

GitHub: <https://github.com/DennisPYu/sit323-2024-t1-prac5p>

DockerHub: <https://hub.docker.com/repository/docker/dennisyup/calculator-app/general>

File that created the docker image

```
dockerfile > ...
1  #Specify the base image
2  FROM node:16
3
4  #Set the working directory
5  WORKDIR /app
6
7  #Copy the package.json file to the working directory
8  COPY package*.json ./
9
10 #Install the dependencies
11 RUN npm install
12
13 #Copy the rest of the files to the working directory
14 COPY . .
15
16 #Expose the port
17 EXPOSE 4000
18
19 #Run the app
20 CMD ["node", "app.js"]
21
```

File that defines a service base on docker image

```
docker-compose.yml
1  version: '3'
2  services:
3    calculator:
4      image: calculator-app
5      ports:
6        - "4000:4000"
7
```

Command that build image base on dockerfile

```
PS I:\Study\BachelorD\2024T1\SIT323-Cloud Native Application Development\5.1p\docker_calculator-upgrade> docker build -t calculator-app .
[+] Building 2.1s (11/11) FINISHED                                docker:default
=> [internal] load build definition from dockerfile                0.0s
=> => transferring dockerfile: 163B                                0.0s
=> [internal] load metadata for docker.io/library/node:16         1.7s
=> [auth] library/node:pull token for registry-1.docker.io        0.0s
=> [internal] load .dockerignore                                  0.0s
=> => transferring context: 2B                                       0.0s
=> [1/5] FROM docker.io/library/node:16@sha256:f77a1aef2da8d83e45ec990f45df50f1a286c5fe8bbfb8c6e4246c6389705c0b  0.0s
=> [internal] load build context                                  0.1s
=> => transferring context: 89.81kB                                  0.1s
=> CACHED [2/5] WORKDIR /app                                       0.0s
=> CACHED [3/5] COPY package.json .                               0.0s
=> CACHED [4/5] RUN npm install                                    0.0s
=> [5/5] COPY . .                                                  0.1s
=> exporting to image                                              0.1s
=> => exporting layers                                              0.1s
=> => writing image sha256:bfd6b049666af5687f08343f0c9df6ec2b955feb00bace7eb7efcde61fc31601  0.0s
=> => naming to docker.io/library/calculator-app                  0.0s

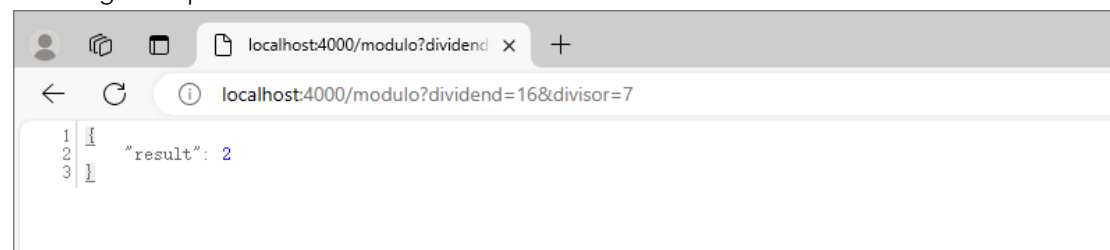
View build details: docker-desktop:///dashboard/build/default/default/x4hr8irqe73eib080dfml2eh

What's Next?
View a summary of image vulnerabilities and recommendations → docker scout quickview
```

Command that starts the docker compose environment

```
PS I:\Study\BachelorD\2024T1\SIT323-Cloud Native Application Development\5.1p\docker_calculator-upgrade> docker-compose up -d
[+] Running 1/0
✓ Container docker_calculator-upgrade-calculator-1 Running
PS I:\Study\BachelorD\2024T1\SIT323-Cloud Native Application Development\5.1p\docker_calculator-upgrade>
```

Working example



Command that pushes all to Docker Hub

```
(base) PS I:\Study\BachelorD\2024T1\SIT323-Cloud Native Application Development\5.1p\docker_calculator-upgrade> docker tag calculator-app dennisyup/calculator-app:latest
(base) PS I:\Study\BachelorD\2024T1\SIT323-Cloud Native Application Development\5.1p\docker_calculator-upgrade> docker login
Authenticating with existing credentials...
Login Succeeded
(base) PS I:\Study\BachelorD\2024T1\SIT323-Cloud Native Application Development\5.1p\docker_calculator-upgrade> docker push dennisyup/calculator-app:latest
The push refers to repository [docker.io/dennisyup/calculator-app]
09dda91edfdf: Pushed
5248b2fdf435: Pushed
b9198b75382b: Pushed
8f7853bba787: Pushed
be322b479aee: Pushed
d41bcd3a037b: Pushed
fe0d845e767b: Pushed
f25ec1d93a58: Pushed
794ce8b1b516: Pushed
3220beed9b06: Pushed
684f82921421: Pushed
9af5f53e8f62: Pushed
latest: digest: sha256:552a9f9ad5c7efb3d039f15d0a4660f779111987597f9fcca688c5985ced66f2 size: 2840
(base) PS I:\Study\BachelorD\2024T1\SIT323-Cloud Native Application Development\5.1p\docker_calculator-upgrade>
```