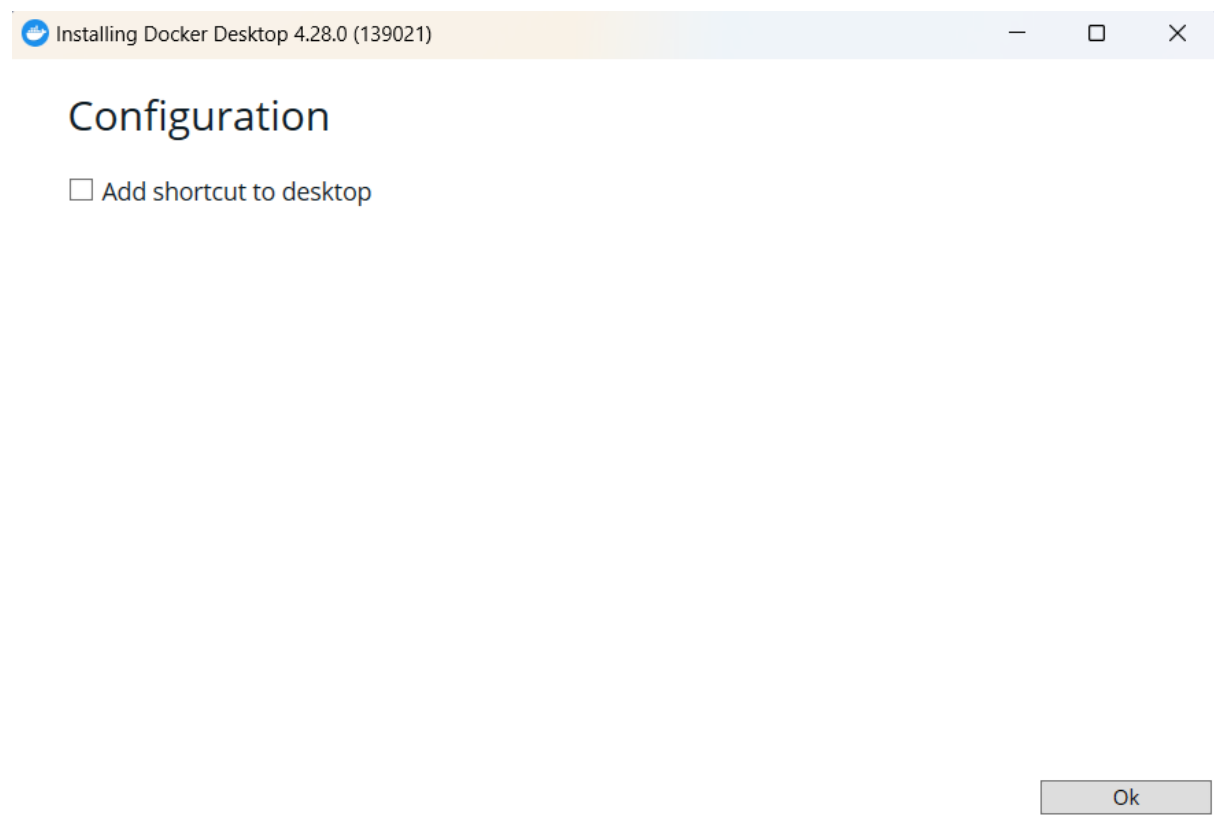


## GitHub link:

[https://github.com/Cikky0209/SIT323\\_ZeyuChen.git](https://github.com/Cikky0209/SIT323_ZeyuChen.git)

## Instructions:

### 1. Install Docker



# Docker Desktop 4.28.0

## Unpacking files...

Unpacking file: resources/docker-desktop.iso  
Unpacking file: resources/ddvp.ico  
Unpacking file: resources/config-options.json  
Unpacking file: resources/componentsVersion.json  
Unpacking file: resources/bin/docker-compose  
Unpacking file: resources/bin/docker  
Unpacking file: resources/.gitignore  
Unpacking file: InstallerCli.pdb  
Unpacking file: InstallerCli.exe.config  
Unpacking file: frontend/vk\_swiftshader\_icd.json  
Unpacking file: frontend/v8\_context\_snapshot.bin  
Unpacking file: frontend/snapshot\_blob.bin  
Unpacking file: frontend/resources/regedit/vbs/util.vbs



