**Solution to Challenge-1**

Steps to be reproduces to produce a solution for challenge-1:-

1. Check if the host machine have docker installed by executing the following command in the administrator terminal

* docker --version

If the terminal provides with a string showcasing a version of docker, the docker is installed in the host machine as



Otherwise Visit:-

<https://www.docker.com/products/docker-desktop/>

And download docker desktop from there and follow standard installation instructions.

1. Once confirmed the host machine have a docker stable version, run the docker desktop application
2. Now navigate to the directory of the challenge 1 folder.
3. Open this directory in the vs code.
4. Create a folder named ‘*public*’
5. In that folder proceed to create a index.html file.
6. In the index.html proceed to create a html static page by using ! emmet.
7. In the body write your name and student ID.
8. Create a Dockerfile with no extension in challenge 1 folder.
9. In that file proceed with the following code:-

FROM nginx:latest // This creates an image of nginx distribution

COPY public /usr/share/nginx/html //This copies the public folder to the shared nginx folder to host it on a particular port

EXPOSE 80 //This exposes the port 80 to the html requests for the localhost

CMD [“nginx”, “-g”, “daemon off;”] // This command runs the default nginx container with the config of daemon off to run nginx in foreground

1. Now proceed to the terminal of VS code and build this image by running the following command

* docker build -t solution-01 .

This command creates a docker image with the following command configured dockerfile

1. Now start this image with the following command:-

* docker run -p 8080:80 -d –name docker-container solution-01

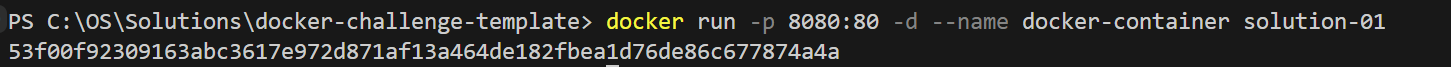
This command runs a new container from the solution-01 image.

-p 8080:80: Maps port 8080 on the host machine to port 80 in the container.

-d: Runs the container in detached mode so the terminal does not gets bombarded with the logs.

--name docker -container: Gives the container the name docker -container

1. If the terminal produces a string of character then the docker container is running



1. Now if you open any browser in host machine and goto localhost:8080/ then you can see that html page rendered in the browser

A screenshot of a computer

Description automatically generated

And with this it concludes the challenge 1.