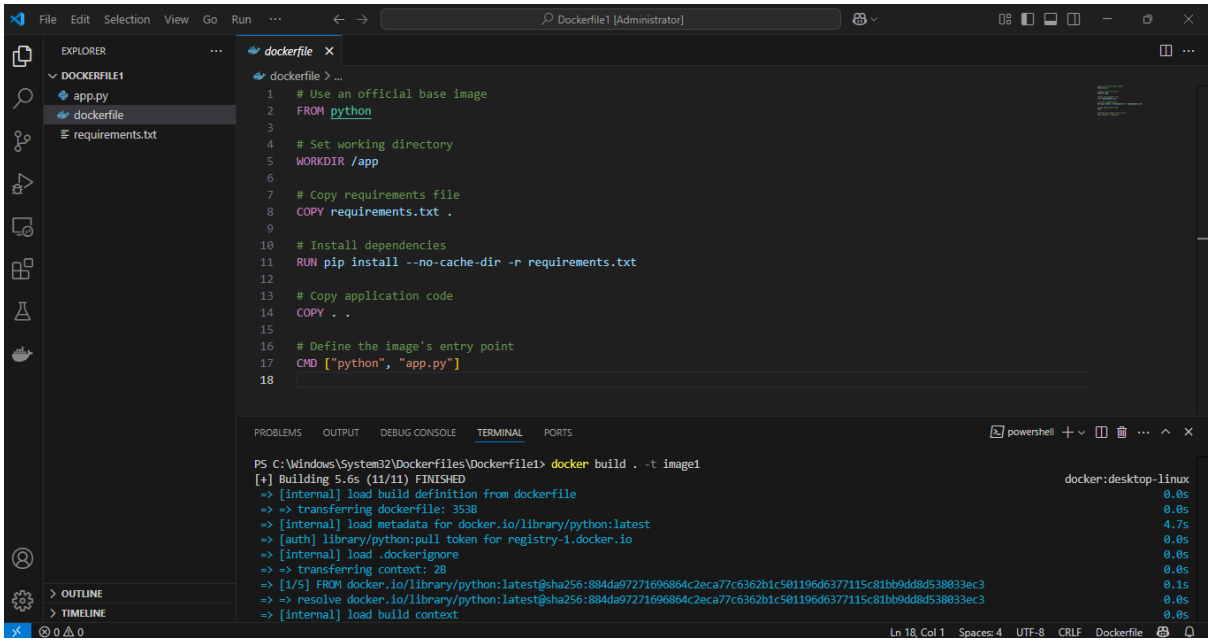
Containerization with Docker-Lab1

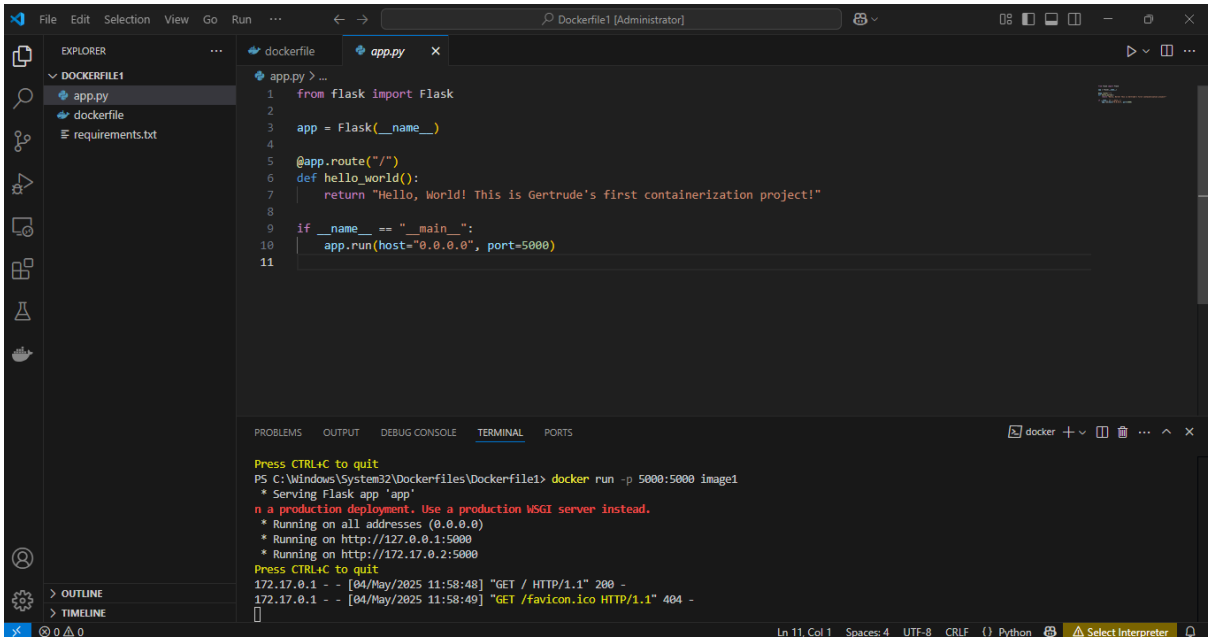
In this lab, I created an image of a dockerfile and pushed it to my repository in dockerhub.