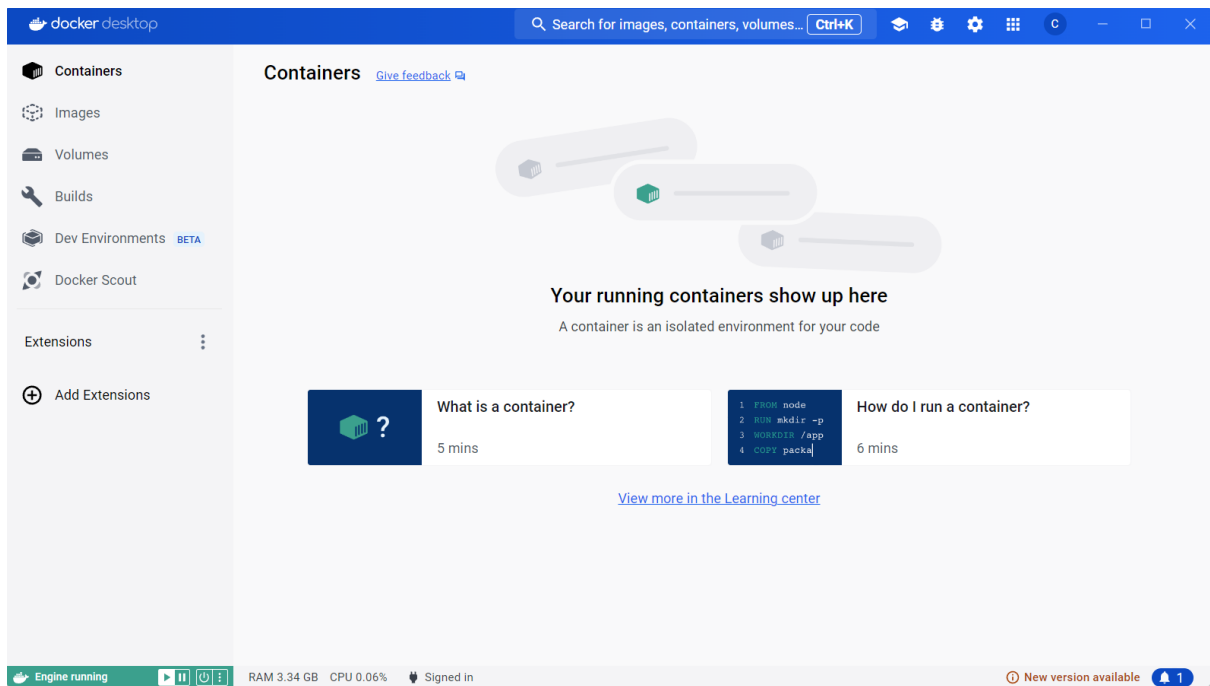
### Welcome to Docker Desktop

Sign in to connect to your Docker Desktop subscription or  
access online features.

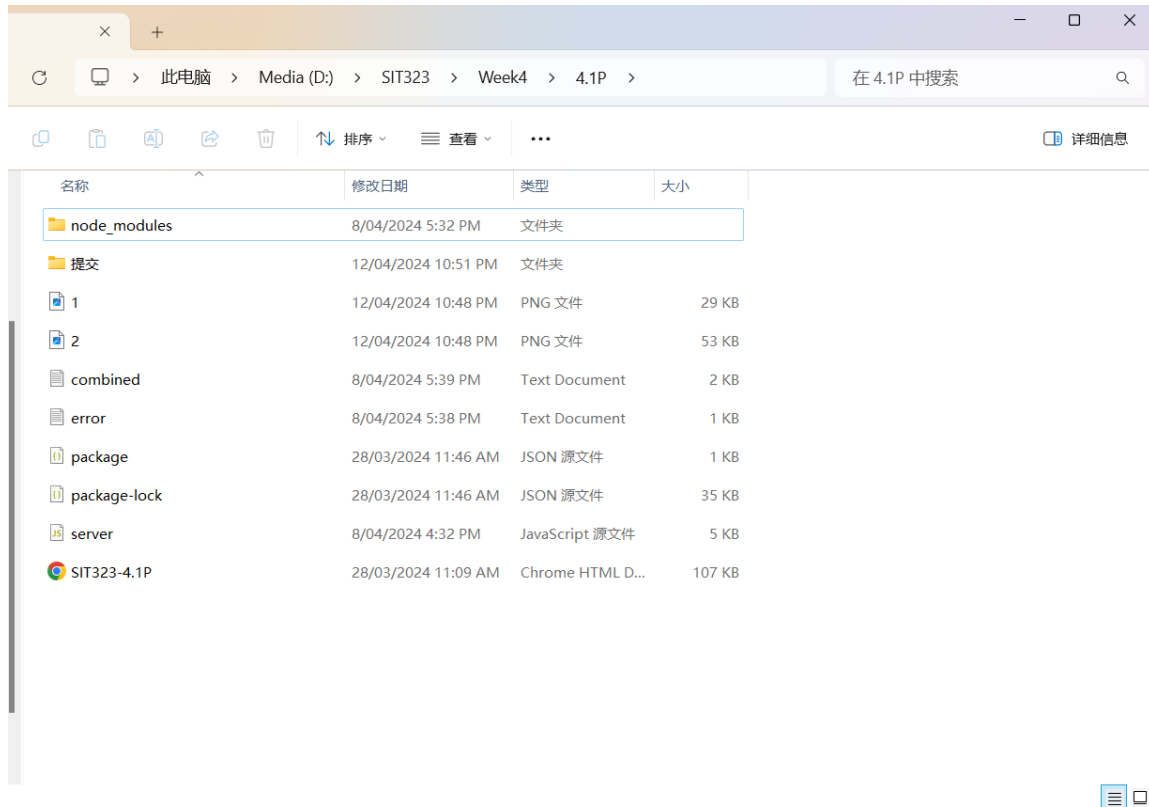
[Sign up](#)

Already have an account? [Sign in](#)

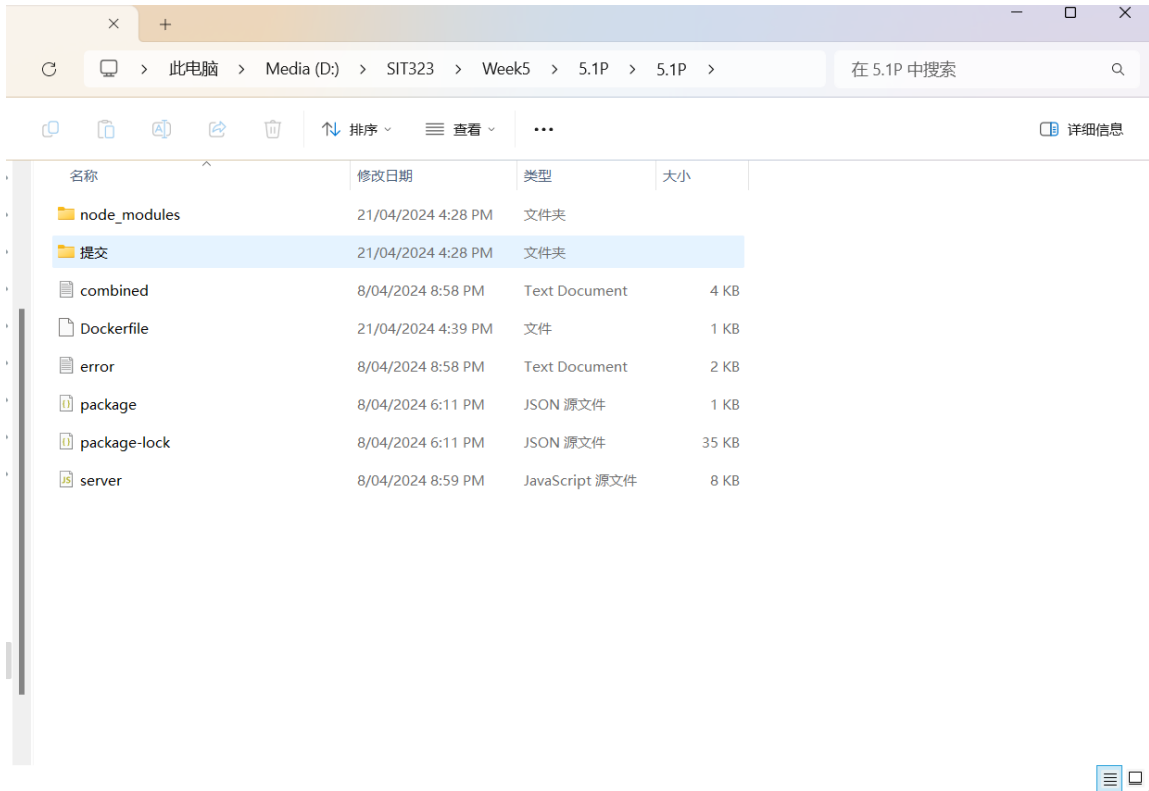
[Continue without signing in](#)



