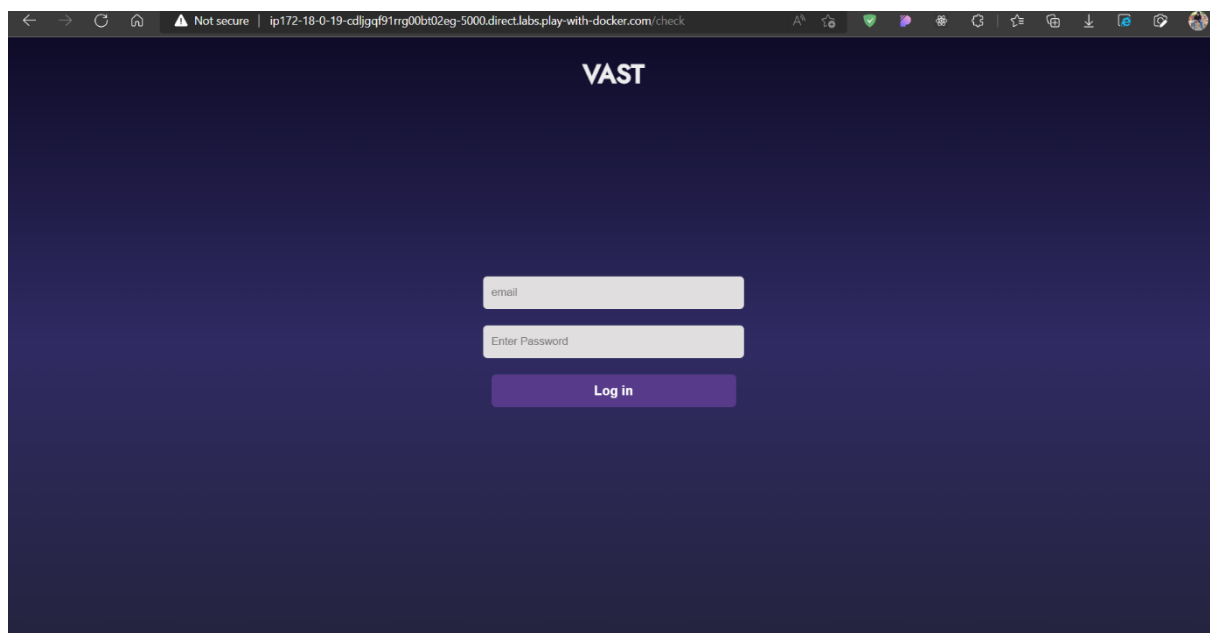
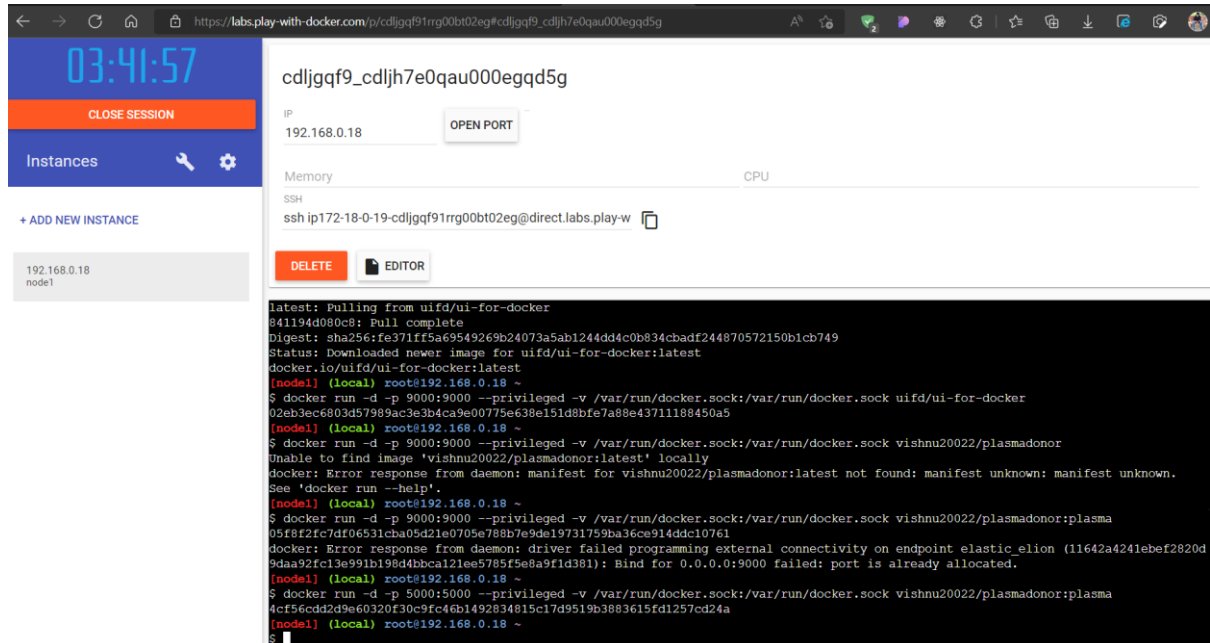
