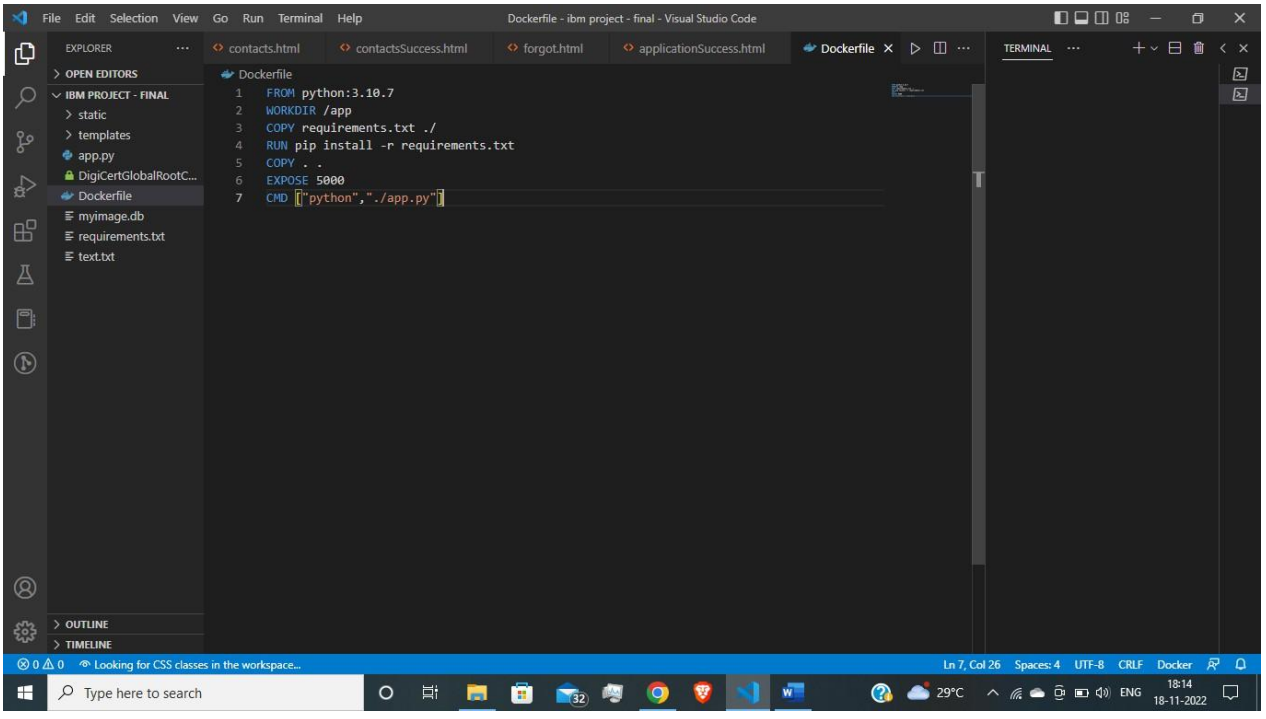
Date	**18 NOV 2022**
Team ID	**PNT2022TMID00862**
Project Name	**Skill and Job Recommender Application**

Containerize your Flask application

- In your project directory, create a file named "Dockerfile." *Suggestion: Name your file exactly "Dockerfile," nothing else.*

A "Dockerfile" is used to indicate to Docker a base image, the Docker settings you need, and a list of commands you would like to have executed to prepare and start your new container.




```
FROM python:3.10.7
WORKDIR /app
COPY requirements.txt ./
RUN pip install -r requirements.txt
COPY . .
EXPOSE 5000
CMD ["python","./app.py"]
```

Build an image from the Dockerfile

Open the terminal and type this command to build an image from your Dockerfile: docker build -t <image_name>:<tag> .(note the period to indicate we're in our apps top level directory). For example: docker build -t app:latest .

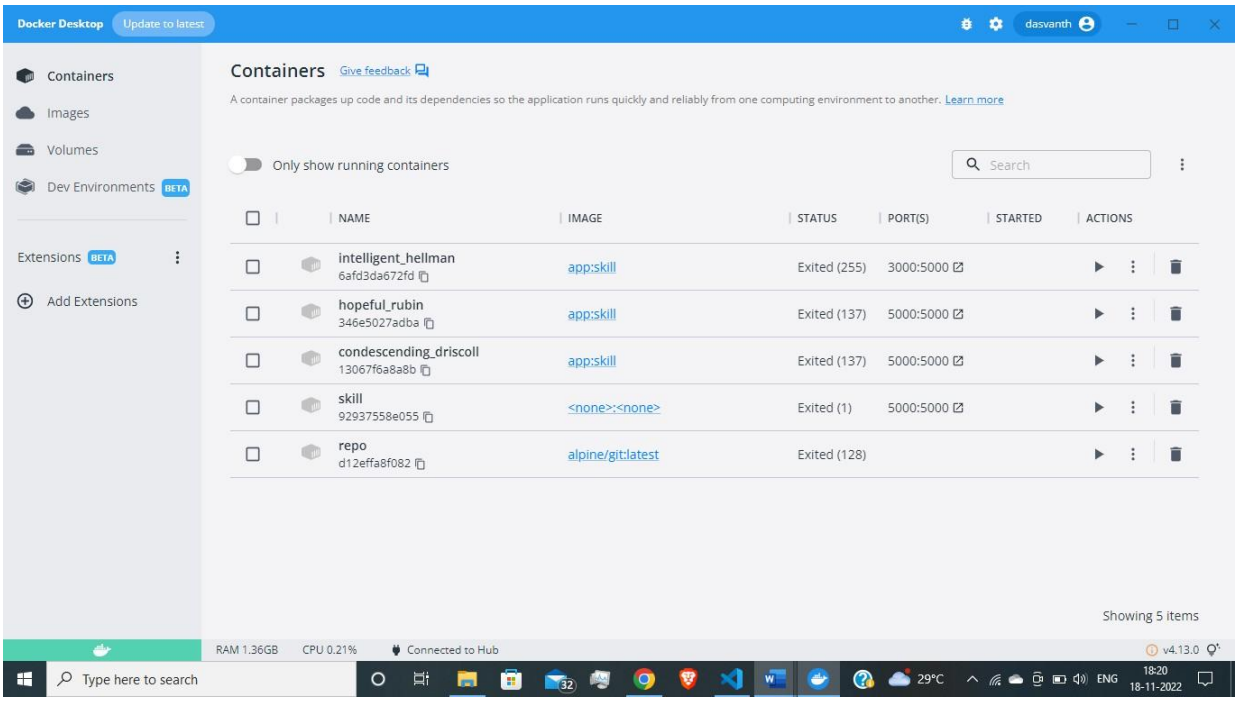
```
kunals-mbp:web kunalmalhotra$ docker build -t app:latest .
Sending build context to Docker daemon  348.2kB
Step 1/8 : FROM python:2.7
 ---> 6c76e39e7cfe
Step 2/8 : LABEL maintainer="Kunal Malhotra, kunal.malhotra1@ibm.com"
 ---> Using cache
 ---> d8b57d41591c
Step 3/8 : RUN apt-get update
 ---> Using cache
 ---> 6262a134e40e
Step 4/8 : COPY . /app
 ---> f07f7377099f
Step 5/8 : WORKDIR /app
Removing intermediate container f9010b99d2fe
 ---> 0bcc6af20e3d
Step 6/8 : RUN pip install -r requirements.txt
 ---> Running in 8153040b00b7
Collecting click==6.7 (from -r requirements.txt (line 1))
  Downloading https://files.pythonhosted.org/packages/34/c1/8806f99713ddb993c5366c362b2f908f18269f8d792aff1abfd700775a77/click-6.7-py2.py3-none-any.whl (71kB)
Collecting Flask==1.0.2 (from -r requirements.txt (line 2))
  Downloading https://files.pythonhosted.org/packages/7f/e7/08578774ed4536d3242b14dacb4696386634607af824ea997202cd0edb4b/Flask-1.0.2-py2.py3-none-any.whl (91kB)
Collecting itsdangerous==0.24 (from -r requirements.txt (line 3))
  Downloading https://files.pythonhosted.org/packages/dc/b4/a60bcdba945c00f6d608d8975131ab3f25b22f2bcfe1dab221165194b2d4/itsdangerous-0.24.tar.gz (46kB)
Collecting Jinja2==2.10 (from -r requirements.txt (line 4))
  Downloading https://files.pythonhosted.org/packages/7f/ff/ae64bacdfc95f27a016a7bed8e8686763ba4d277a78ca76f32659220a731/Jinja2-2.10-py2.py3-none-any.whl (126kB)
Collecting MarkupSafe==1.0 (from -r requirements.txt (line 5))
  Downloading https://files.pythonhosted.org/packages/4d/de/32d741db316d8fdb7680822dd37001ef7a448255de9699ab4bfcbdf4172b/MarkupSafe-1.0.tar.gz
Collecting Werkzeug==0.14.1 (from -r requirements.txt (line 6))
  Downloading https://files.pythonhosted.org/packages/20/c4/12e3e56473e52375aa29c4764e70d1b8f3efa6682bef8d0aae04fe335243/Werkzeug-0.14.1-py2.py3-none-any.whl (322kB)
Building wheels for collected packages: itsdangerous, MarkupSafe
  Running setup.py bdist_wheel for itsdangerous: started
  Running setup.py bdist_wheel for itsdangerous: finished with status 'done'
  Stored in directory: /root/.cache/pip/wheels/2c/4a/61/5599631c1554768c6290b08c02c72d7317910374ca602ff1e5
  Running setup.py bdist_wheel for MarkupSafe: started
  Running setup.py bdist_wheel for MarkupSafe: finished with status 'done'
  Stored in directory: /root/.cache/pip/wheels/33/56/20/ebe49a5c612fffe1c5a632146b16596f9e64676768661e4e46
Successfully built itsdangerous MarkupSafe
Installing collected packages: click, itsdangerous, MarkupSafe, Jinja2, Werkzeug, Flask
Successfully installed Flask-1.0.2 Jinja2-2.10 MarkupSafe-1.0 Werkzeug-0.14.1 click-6.7 itsdangerous-0.24
Removing intermediate container 8153040b00b7
 ---> 66d7636b97bc
Step 7/8 : ENTRYPOINT [ "python" ]
 ---> Running in bdc1c83815e1
Removing intermediate container bdc1c83815e1
 ---> 73cefc38ac1c
Step 8/8 : CMD [ "app.py" ]
 ---> Running in a784d430dd6f
Removing intermediate container a784d430dd6f
 ---> d8b6b83763a5
Successfully built d8b6b83763a5
Successfully tagged app:latest
kunals-mbp:web kunalmalhotra$
```

Run your container locally and test

After you build your image succesfully, type: docker run -d -p 5000:5000 app

This command will create a container that contains all the application code anddependencies from the image and runs it locally.

```
kunals-mbp:web kunalmalhotra$ docker run -d -p 5000:5000 app
3c2bbf86f758e9a606006eb52a2ef389ea8400eb88263137ca5543c60c616247
kunals-mbp:web kunalmalhotra$ docker ps
CONTAINER ID        IMAGE               COMMAND             CREATED             STATUS              PORTS                    NAMES
3c2bbf86f758        app                 "python app.py"     Less than a second ago   Up 5 seconds        0.0.0.0:5000->5000/tcp   compassionate_keldysh
kunals-mbp:web kunalmalhotra$
```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A container packages up code and its dependencies so the application runs quickly and reliably from one computing environment to another. Learn more
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NAME
IMAGE
STATUS
PORT(S)
STARTED
ACTIONS
intelligent_hellman
6afd3da672fd
app:skill
Exited (255)
3000:5000
hopeful_rubin
346e5027adba
app:skill
Exited (137)
5000:5000
condescending_driscoll
13067f6a8a8b
app:skill
Exited (137)
5000:5000
skill
92937558e055
<none>:<none>
Exited (1)
5000:5000
repo
d12effa8f082
alpine/git:latest
Exited (128)
Showing 5 items
RAM 1.36GB
CPU 0.21%
Connected to Hub
v4.13.0
Type here to search
29°C
ENG
18:20
18-11-2022