

# Instructions for the teaching assistant

1. Implemented optional features  
Testing of individual services
2. List of optional features implemented.  
Status manager
3. Instructions for examiner to test the system.  
First need run the docker image.  
``docker-compose build --no-cache``  
``docker-compose up -d``  
Run ``cd tests``  
``npm install``  
``npm run test``
4. Pay attention to optional features.
5. Data about the platform you used in development (hardware, CPU architecture, operating  
Apple Silicon M2 Max, ARM 64
6. system, version of docker and docker-compose)  
OS: macOS 13.6.3 (22G436)  
Docker version: 4.28.0 (139021)
7. Description of the CI/CD pipeline  
CI/CD pipeline run result.

Chenshuo Dong / SE.140.Project / Pipelines / #703

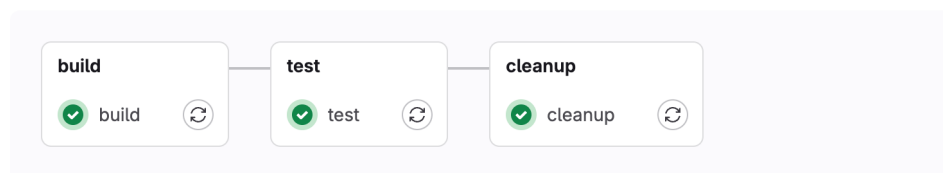
## Update .gitlab-ci.yml file

✓ Passed Chenshuo Dong created pipeline for commit d97b262e 6 days ago, finished 6 days ago

For [project](#)

latest 3 jobs 9 seconds, queued for 3 seconds

Pipeline Jobs 3 Tests 0



Setp:

- a) Build: download and run docker image.
- b) Test: run the mocha test.
- c) Cleanup: shutdown docker server and remove image.

## CI/CD pipeline history

Chenshuo Dong / SE.140.Project / Pipelines

All9

Finished

Branches

Tags

View analytics

Clear runner caches

New pipeline

Filter pipelines

Q

Show Pipeline ID

Status	Pipeline	Created by	Stages	
<div>Passed</div> <div><div>00:00:09</div><div>6 days ago</div></div>	<div>Update .gitlab-ci.yml file</div> <div>#703 P project → d97b262e</div> <div>latest</div>	<div></div>	<div><div>✓</div><div>✓</div><div>✓</div></div>	<div>↓</div>
<div>Failed</div> <div><div>00:00:27</div><div>6 days ago</div></div>	<div>Update .gitlab-ci.yml file</div> <div>#702 P project → 5cf4ca4f</div>	<div></div>	<div><div>✓</div><div>✗</div><div>✓</div></div>	<div>↺ ↓</div>
<div>Failed</div> <div><div>00:00:02</div><div>6 days ago</div></div>	<div>Update .gitlab-ci.yml file</div> <div>#701 P project → f7c63809</div>	<div></div>	<div><div>✗</div><div>✗</div><div>✗</div></div>	<div>↺ ↓</div>
<div>Failed</div> <div><div>00:00:02</div><div>6 days ago</div></div>	<div>Update .gitlab-ci.yml file</div> <div>#700 P project → fe471f27</div>	<div></div>	<div><div>✗</div><div>✗</div><div>→</div><div>✓</div></div>	<div>↺ ↓</div>
<div>Failed</div> <div><div>00:00:02</div><div>6 days ago</div></div>	<div>Update .gitlab-ci.yml file</div> <div>#699 P project → 937287ac</div>	<div></div>	<div><div>✗</div><div>✗</div><div>→</div><div>✗</div></div>	<div>↺ ↓</div>
<div>Failed</div> <div><div>00:00:07</div><div>6 days ago</div></div>	<div>Update .gitlab-ci.yml file</div> <div>#698 P project → 3ef44ae1</div>	<div></div>	<div><div>✗</div><div>✗</div><div>→</div><div>✗</div></div>	<div>↺ ↓</div>
<div>Failed</div> <div><div>00:00:08</div><div>6 days ago</div></div>	<div>Update .gitlab-ci.yml file</div> <div>#697 P project → a8976458</div>	<div></div>	<div><div>✗</div><div>✗</div><div>→</div><div>✗</div></div>	<div>↺ ↓</div>
<div>Failed</div> <div><div>6 days ago</div></div>	<div>Commit project</div> <div>#696 P project → 828ccfd2</div>	<div></div>	<div><div>✗</div><div>✗</div><div>→</div><div>✗</div></div>	<div>↺ ↓</div>

### 8. Briefly document all steps:

- Version management; use of branches etc

Main repository in GitHub ` <https://github.com/DevelopCubeLab/Docker-compose> `

CI/CD repository in GitLab ` <https://compse140.devops-gitlab.rd.tuni.fi/developlab/se.140.project> `

Branches: project

- Building tools

Java, Python, npm

- Testing; tools and test cases

Mocha

Test case:

Server API Tests

- ✓ should return information from the root endpoint (123ms)
- ✓ should get the current state (46ms)
- ✓ should not allow state change without login (401)
- ✓ should allow state change after login as admin (57ms)
- ✓ should return the run log

✓ should stop the service

- Packing

npm

- Deployment

Mocha

- Operating; monitoring

`npm run test`

## 9. Example runs of the pipeline

Chenshuo Dong / SE140.Project / Jobs / #2252

**build**  
Passed Started 6 days ago by Chenshuo Dong

Search visible log output

```
1 Running with gitlab-runner 17.6.0 (374d34fd)
2   on Codes-MacBook-Pro-2023.local t3_fftqyH, system ID: s_71d45c4cfaf1
3   ✓ Preparing the "shell" executor
4   Using Shell (bash) executor...
5   ✓ Preparing environment
6   Running on Codes-MacBook-Pro-2023.local...
7   ✓ Getting source from Git repository
8   Fetching changes with git depth set to 28...
9   Reinitialized existing Git repository in /Users/dongchenshuo/builds/t3_fftqyH/0/developlab/se.140.project/.git/
10  Checking out d97b262e as detached HEAD (ref is project)...
11  Skipping Git submodules setup
12  ✓ Executing "step_script" stage of the job script
13  $ echo "Building Docker images..."
14  Building Docker images...
15  $ docker-compose build
16  #0 building with "default" instance using docker driver
17  #1 [service1-1 internal] load build definition from Dockerfile
18  #1 transferring dockerfile: 379B done
19  #1 DONE 0.0s
20  #2 [service1-2 internal] load build definition from Dockerfile
21  #2 transferring dockerfile: 379B done
22  #2 DONE 0.0s
23  #3 [service2 internal] load build definition from Dockerfile
24  #3 transferring dockerfile: 366B done
25  #3 DONE 0.0s
26  #4 [service1-3 internal] load build definition from Dockerfile
27  #4 transferring dockerfile: 379B done
28  #4 DONE 0.0s
29  #5 [service1-3 internal] load metadata for docker.io/library/gradle:7.6-jdk17
30  #5 DONE 0.4s
31  #6 [service2 internal] load metadata for docker.io/library/python:3.10-slim
32  #6 DONE 0.4s
33  #7 [service2 internal] load .dockerignore
34  #7 transferring context: 2B done
35  #7 DONE 0.0s
36  #8 [service1-3 internal] load .dockerignore
37  #8 transferring context: 2B done
38  #8 DONE 0.0s
```

Duration: 2 seconds  
Finished: 6 days ago  
Queued: 2 seconds  
Timeout: 1h (from project)  
Runner: #69 (fftqyH7P)

Commit d97b262e  
Update .gitlab-ci.yml file

Pipeline #703 Passed for project  
build

Related jobs  
→ build

## 10. Include some kind of log of both failing test and passing.

Server1 can assess server2 will show server2 log, if the server2 shutdown, and it will show 'Service2 Error: msg'

## 11. Reflections

I think this project is okay. It mainly adds new functions and tests to the previous tasks. There are some things that you need to learn by yourself, including how to control Nginx's permission access and status settings. Main learnings and worst difficulties

## 12. Especially, if you think that something should have been done differently, describe it here.

## 13. Amount effort (hours) used give your estimate

I spend in this project overall around 25 hours. Including learning the construction of docker and the configuration of nginx, which are relatively time-consuming, and how to shut down the docker service on the index page.