Pull the docker image urmsandeep/ai-artistic-style-service

```
(myenv) PS D:\BMSCE\7th sem\Devops\assignment_3\ai_artistci> docker pull urmsandeep/ai-artistic-style-service
Using default tag: latest
latest: Pulling from urmsandeep/ai-artistic-style-service
bc0965b23a04: Pull complete
9b871d410cbf: Pull complete
8bfa778b5b23: Pull complete
258b25b92655: Pull complete
8f839e8d10a8: Pull complete
76c3a07be88c: Pull complete
ae9ac8307df2: Downloading [====>                                    ]  282.3MB/3.097GB
```
Ln 65, Col 2   Spaces: 4   UTF-8   CRLF   Groovy

```
(myenv) PS D:\BMSCE\7th sem\Devops\assignment_3\ai_artistci> docker pull urmsandeep/ai-artistic-style-service
Using default tag: latest
latest: Pulling from urmsandeep/ai-artistic-style-service
bc0965b23a04: Pull complete
9b871d410cbf: Pull complete
8bfa778b5b23: Pull complete
258b25b92655: Pull complete
8f839e8d10a8: Pull complete
76c3a07be88c: Pull complete
ae9ac8307df2: Pull complete
Digest: sha256:b9c40b3bda1d4eea99ec4adb195d73d40ea2ddfd6b9ee662b69438a1b7da4756
Status: Downloaded newer image for urmsandeep/ai-artistic-style-service:latest
docker.io/urmsandeep/ai-artistic-style-service:latest

What's next:
    View a summary of image vulnerabilities and recommendations → docker scout quickview urmsandeep/ai-artistic-style-service
(myenv) PS D:\BMSCE\7th sem\Devops\assignment_3\ai_artistci> []
```

Run docker image urmsandeep/ai-artistic-style-service

```
What's next:
    View a summary of image vulnerabilities and recommendations → docker scout quickview urmsandeep/ai-artistic-style-service
(myenv) PS D:\BMSCE\7th sem\Devops\assignment_3\ai_artistci> docker run -d -p 5001:5001 urmsandeep/ai-artistic-style-service
c788f1afbf1864d34ce8dce3a0a4bebf7200743834bc8d87a8558223c06de025
(myenv) PS D:\BMSCE\7th sem\Devops\assignment_3\ai_artistci>
```

Ensure that container is running

```
c788f1afbf1864d34ce8dce3a0a4bebf7200743834bc8d87a8558223c06de025
(myenv) PS D:\BMSCE\7th sem\Devops\assignment_3\ai_artistci> docker ps
CONTAINER ID   IMAGE                                        COMMAND                CREATED         STATUS          PORTS
     NAMES
c788f1afbf18   urmsandeep/ai-artistic-style-service   "python ai_artistic_…"   27 seconds ago   Up 27 seconds   0.0.0.0:5001->5001/t
cp   ecstatic_bohr
(myenv) PS D:\BMSCE\7th sem\Devops\assignment_3\ai_artistci>
```
Ln 5, Col 1   Spaces: 2   UTF-8   CRLF   {} YAML   Ninja   prometheus.json

Use curl to invoke the service on port 5001, giving path to input image "input.jpg'

```
(myenv) PS D:\BMSCE\7th sem\Devops\assignment_3\ai_artistci> curl.exe -X POST http://127.0.0.1:5001/styleTransfer -F "image=@input.j
pg" -o styled_image.jpg
>>
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100 2619k  100 25358  100 2594k  65188   6670k --:--:-- --:--:-- --:--:-- 6751k
(myenv) PS D:\BMSCE\7th sem\Devops\assignment_3\ai_artistci>
```
Whole Image   4928x3264   2.53MB   Ninja

10:57 PM

Docker-compose.yml file

```yaml
version: "3.8"
services:
  ai-artistic-style-service:
    image: urmsandeep/ai-artistic-style-service:latest
    container_name: ai-artistic-style-service
    ports:
      - "5001:5001"
    restart: always
    volumes:
      - ./input_images:/app/input_images
      - ./output_images:/app/output_images

  prometheus:
    image: prom/prometheus
    container_name: prometheus
    volumes:
      - ./prometheus.yml:/etc/prometheus/prometheus.yml
    ports:
      - "9090:9090"

  grafana:
    image: grafana/grafana
    container_name: grafana
    ports:
      - "3000:3000"
    volumes:
      - grafana-data:/var/lib/grafana

volumes:
  grafana-data:
```