## 2. Clone the sample web application (clone for the 4.1P calculator application)

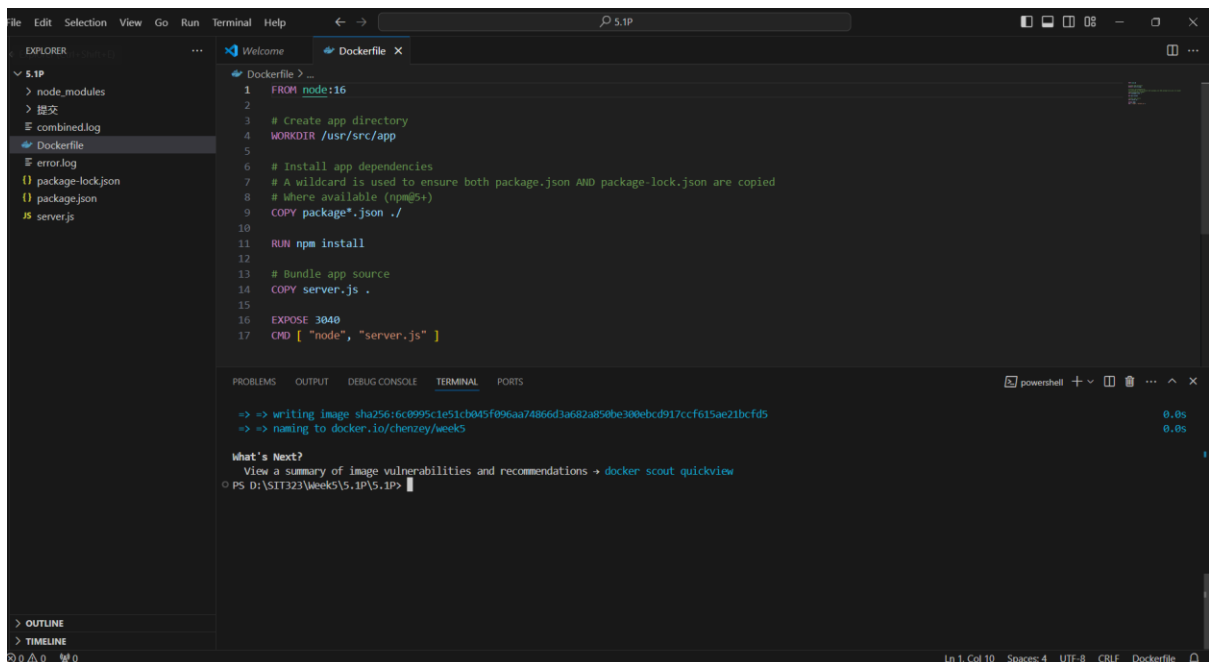


(4.1P folder)



(5.1P folder)

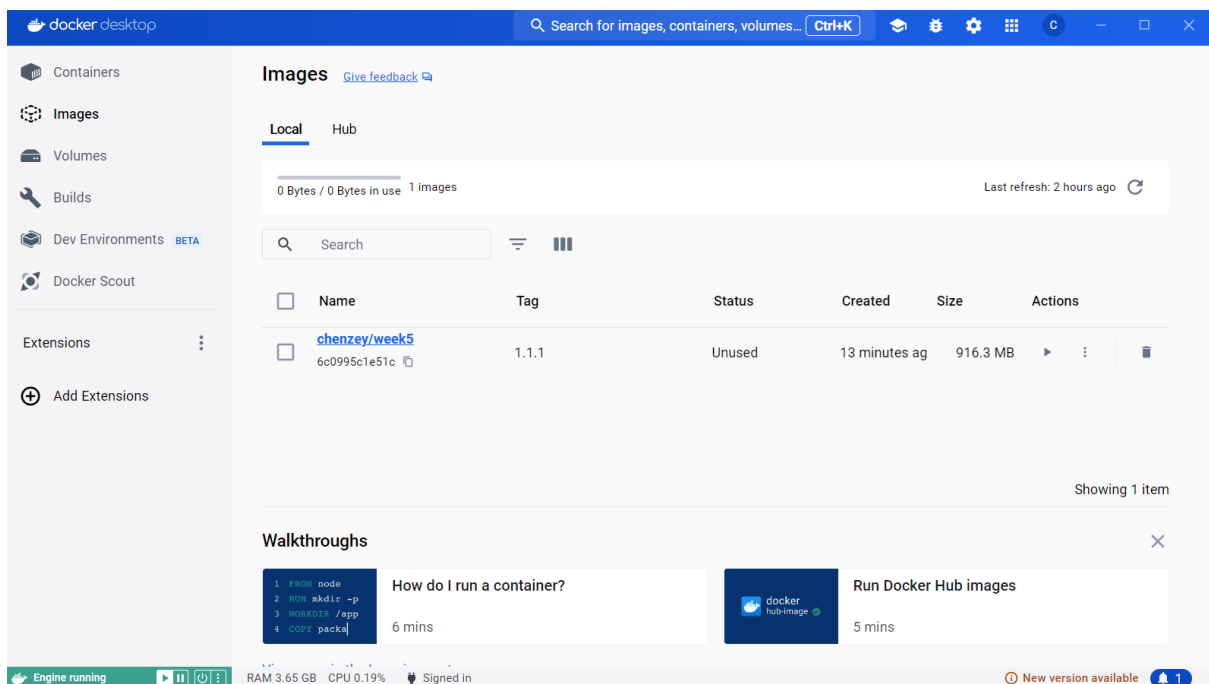
### 3. Create a Dockerfile



## 4. Build Docker image

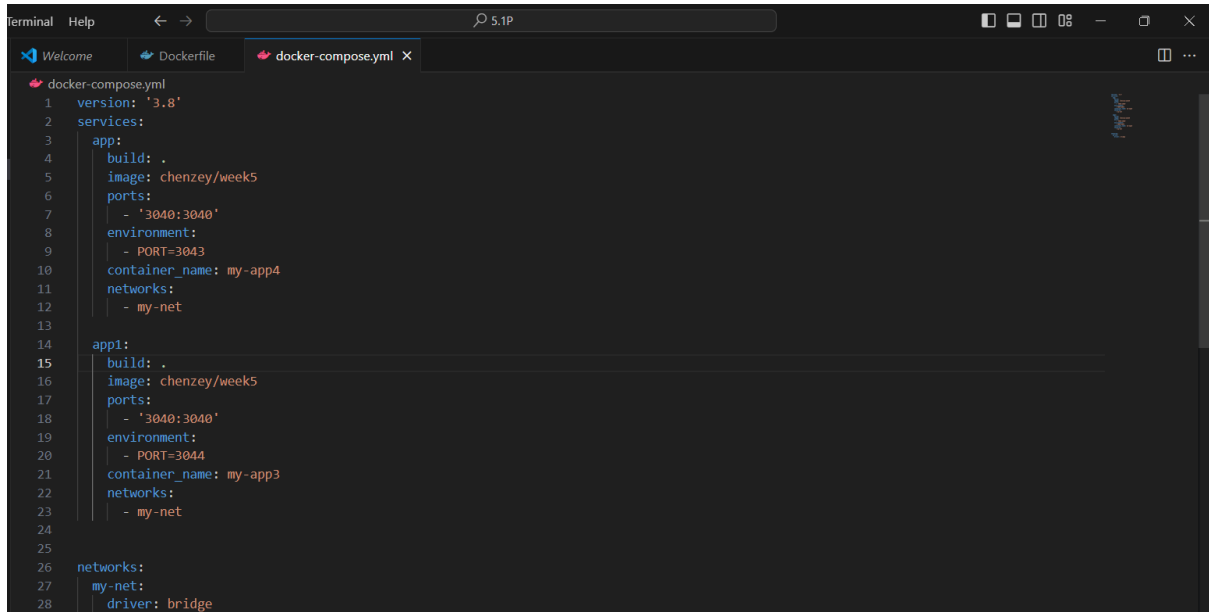
```
PS D:\SIT323\Week5\5.1P\5.1P> docker build -t chenzey/week5:1.1.1 .
[+] Building 2.3s (11/11) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 368B
=> [internal] load metadata for docker.io/library/node:16
=> [auth] library/node:pull token for registry-1.docker.io
=> [internal] load .dockerignore
=> => transferring context: 2B
=> [internal] load build context
=> => transferring context: 100B
=> [1/5] FROM docker.io/library/node:16@sha256:f77a1aef2da8d83e45ec990f45df50f1a286c5fe8bbfb8c6e4246c6389705c0b
=> CACHED [2/5] WORKDIR /usr/src/app
=> CACHED [3/5] COPY package*.json ./
=> CACHED [4/5] RUN npm install
=> CACHED [5/5] COPY server.js .
=> exporting to image
=> => exporting layers
=> => writing image sha256:6c0995c1e51cb045f096aa74866d3a682a850be300ebcd917ccf615ae21bcfd5
=> => naming to docker.io/chenzey/week5:1.1.1

What's Next?
View a summary of image vulnerabilities and recommendations -> docker scout quickview
PS D:\SIT323\Week5\5.1P\5.1P>
```



```
PS D:\SIT323\Week5\5.1P\5.1P> docker images
REPOSITORY          TAG             IMAGE ID        CREATED         SIZE
chenzey/week5       1.1.1          6c0995c1e51c   21 minutes ago  916MB
PS D:\SIT323\Week5\5.1P\5.1P>
```

## 5. Create a Docker Compose file

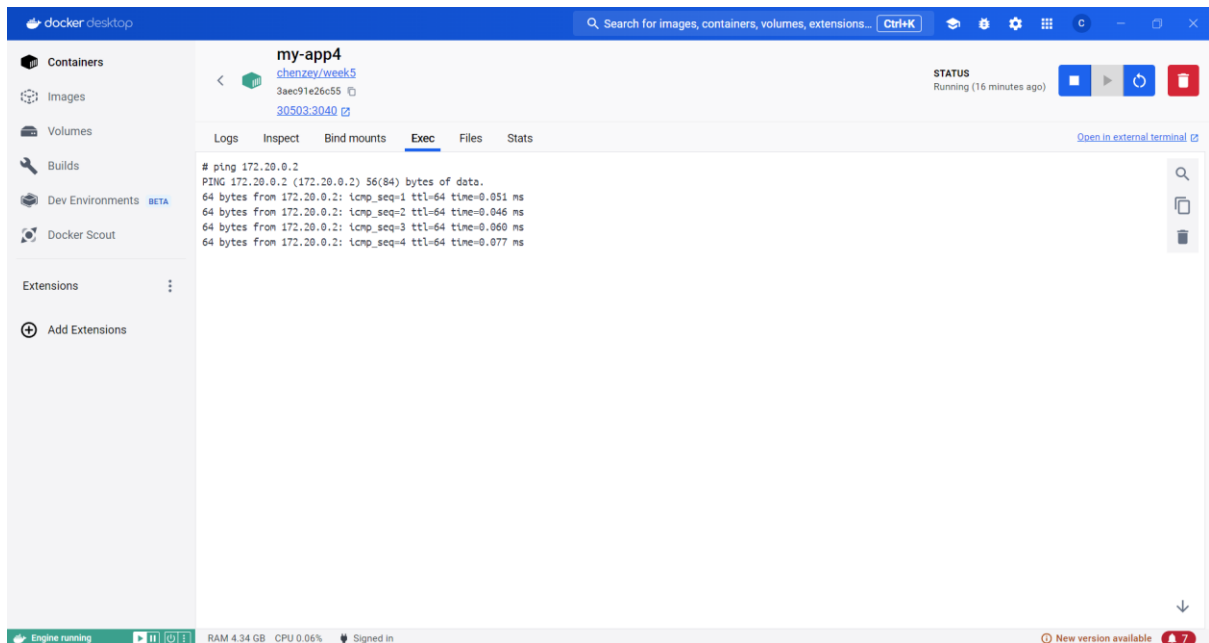


```
1 version: '3.8'
2 services:
3   app:
4     build: .
5     image: chenzey/week5
6     ports:
7       - '3040:3040'
8     environment:
9       - PORT=3043
10    container_name: my-app4
11    networks:
12      - my-net
13
14   app1:
15     build: .
16     image: chenzey/week5
17     ports:
18       - '3040:3040'
19     environment:
20       - PORT=3044
21     container_name: my-app3
22     networks:
23       - my-net
24
25 networks:
26   my-net:
27     driver: bridge
```