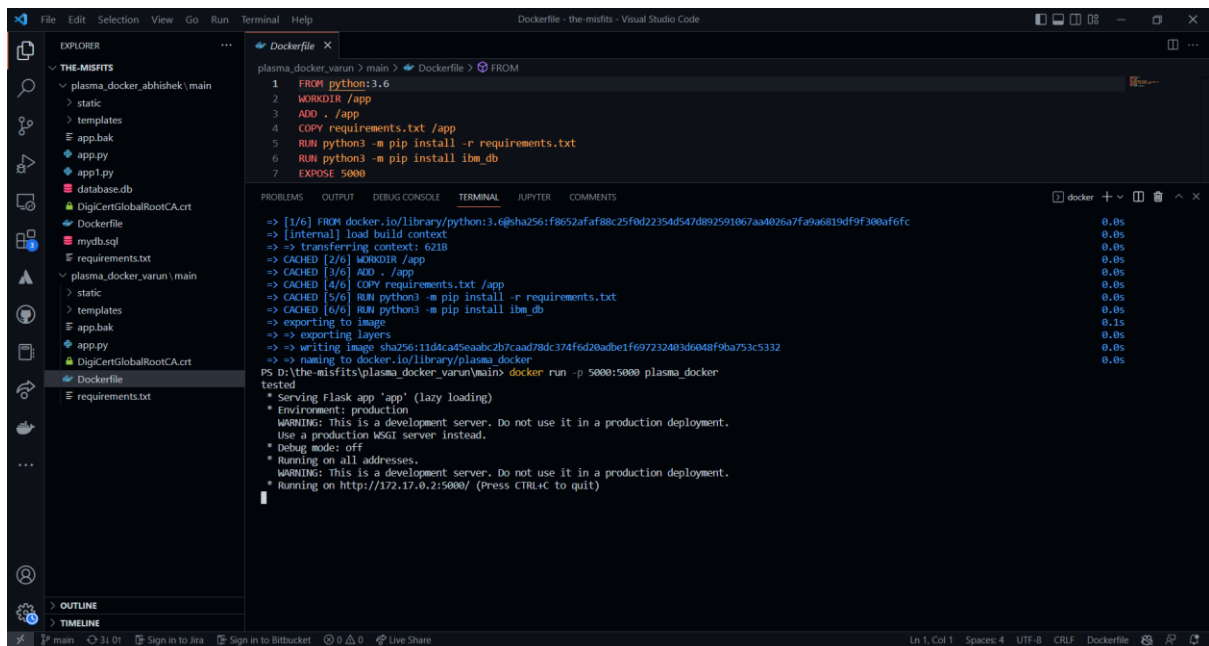


Assignment 4

Pull an Image from docker hub and run it in docker playground



Create a docker file for the application and deploy it in Docker desktop application

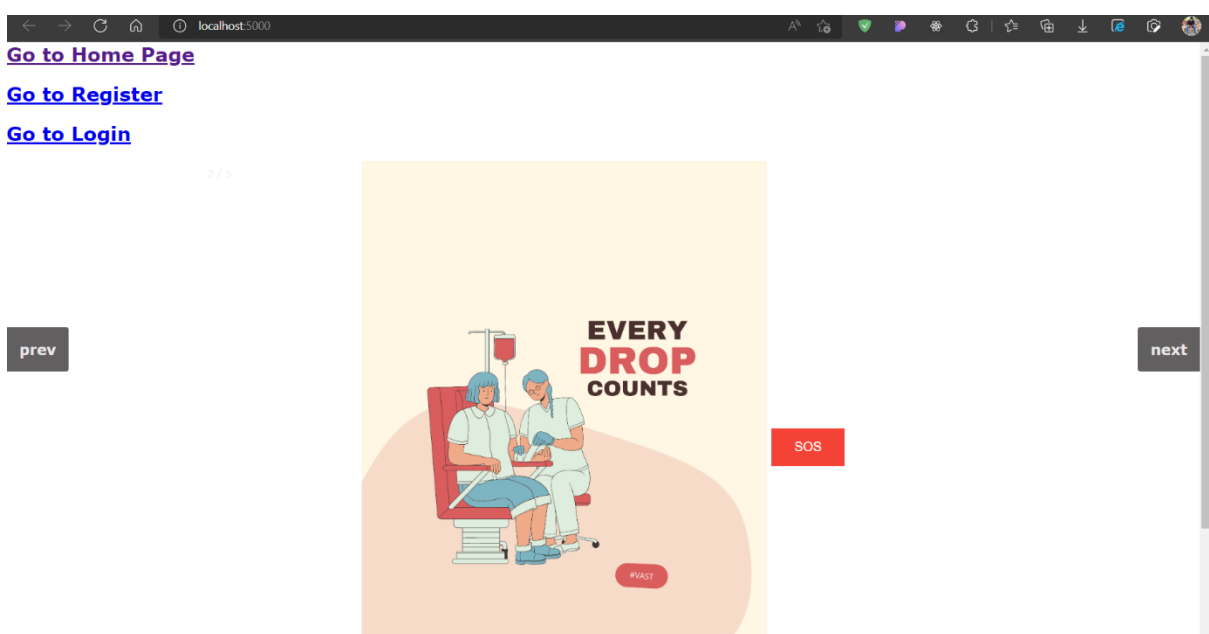
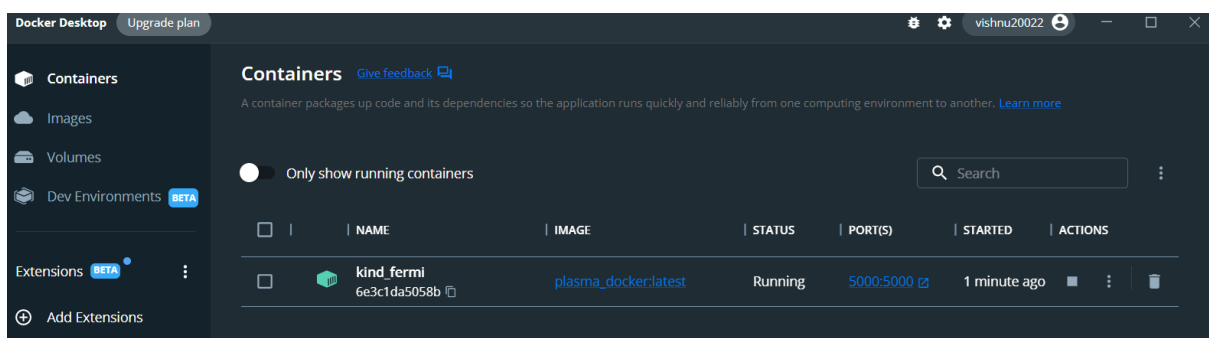