Start the services and verify the containers

```
(myenv) PS D:\BMSCE\7th sem\Devops\assignment_3\ai_artistci> docker-compose up --build -d
time="2024-12-28T23:20:12+05:30" level=warning msg="D:\\BMSCE\\7th sem\\Devops\\assignment_3\\ai_artistci\\docker-comp
ose.yml: the attribute `version` is obsolete, it will be ignored, please remove it to avoid potential confusion"
[+] Running 2/3
 ✓ Container grafana                        Running                                                        0.0s
 ✓ Container prometheus                     Running                                                        0.0s
 - Container ai-artistic-style-service      Starting                                                       0.1s
Error response from daemon: driver failed programming external connectivity on endpoint ai-artistic-style-service (1cd
b19c94b9cb12f7098ba327dfe8ee49add60bc2a6ebdabe417a7857f41c2d4): Bind for 0.0.0.0:5001 failed: port is already allocate
d
(myenv) PS D:\BMSCE\7th sem\Devops\assignment_3\ai_artistci> docker ps
CONTAINER ID   IMAGE                                    COMMAND                CREATED         STATUS          PORTS
               NAMES
396e203eef6a   grafana/grafana                          "/run.sh"              2 minutes ago   Up 2 minutes    0.0.0.0:
3000->3000/tcp   grafana
febec66378c1   prom/prometheus                          "/bin/prometheus --c…" 2 minutes ago   Up 2 minutes    0.0.0.0:
9090->9090/tcp   prometheus
4f87eb45dbff   urmsandeep/ai-artistic-style-service     "python ai_artistic_…" 8 minutes ago   Up 8 minutes    0.0.0.0:
5001->5001/tcp   blissful_neumann
(myenv) PS D:\BMSCE\7th sem\Devops\assignment_3\ai_artistci>
```

Prometheus.yml

```
prometheus.json - Prometheus configuration file (prometheus.json)
1  scrape_configs:
2    - job_name: "ai-artistic-style-service"
3      static_configs:
4        - targets: ["ai-artistic-style-service:5001"]
5
```

Restart Docker Compose

```
(myenv) PS D:\BMSCE\7th sem\Devops\assignment_3\ai_artistci> docker-compose down
time="2024-12-28T23:21:06+05:30" level=warning msg="D:\\BMSCE\\7th sem\\Devops\\assignment_3\\ai_artistci\\docker-comp
ose.yml: the attribute `version` is obsolete, it will be ignored, please remove it to avoid potential confusion"
[+] Running 4/4
 ✓ Container grafana                    Removed                                                                    0.6s
 ✓ Container ai-artistic-style-service  Removed                                                                    0.1s
 ✓ Container prometheus                 Removed                                                                    0.7s
 ✓ Network ai_artistci_default          Removed                                                                    0.3s
(myenv) PS D:\BMSCE\7th sem\Devops\assignment_3\ai_artistci> docker-compose up -d
time="2024-12-28T23:21:09+05:30" level=warning msg="D:\\BMSCE\\7th sem\\Devops\\assignment_3\\ai_artistci\\docker-comp
ose.yml: the attribute `version` is obsolete, it will be ignored, please remove it to avoid potential confusion"
[+] Running 4/4
 ✓ Network ai_artistci_default          Created                                                                    0.1s
 ✓ Container prometheus                 Started                                                                    0.8s
 ✓ Container grafana                    Started                                                                    0.6s
 ✓ Container ai-artistic-style-service  Started                                                                    0.8s
(myenv) PS D:\BMSCE\7th sem\Devops\assignment_3\ai_artistci>
```
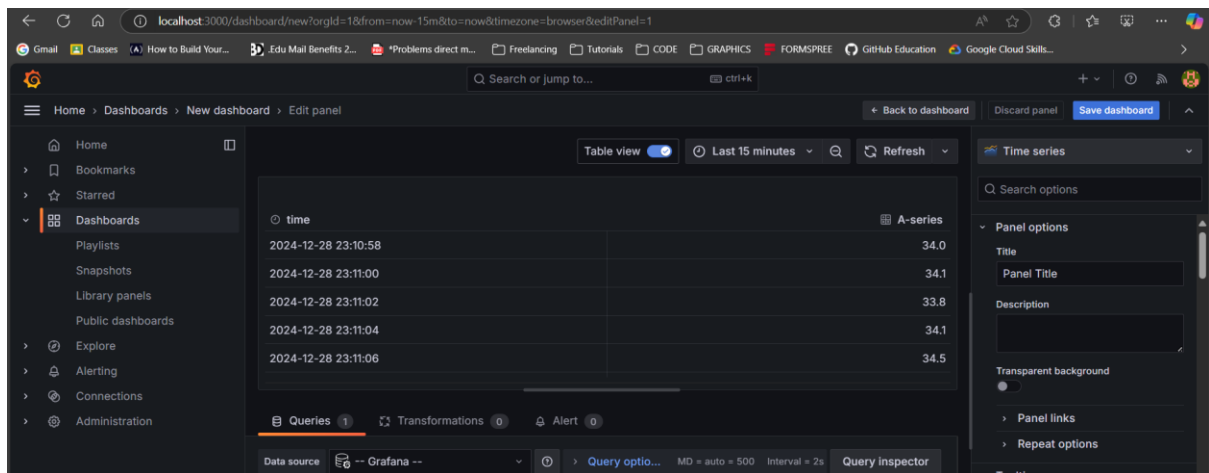
Localhost:9090->Prometheus
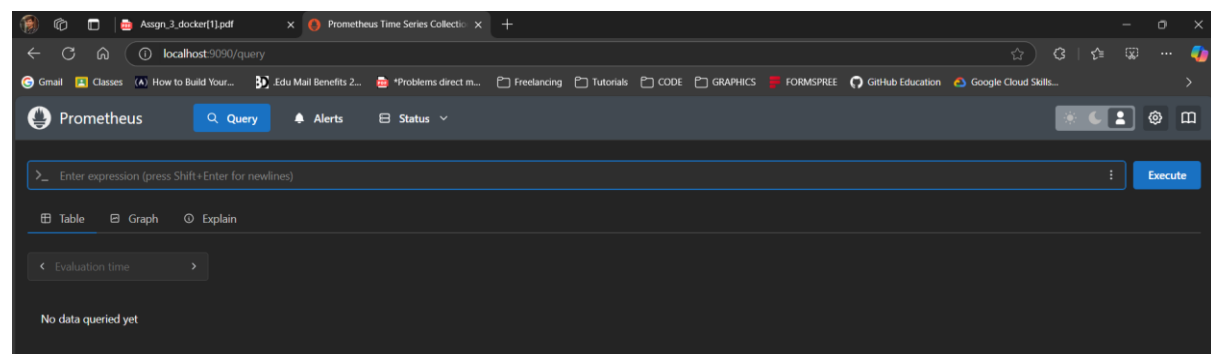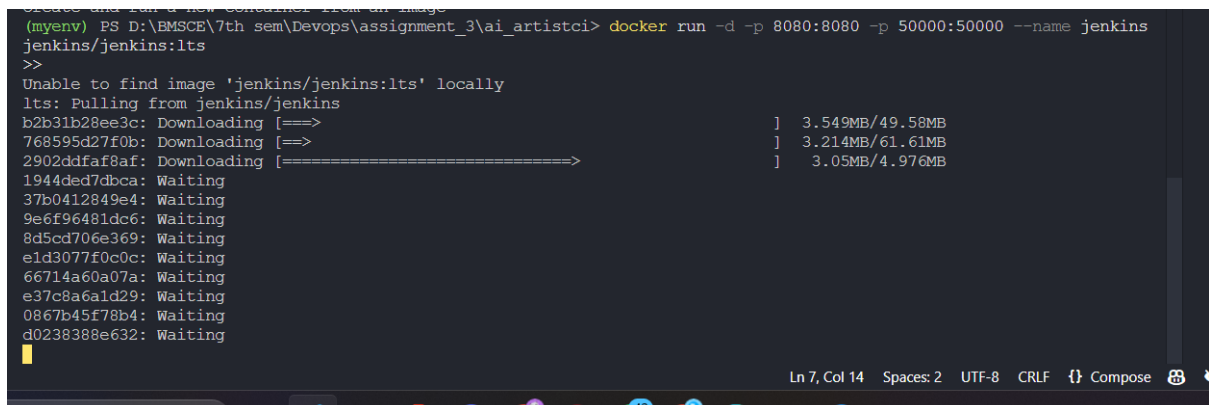
Localhost:3000->Graphana
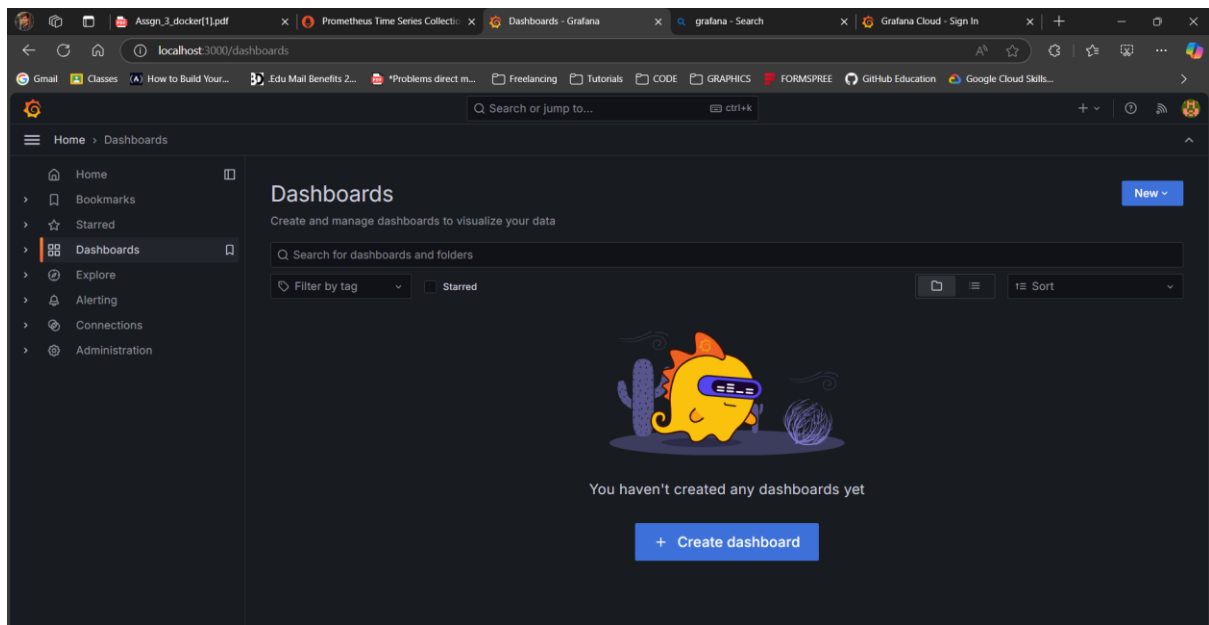
Total API Requests: Query: rate(http_requests_total[1m])

CPUUsage: Query: container_cpu_usage_seconds_total

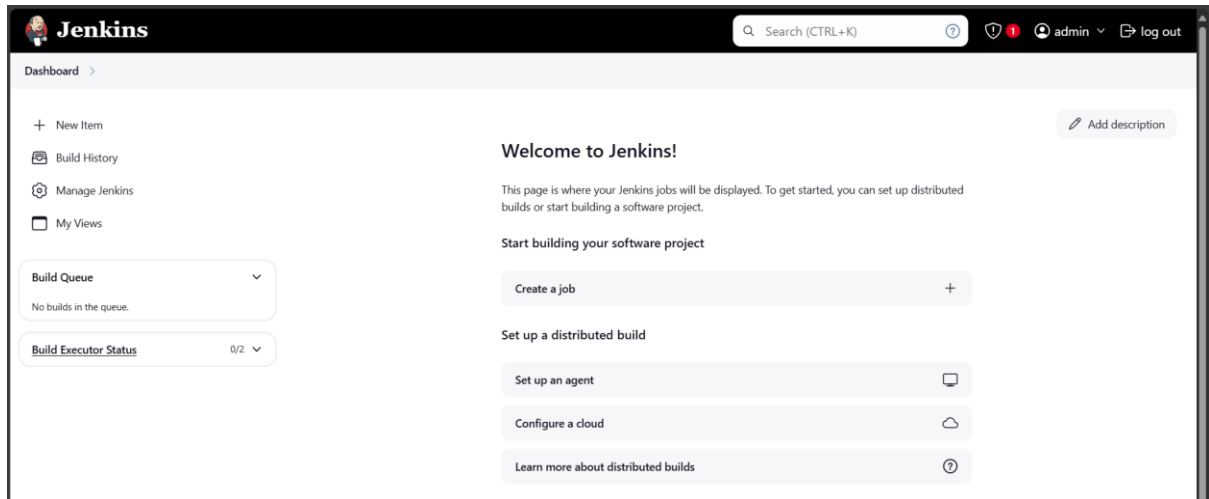Memory Usage: Query: container_memory_usage_bytes

Setting up Jenkins


```
(myenv) PS D:\BMSCE\7th sem\Devops\assignment_3\ai_artistci> docker run -d -p 8080:8080 -p 50000:50000 --name jenkins
jenkins/jenkins:lts
>>
Unable to find image 'jenkins/jenkins:lts' locally
lts: Pulling from jenkins/jenkins
b2b31b28ee3c: Downloading [===>                                  ]  3.549MB/49.58MB
768595d27f0b: Downloading [==>                                   ]  3.214MB/61.61MB
2902ddfaf8af: Downloading [================================>     ]  3.05MB/4.976MB
1944ded7dbca: Waiting
37b0412849e4: Waiting
9e6f96481dc6: Waiting
8d5cd706e369: Waiting
e1d3077f0c0c: Waiting
66714a60a07a: Waiting
e37c8a6a1d29: Waiting
0867b45f78b4: Waiting
d0238388e632: Waiting
```

Adding plugins in Jenkins

Input image :

Output Image: