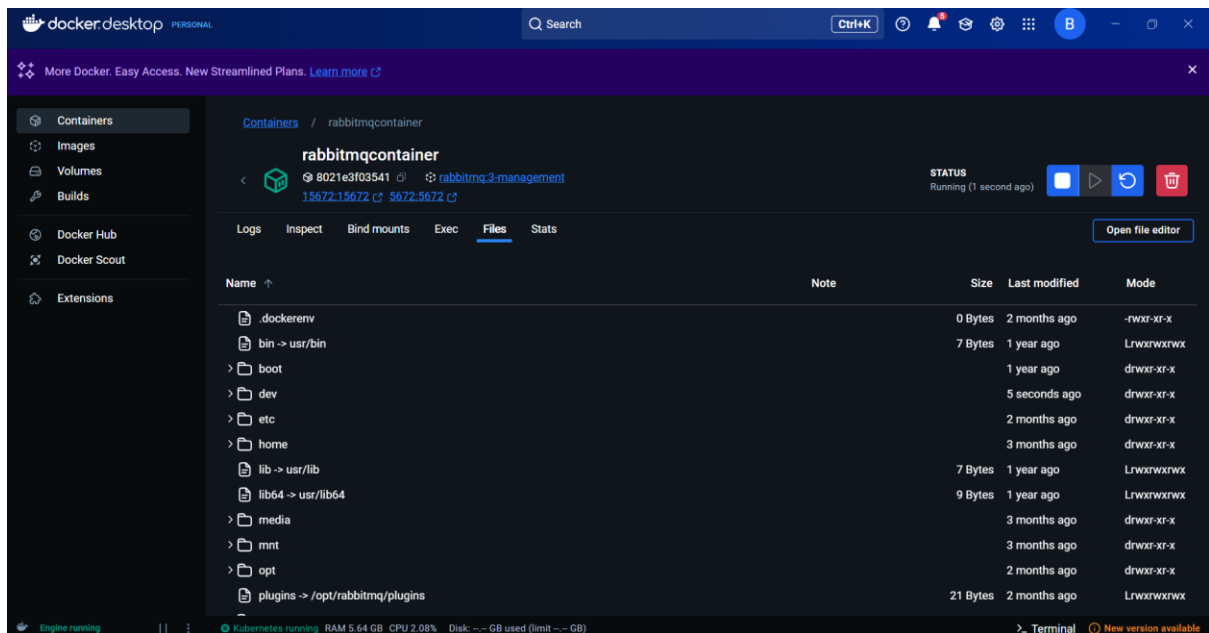NAME :BAHGYA ASKI
SRN:PES2UG22CS127
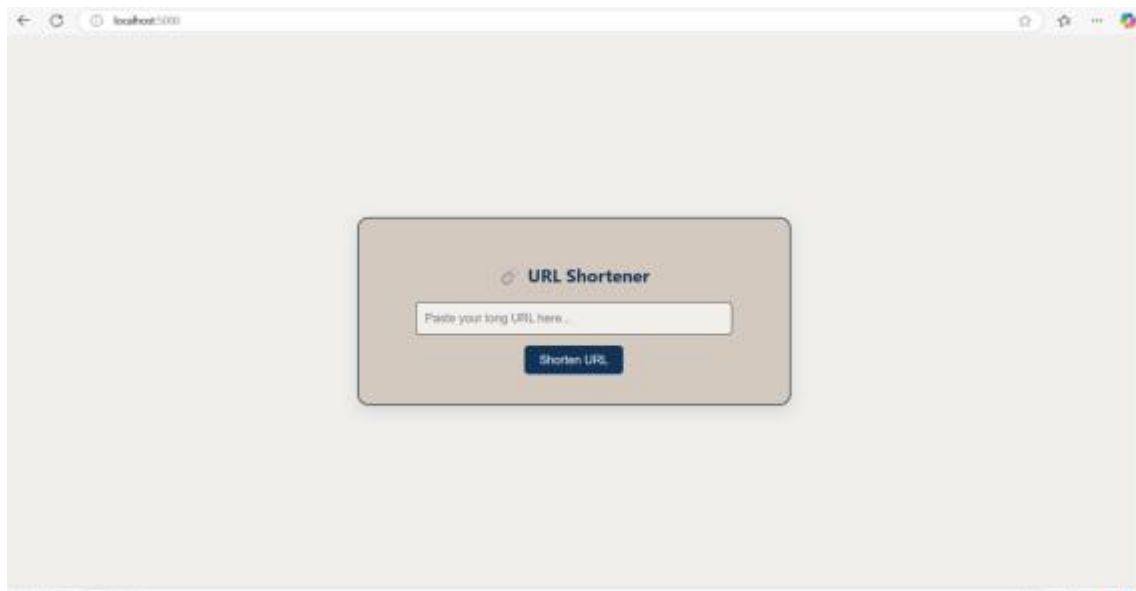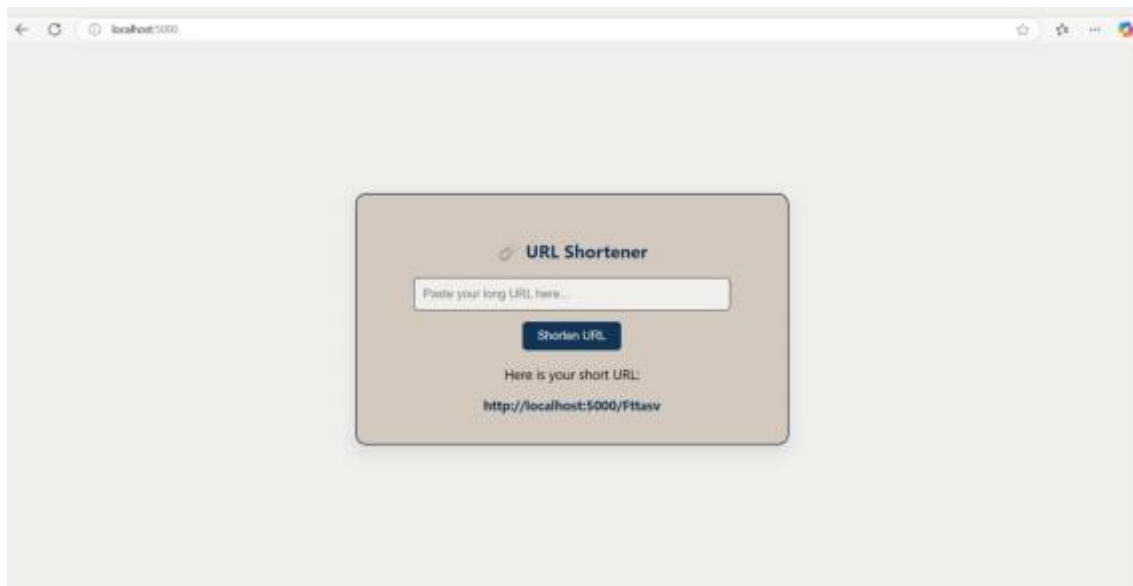SCETION:C

WEEK1:


```
bhagya@BHAGYA:/mnt/c/Users/bhagy/OneDrive - PESUNIVERSITY/Documents/sem-6/url-shortener-project$ docker run -p 5000:5000
url-shortener
 * Serving Flask app 'app.py' (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 mode: 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)
172.17.0.1 - - [24/Apr/2025 01:30:38] "POST /shorten HTTP/1.1" 200 -
```

```
bhagya@BHAGYA:/mnt/c/Users/bhagy/OneDrive - PESUNIVERSITY/Documents/sem-6/url-shortener-project$ curl -X POST http://loc
alhost:5000/shorten -H "Content-Type: application/json" -d '{"long_url": "https://example.com"}'
{"short_url":"http://localhost:5000/QOfmX5"}
bhagya@BHAGYA:/mnt/c/Users/bhagy/OneDrive - PESUNIVERSITY/Documents/sem-6/url-shortener-project$ |
```

WEEK2:


```
bhagya@BHAGYA:/mnt/c/Users/bhagy/OneDrive - PESUNIVERSITY/Documents/sem-6/url-shortener-project$ kubectl get pods
NAME                                READY   STATUS        RESTARTS        AGE
ab-stress-test-2glxs                0/1     Error         0               45h
ab-stress-test-tl8nz                0/1     Error         0               45h
ab-stress-test-v7bwz                0/1     Error         0               45h
redis-58f44d957b-4576b              1/1     Running       8 (75s ago)     24h
redis-deployment-748ffbc5f5-h6tkq   1/1     Running       13 (75s ago)    44h
url-shortener-5f4597c48-7rlwt       1/1     Running       12 (75s ago)    45h
url-shortener-5f4597c48-hqp5m       1/1     Running       12 (75s ago)    45h
url-shortener-5f4597c48-sqm47       1/1     Running       12 (75s ago)    45h
url-shortener-7f6955df87-w6qnj      0/1     ErrImagePull  0               23h
bhagya@BHAGYA:/mnt/c/Users/bhagy/OneDrive - PESUNIVERSITY/Documents/sem-6/url-shortener-project$ kubectl get deployments

NAME               READY   UP-TO-DATE   AVAILABLE   AGE
redis              1/1     1            1           45h
redis-deployment   1/1     1            1           44h
url-shortener      3/3     1            3           45h
bhagya@BHAGYA:/mnt/c/Users/bhagy/OneDrive - PESUNIVERSITY/Documents/sem-6/url-shortener-project$ kubectl get services
NAME                  TYPE        CLUSTER-IP      EXTERNAL-IP   PORT(S)         AGE
kubernetes            ClusterIP   10.96.0.1       <none>        443/TCP         2d1h
redis                 ClusterIP   10.100.177.47   <none>        6379/TCP        45h
redis-service         ClusterIP   10.105.244.64   <none>        6379/TCP        45h
url-shortener         ClusterIP   10.98.73.32     <none>        5000/TCP        23h
url-shortener-service NodePort    10.98.228.1     <none>        80:30007/TCP    45h
```

Week3

E:\URL SHORTNER\PES2UG22CS164_PES2UG22CS127_PES2UG22CS132_PES2UG22CS188_Load-Balanced_URL_Shortener>curl -X POST http://localhost:5000/shorten -H "Content-T
ype: application/json" -d "{\"url\":\"https://pes.edu/\"}"
{"short_url":"http://127.0.0.1:5000/RGoB3F"}

E:\URL SHORTNER\PES2UG22CS164_PES2UG22CS127_PES2UG22CS132_PES2UG22CS188_Load-Balanced_URL_Shortener>curl -X POST http://localhost:5000/shorten -H "Content-T
ype: application/json" -d "{\"url\":\"https://drive.google.com/drive/folders/1T94SU5_zt0TAqVRR-tpbteC4FlOFidBj\"}"
{"short_url":"http://127.0.0.1:5000/Cvsed2"}

E:\URL SHORTNER\PES2UG22CS164_PES2UG22CS127_PES2UG22CS132_PES2UG22CS188_Load-Balanced_URL_Shortener>kubectl exec -it redis-5f86f8f9c7-86gmt -- redis-cli
127.0.0.1:6379> keys *
1) "RGoB3F"
2) "Cvsed2"
127.0.0.1:6379>

E:\URL SHORTNER\PES2UG22CS164_PES2UG22CS127_PES2UG22CS132_PES2UG22CS188_Load-Balanced_URL_Shortener>kubectl get hpa
NAME   REFERENCE   TARGETS   MINPODS   MAXPODS   REPLICAS   AGE
url-shortener   Deployment/url-shortener   cpu: 1%/50%   3   6   3   34h

E:\URL SHORTNER\PES2UG22CS164_PES2UG22CS127_PES2UG22CS132_PES2UG22CS188_Load-Balanced_URL_Shortener>kubectl get hpa
NAME   REFERENCE   TARGETS   MINPODS   MAXPODS   REPLICAS   AGE
url-shortener   Deployment/url-shortener   cpu: 75%/50%   3   6   3   34h

```
E:\URL SHORTNER\PES2UG22CS164_PES2UG22CS127_PES2UG22CS132_PES2UG22CS188_Load-Balanced_URL_Shortener>kubectl logs ab-stress-test-5dj5s
This is ApacheBench, Version 2.3 <$Revision: 1923142 $>
Copyright 1996 Adam Twiss, Zeus Technology Ltd, http://www.zeustech.net/
Licensed to The Apache Software Foundation, http://www.apache.org/

Benchmarking url-shortener-service (be patient)
Completed 500 requests
Completed 1000 requests
Completed 1500 requests
Completed 2000 requests
Completed 2500 requests
Completed 3000 requests
Completed 3500 requests
Completed 4000 requests
Completed 4500 requests
Completed 5000 requests
Finished 5000 requests


Server Software:        Werkzeug/3.1.3
Server Hostname:        url-shortener-service
Server Port:            5000

Document Path:          /
Document Length:        207 bytes

Concurrency Level:      100
Time taken for tests:   21.674 seconds
Complete requests:      5000
Failed requests:        0
Non-2xx responses:      5000
Total transferred:      1940000 bytes
HTML transferred:       1035000 bytes
Requests per second:    230.69 [#/sec] (mean)
Time per request:       433.486 [ms] (mean)
Time per request:       4.335 [ms] (mean, across all concurrent requests)
Transfer rate:          87.41 [Kbytes/sec] received

Connection Times (ms)
              min  mean[+/-sd] median   max
Connect:        0    4  13.4      1      95
Processing:    13  414 418.0    301    3384
Waiting:        1  344 412.6    211    3308
Total:         13  418 418.9    302    3384

Percentage of the requests served within a certain time (ms)
  50%    302
  66%    411
  75%    505
  80%    598
  90%    802
  95%   1105
  98%   1767
  99%   2294
 100%   3384 (longest request)
```