## 6. Start the Docker Compose environment

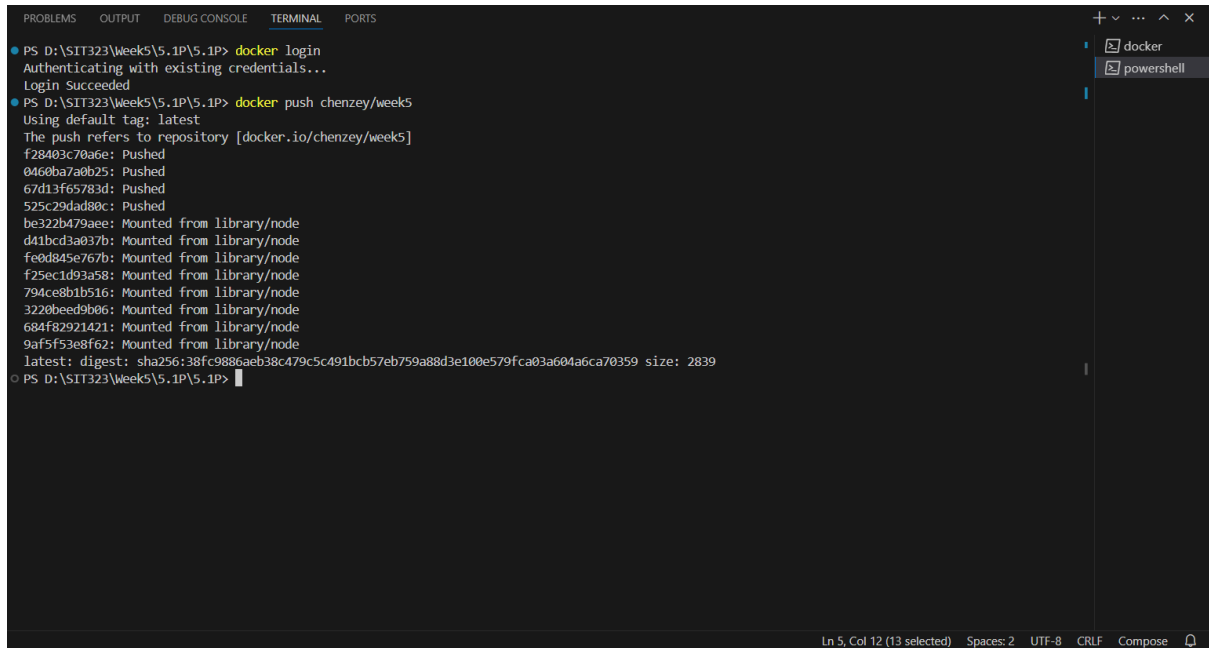
```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
P5 D:\SIT323\Week5\5.1P\5.1P> docker compose up
[+] Running 3/3
  ✓ Network 51p_my-net Created 0.0s
  ✓ Container my-app4 Created 0.0s
  ✓ Container my-app3 Created 0.1s
Attaching to my-app3, my-app4
my-app3 | hello i'm listening to port3040
my-app4 | hello i'm listening to port3040
```

## 7. Test the application





## 8. Push the Docker image to a registry



The screenshot shows a Visual Studio Code interface with a terminal window open. The terminal displays the output of two Docker commands. The first command is `docker login`, which authenticates the user. The second command is `docker push chenzey/week5`, which pushes the image to the Docker registry. The output shows the image being pushed in layers, with some layers being mounted from the local library. The terminal also shows the latest digest and size of the image.

```
PS D:\SIT323\Week5\5.1P\5.1P> docker login
Authenticating with existing credentials...
Login Succeeded

PS D:\SIT323\Week5\5.1P\5.1P> docker push chenzey/week5
Using default tag: latest
The push refers to repository [docker.io/chenzey/week5]
f28403c70a6e: Pushed
0460ba7a0b25: Pushed
67d13f65783d: Pushed
525c29dad80c: Pushed
be322b479aee: Mounted from library/node
d41bcd3a037b: Mounted from library/node
fe0d845e767b: Mounted from library/node
f25ec1d93a58: Mounted from library/node
794ce8b1b516: Mounted from library/node
3220beed9b06: Mounted from library/node
684f82921421: Mounted from library/node
9af5f53e8f62: Mounted from library/node
latest: digest: sha256:38fc9886aeb38c479c5c491bcb57eb759a88d3e100e579fca03a604a6ca70359 size: 2839
PS D:\SIT323\Week5\5.1P\5.1P>
```