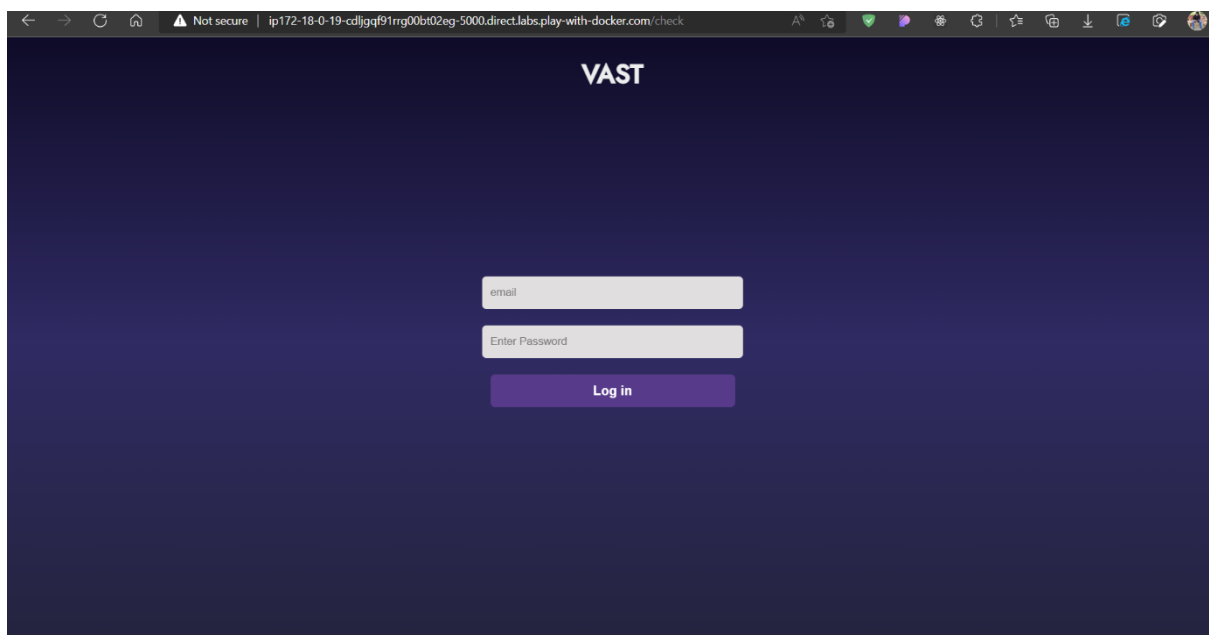
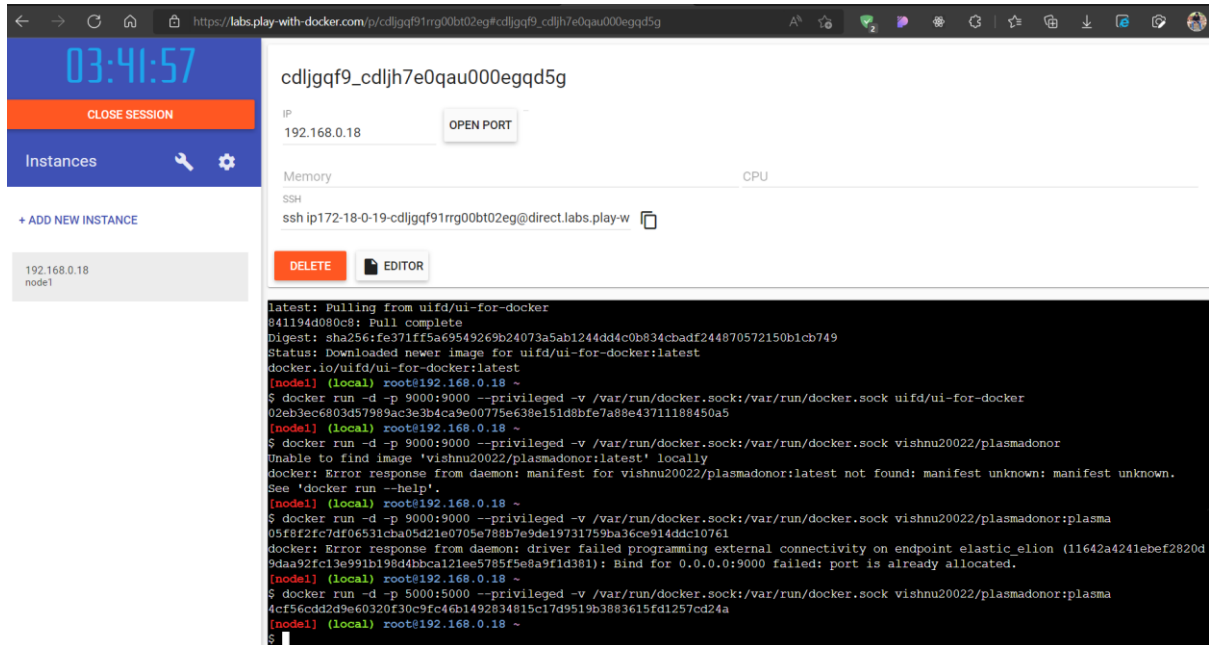