The screenshot shows the Visual Studio Code interface with a Dockerfile open in the editor. The Dockerfile contains the following instructions:

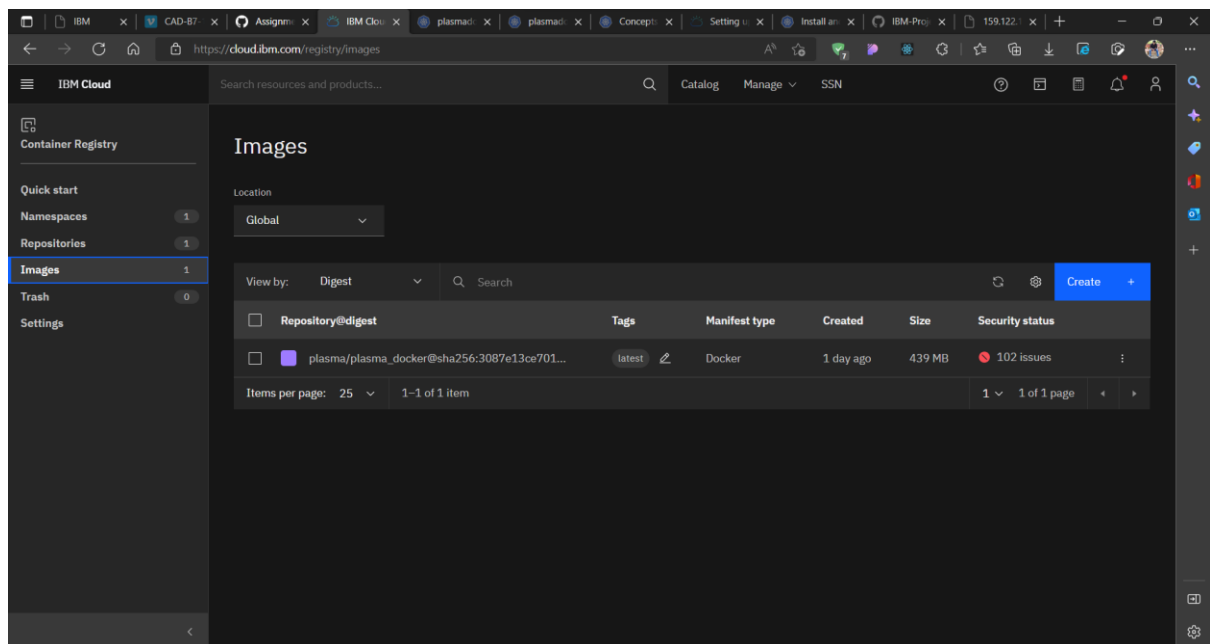
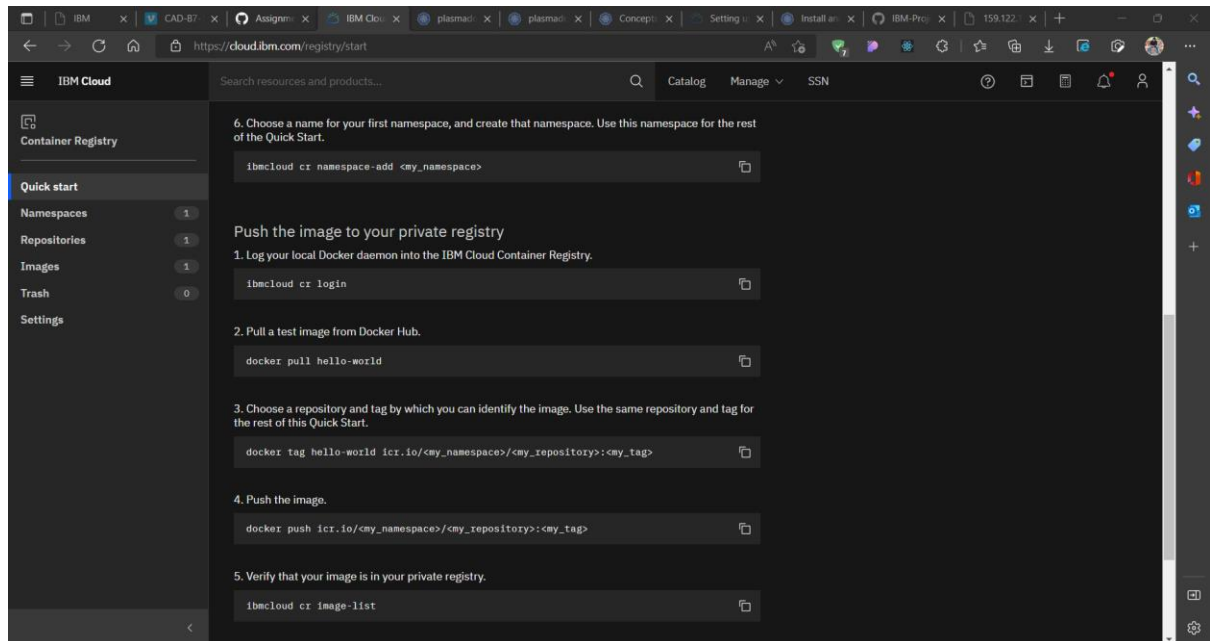
```
1 FROM python:3.6
2 WORKDIR /app
3 ADD . /app
4 COPY requirements.txt /app
5 RUN python3 -m pip install -r requirements.txt
6 RUN python3 -m pip install ibm_db
7 EXPOSE 5000
```