A python image was pulled from the docker hub. The dockerfile was given several instructions. For instance, specifying the directory where the application will reside when the container is created from the image and also where all commands indicated on the dockerfile will be executed was specified using the WORKDIR command. Commands such as COPY, RUN and CMD was executed in this directory. All the files in the current directory of the local desktop were copied into the directory specified in the container as the work directory.

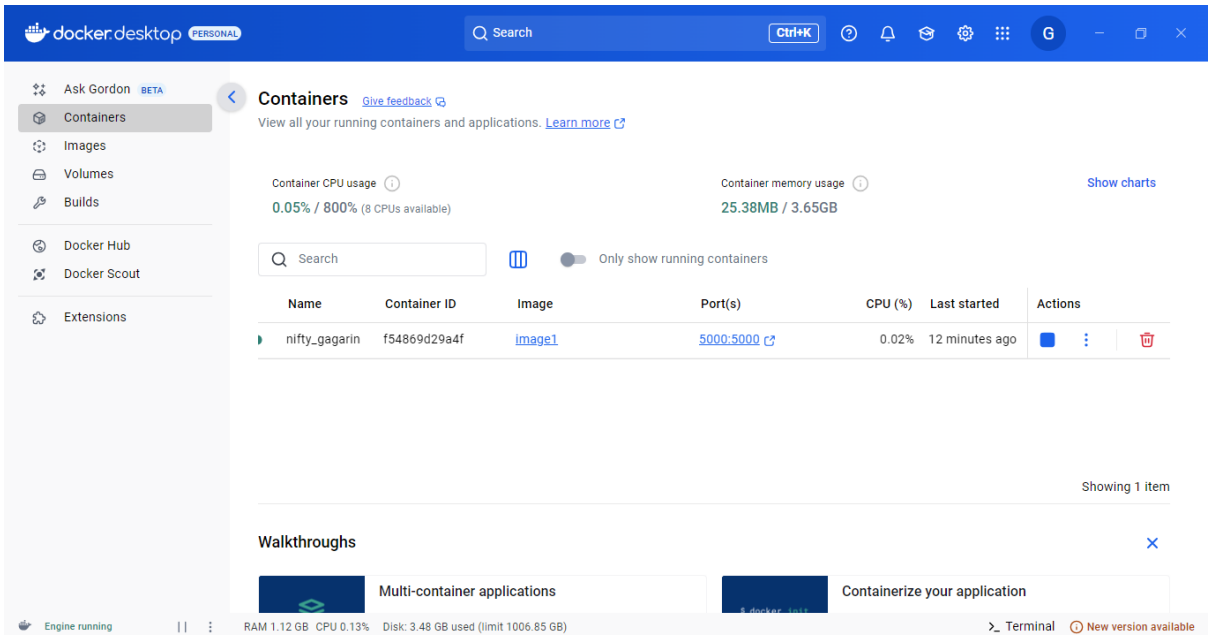
The requirement.txt file which was a dependency of the application was copied first to provide the specifications needed for the installation of the python hence reducing slow build times which may be as a result of unnecessary reinstallations of dependencies and reduction of potential errors. These dependencies were used by the application when it ran. The CMD command was final step in the container's startup process. This enables the python script to be executed by the python installed.

The Docker build command was used to create an image from the dockerfile and the docker run command created a container based on the image.



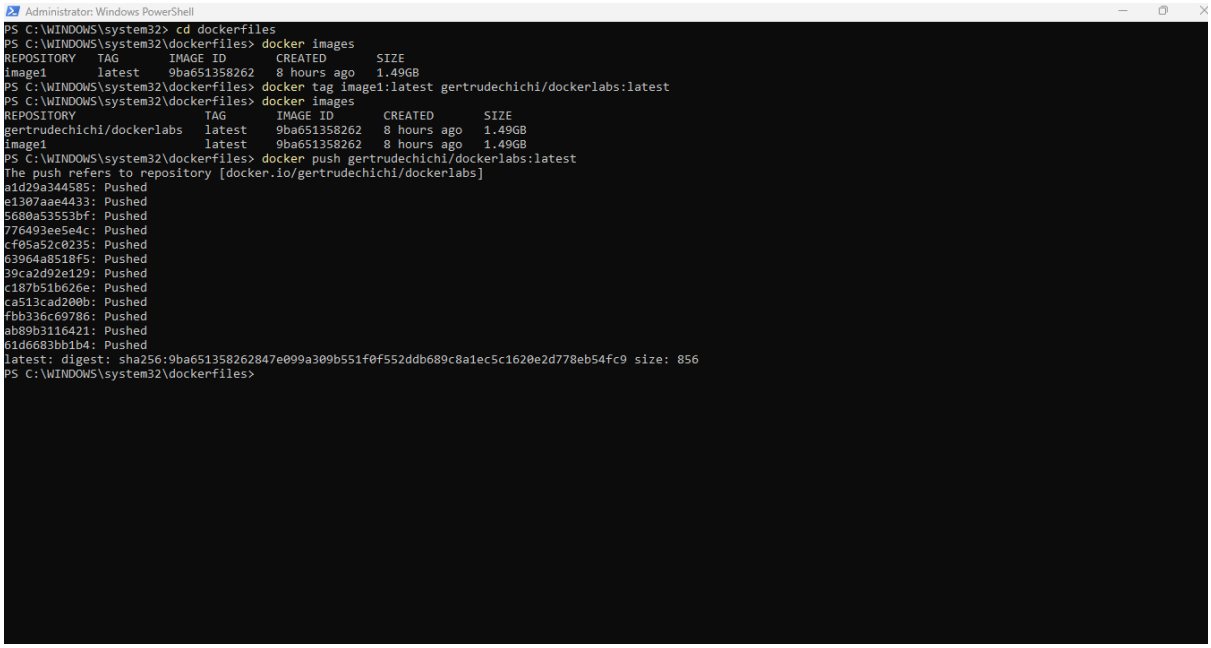


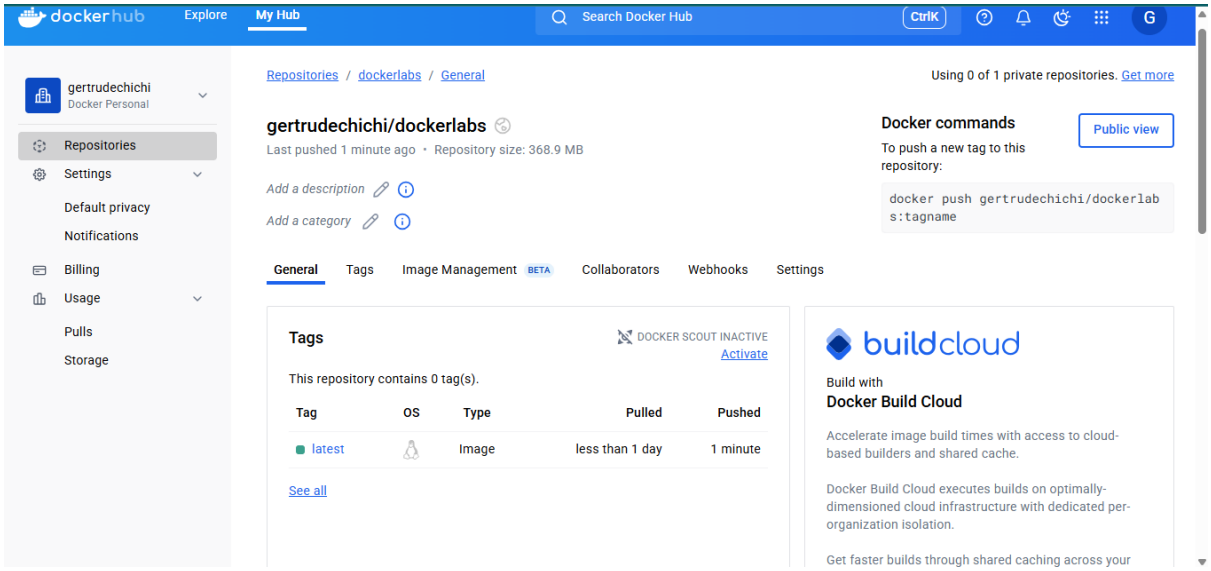
To allow inbound traffic into the container, port mapping was applied to the container during its creation. While the dockerfile provided a template for creating an image from which the container was built, the port mapping determined the traffic flow into the container for testing and development of the application in the container environment. The host machine acted as a proxy which forwarded traffic to the container allowing the testing and validation of the application inside a container.



Because the dockerfile was configured to copy app.py file from the local machine into a directory in the container, after the container was built, the application was tested and validated in the container.

The docker image was pushed to my docker hub as shown below.

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Explore
My Hub
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G
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Docker Personal
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Settings
Default privacy
Notifications
Billing
Usage
Pulls
Storage
Repositories / dockerlabs / General
Using 0 of 1 private repositories. Get more
gertrudechichi/dockerlabs
Last pushed 1 minute ago • Repository size: 368.9 MB
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To push a new tag to this repository:
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Settings
Tags
DOCKER SCOUT INACTIVE
Activate
This repository contains 0 tag(s).
Tag
OS
Type
Pulled
Pushed
latest
Image
less than 1 day
1 minute
See all
buildcloud
Build with
Docker Build Cloud
Accelerate image build times with access to cloud-based builders and shared cache.
Docker Build Cloud executes builds on optimally-dimensioned cloud infrastructure with dedicated per-organization isolation.
Get faster builds through shared caching across your