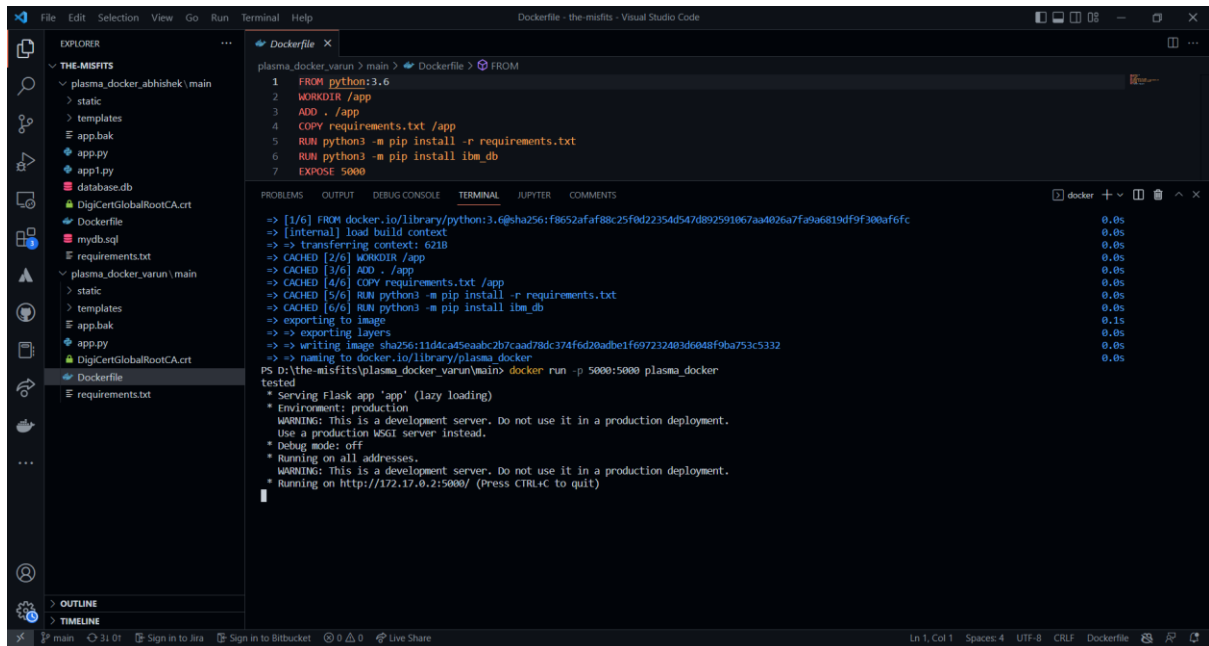