The terminal output shows the build process and the command to run the container:

```
plasma_docker_varun > main > Dockerfile > FROM
-> [1/6] FROM docker.io/library/python:3.6@sha256:f8652afaf88c25f0d22354d547d892591067aa4026a7fa9a6819df9f300af6fc 0.0s
-> [internal] load build context 0.0s
-> -> transferring context: 621B 0.0s
-> CACHED [2/6] WORKDIR /app 0.0s
-> CACHED [3/6] ADD . /app 0.0s
-> CACHED [4/6] COPY requirements.txt /app 0.0s
-> CACHED [5/6] RUN python3 -m pip install -r requirements.txt 0.0s
-> CACHED [6/6] RUN python3 -m pip install ibm_db 0.0s
-> exporting to image 0.1s
-> writing image sha256:11d4ca45eaabc2b7caad78dc374fd20adbe1f697232403d6048f9ba753c5332 0.0s
-> naming to docker.io/library/plasma_docker 0.0s
PS D:\the-misfits\plasma_docker_varun\main> docker run -p 5000:5000 plasma_docker
tested
* Serving Flask app 'app' (lazy loading)
* Environment: production
WARNING: This is a development server. Do not use it in a production deployment.
Use a production WSGI server instead.
* Debug modes: off
* Running on all addresses.
WARNING: This is a development server. Do not use it in a production deployment.
* Running on http://172.17.0.2:5000/ (Press CTRL+C to quit)
```



Create an IBM container registry and deploy the app



Create a Kubernetes cluster in IBM cloud and deploy image and expose the same app to run in nodeport

```
Windows PowerShell
Session Affinity: None
Events:
PS C:\Users\srivi> ibmcloud ks cluster ls
OK
Name      ID      State    Created    Workers    Location    Version    Resource Group Name    Provider
plasmadonor cdlui2gf0lvv2pci4kg normal    19 hours ago 1          ams         1.24.7_1542    Default                classic
PS C:\Users\srivi> kubectl get pods
No resources found in default namespace.
PS C:\Users\srivi> kubectl create deployment plasmadonor-deploy --image=icr.io/plasma/plasma_docker@sha256:3087e13ce7010ae2cbd5255ef61641fbf16e9da865a4b097a
b6926277a621996
deployment.apps/plasmadonor-deploy created
PS C:\Users\srivi> kubectl get deployments
NAME      READY    UP-TO-DATE    AVAILABLE    AGE
plasmadonor-deploy 1/1      1              1            13s
PS C:\Users\srivi> kubectl expose deployment/plasmadonor-deploy --type="NodePort" --port 5000
service/plasmadonor-deploy exposed
PS C:\Users\srivi> kubectl describe service plasmadonor-deploy
Name:      plasmadonor-deploy
Namespace: default
Labels:    app=plasmadonor-deploy
Annotations: <none>
Selector:  app=plasmadonor-deploy
Type:      NodePort
IP Family Policy: SingleStack
IP Families: IPv4
IP:         172.21.208.227
IPs:        172.21.208.227
Port:       <unset> 5000/TCP
TargetPort: 5000/TCP
NodePort:   <unset> 30145/TCP
Endpoints:  172.30.101.141:5000
Session Affinity: None
External Traffic Policy: Cluster
Events:     <none>
PS C:\Users\srivi> ibmcloud cs workers --cluster cdlui2gf0lvv2pci4kg
OK
ID      Public IP      Private IP      Flavor      State      Status      Zone      Version
kube-cdlui2gf0lvv2pci4kg-plasmadonor-default-0000003c 159.122.183.185 10.144.214.235 free        normal     Ready      mil01     1.24.7_1543
PS C:\Users\srivi>
```

Go to Home Page

Go to Register

Go to Login

PLASMA DONORS ARE ESSENTIAL

55% OF TOTAL BLOOD PLASMA

WHAT IS PLASMA? Plasma is the straw-colored liquid portion of blood composed of water, salts, and proteins which contains numerous proteins essential for proper functioning of the body. INSUFFICIENT LEVELS OF BLOOD PLASMA PROTEIN prevents the body from carrying out vital functions, causing a VARIETY OF ENDORGE AND LIFE-THREATENING MEDICAL CONDITIONS.

WHAT IS SOURCE PLASMA? Source plasma is plasma that is collected from healthy, compensated donors and is used EXCLUSIVELY TO MAKE PLASMA PROTEIN THERAPIES.

WHO CAN DONATE SOURCE PLASMA? Source plasma donors undergo a RIGOROUS DONATION SCREENING PROCESS, which includes donor history, and must maintain a healthy lifestyle to remain a qualified donor.

PLASMA DONOR ELIGIBILITY CRITERIA MUST BE:

- 18-60 YEARS OLD
- 175-185 CM (5'8"-6'1")
- MEDICALLY SOUND
- WEIGHING AT LEAST 50 KG (110 LBS)
- NO SPECIFIC MEDICAL CONDITIONS

WHAT IS COVID-19 PLASMA? COVID-19 plasma is plasma collected from PATIENTS WHO HAVE RECOVERED FROM COVID-19. In addition to the proteins found in plasma, COVID-19 PLASMA CONTAINS PATIENT-SPECIFIC ANTIBODIES.

WHO CAN DONATE COVID-19 PLASMA? In addition to meeting source plasma donor eligibility criteria, individuals must have had a POSITIVE DIAGNOSIS OF COVID-19 by a laboratory test and must have COMPLETE RESOLUTION OF SYMPTOMS FOR AT LEAST 10 DAYS prior to donation.

THERAPIES MADE FROM SOURCE PLASMA TREAT:

- Alpha-1 Antitrypsin Deficiency
- Bleeding disorders, such as Hemophilia
- Chronic Inflammatory Demyelinating Polyneuropathy
- Hematologic Disorders
- Primary and Secondary Immune Deficiencies
- Acute conditions, such as shock, trauma, and burns

THERAPIES MADE FROM COVID-19 PLASMA COULD TREAT:

- Patients with COVID-19
- Pre- and post-exposure prophylaxis
- Those at high risk for contracting COVID-19, such as: individuals with underlying conditions or chronic lung disease
- Health care workers
- Public health service staff

To find where you can donate Source and COVID-19 plasma, visit: www.DonatingPlasma.org

EVERY DONATION

SOURCE PLASMA DONATIONS NEEDED TO TREAT 1 PATIENT FOR 1 YEAR*

130: 900: 1200:

SOS