Ques 1: Below is a small flask app with a Dockerfile your task is to explain the Dockerfile and then make a change in the app.py file and change your name in “My name is ___” string, then create a Docker Image and push it to docker hub.After building that docker image your name should be shown at that place.

For a successful submission share docker hub link and a screenshot to the webpage.

Find the code from here: https://github.com/DARK-art108/Dockerfile-Assignment

SOLUTION:

FROM ubuntu:20.04

RUN apt-get update && apt-get install -y python3 python3-pip

RUN pip install flask

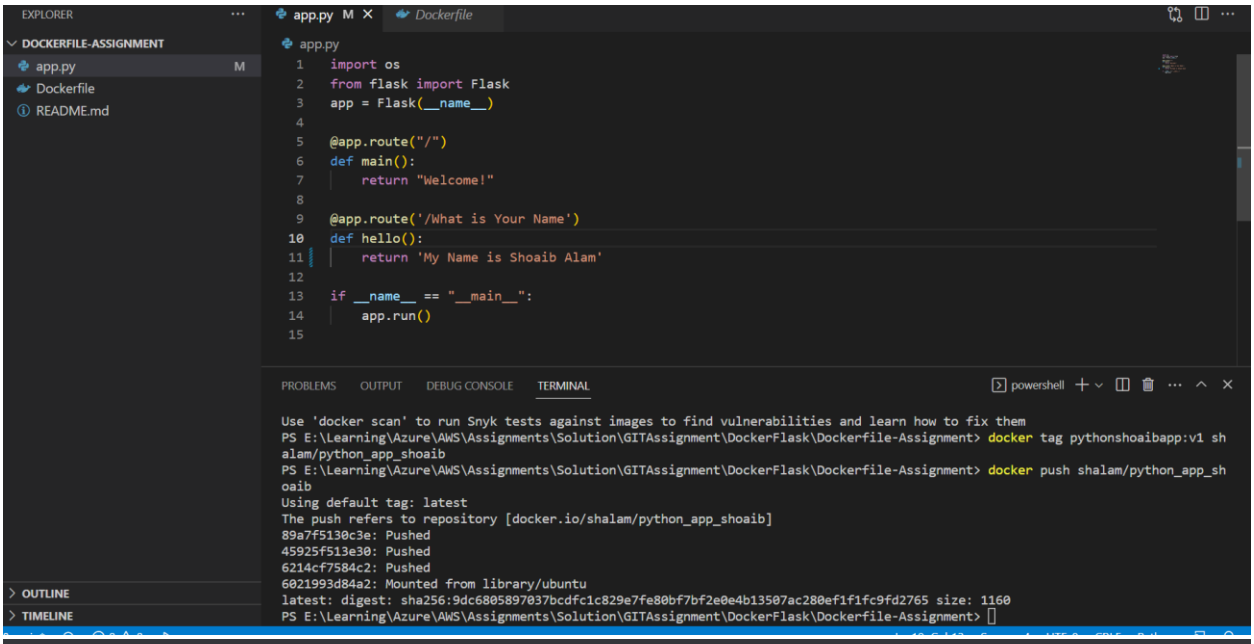
COPY app.py /opt/

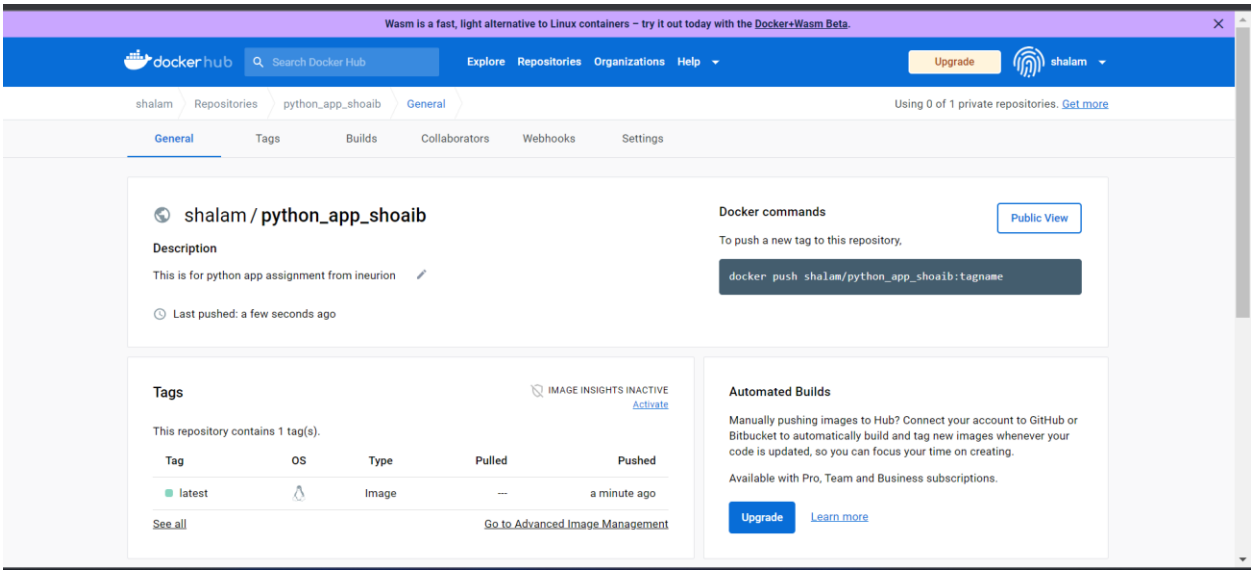
ENTRYPOINT FLASK_APP=/opt/app.py flask run --host=0.0.0.0 --port=8080