Assignment 4

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

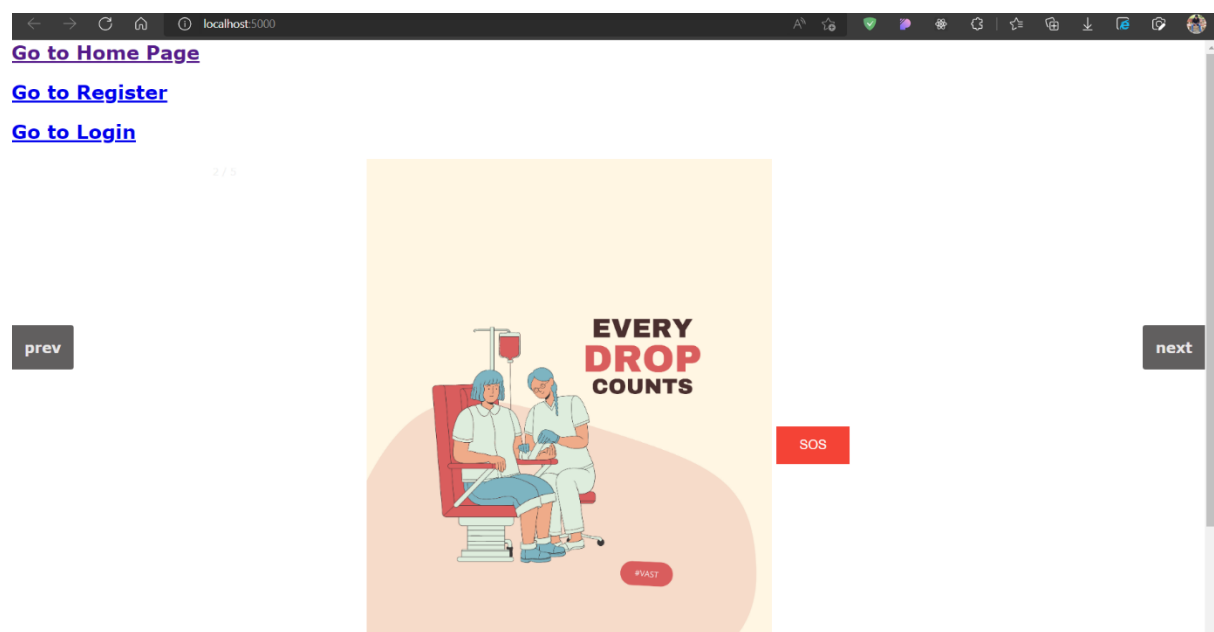
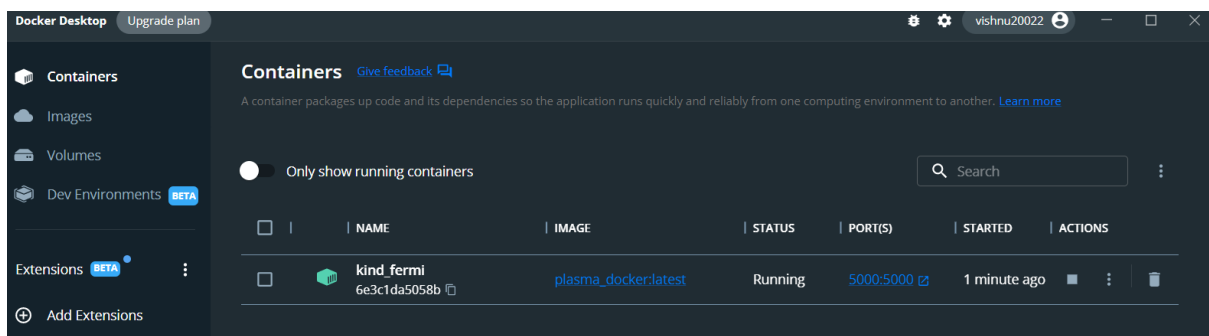


```
File Edit Selection View Go Run Terminal Help
Dockerfile - the-misfits - Visual Studio Code

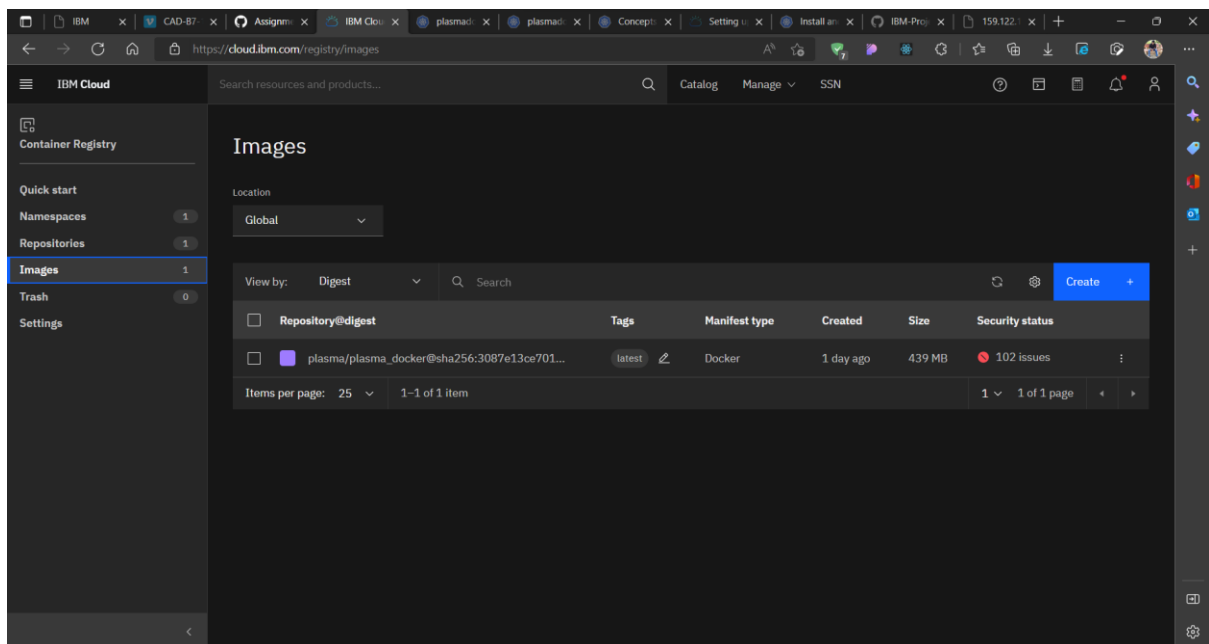
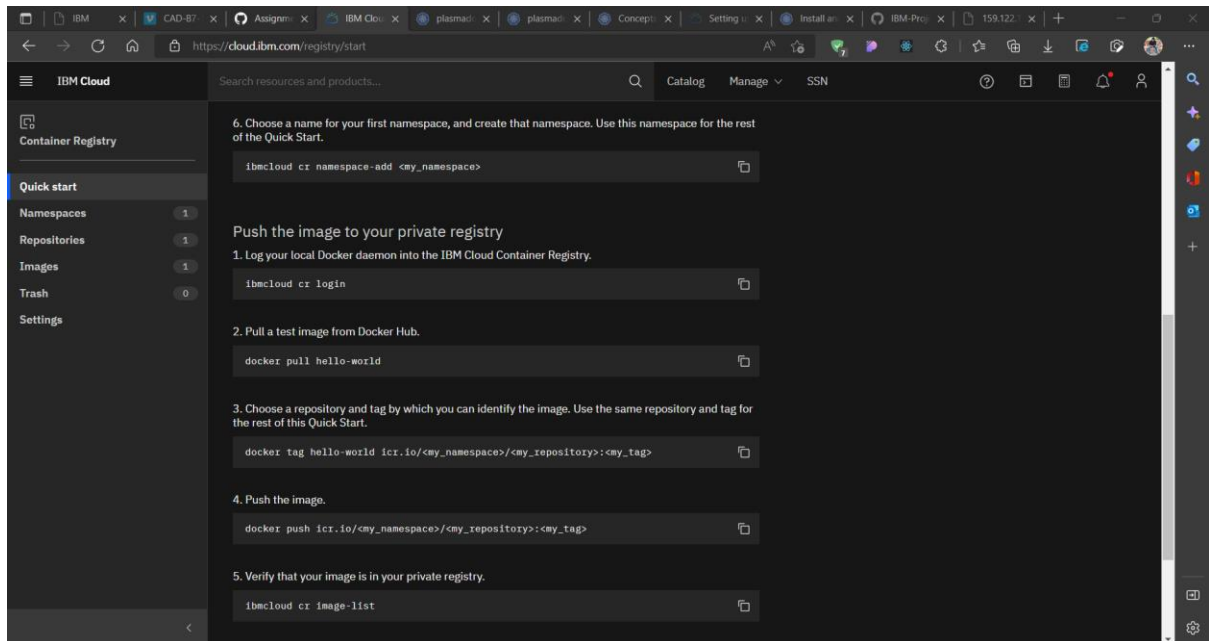
EXPLORER
  THE-MISFITS
    plasma_docker_varun\main
      static
      templates
      app.bak
      app.py
      app1.py
      database.db
      DigiCertGlobalRootCA.crt
      Dockerfile
      mydb.sql
      requirements.txt
    plasma_docker_varun\main
      static
      templates
      app.bak
      app.py
      app1.py
      database.db
      DigiCertGlobalRootCA.crt
      Dockerfile
      requirements.txt

Dockerfile
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

TERMINAL
-> [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: <none>
PS C:\Users\srivi> ibmcloud ks cluster ls
OK
Name ID cdlui2gf0lvv2pci4kg State Created 19 hours ago Workers 1 Location ams Version 1.24.7_1542 Resource Group Name Default Provider 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@sha256:3687e13ce7010ae2cbd5255ef61641fbf16e9da865a4b097a
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 kube-cdlui2gf0lvv2pci4kg-plasmadonor-default-0000003c Public IP 159.122.183.105 Private IP 10.144.214.235 Flavor free State normal Status Ready Zone mil01 Version 1.24.7_1543
PS C:\Users\srivi>
```

Go to Home Page

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SOS

PLASMA DONORS ARE ESSENTIAL

WHAT IS PLASMA?
Plasma is the clear-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 KEY PLASMA PROTEIN prevents the body from carrying out vital functions, causing a VARIETY OF ENDING 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.

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.

PLASMA DONOR ELIGIBILITY DONORS MUST BE:

- 18+ YEARS OLD
- 175-185 CM (5'6"-6'0")
- MEDICALLY SOUND
- WEIGH AT LEAST 110 LBS (50 KG)
- NO SPECIFIC RISKS

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:

- Acute & Antigenic Deficiency
- Bleeding disorders, such as Hemophilia
- Chronic Inflammatory Demyelinating Polyneuropathy
- Hematologic Dysplasias
- 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: