

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 be executing several commands
- RUN:
 - This docker command is used 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 used 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 used 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

The top part of the image shows a VS Code editor with a Python Flask application in `app.py` and a Dockerfile. The terminal window shows the execution of `docker tag` and `docker push` commands, resulting in the image being pushed to Docker Hub.

The bottom part of the image shows the Docker Hub repository page for `shalam/python_app_shoaib`. The page includes a description, tags, and a table of image details.

Tag	OS	Type	Pulled	Pushed
latest	linux	Image	—	a minute ago

See all [Go to Advanced Image Management](#)

- ```
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PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
oaiib:latest
latest: Pulling from shalam/python_app_shoaiib
47c764472391: Already exists
300d67fc3a0e: Already exists
7cac79150ad5: Already exists
0da8b7551ab0: Already exists
Digest: sha256:9dc6805897037bcdffc1c829e7fe80bf7bf2e0e4b13507ac280ef1f1fc9fd2765
Status: Downloaded newer image for shalam/python_app_shoaiib:latest
docker.io/shalam/python_app_shoaiib:latest
PS E:\Learning\Azure\AWS\Assignments\Solution\GITAssignment\DockeFlask\DockeFile-Assignment> docker run -d -p 8080:8080 --nam
e pythonapp shalam/python_app_shoaiib
a6fce4229e7fb2de86a0a1cabe40c8b6a07a2913054d632d7d71400b931751c
PS E:\Learning\Azure\AWS\Assignments\Solution\GITAssignment\DockeFlask\DockeFile-Assignment>
```