EXPLANATION*:*

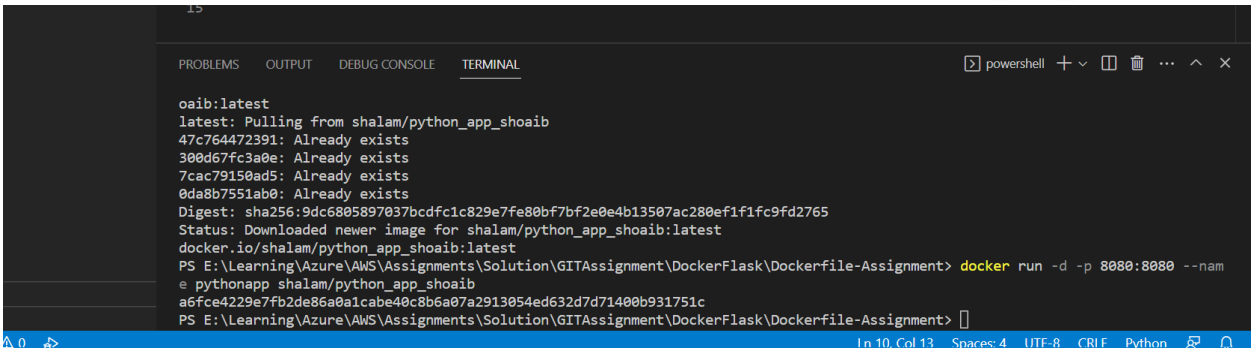
- FROM:
  - This command will act as base images on which we will be creating our custom image
  - It is using **ubuntu:20.04** image on which we will executing several commands
- RUN:
  - This docker command is use to execute the Commands.
  - **apt-get update** command will fetch the latest version of the package from the repository but will not actually download or install any of those updates that’s why **apt-get install** is use it will install those packages.
  - **python3** install the python package.
  - **python3-pip** It is a specialized package manager that only deals with python packages
- COPY:
  - This command is use to copy the files or folder from the localhost to the image.
  - Here it is copying the files **app.py** from the localhost to the image on ***/opt/*** location.
- ENTRYPOINT:
  - ENTRYPOINT Sets default parameters that cannot be overridden while executing Docker containers with CLI parameters
  - This command starts the flask application when you run the docker container

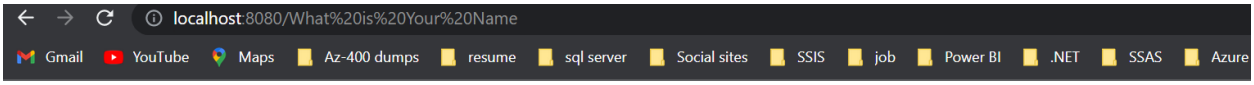
- **Making changes in the app.py file**
- **Created docker image**
    - docker build -t pythonshoaibapp:v1 .
- **Push to the Docker Hub:**
    - docker tag pythonshoaibapp:v1 shalam/python_app_shoaib
    - docker push shalam/python_app_shoaib
    - DockerHub link:
        - https://hub.docker.com/repository/docker/shalam/python_app_shoaib/general





- **Pulling the pushed image from docker hub and creating docker container:**
  - docker pull shalam/python_app_shoaib:latest
  - docker run -d -p 8080:8080 --name pythonapp shalam/python_app_shoaib





My Name is Shoaib Alam