MP0 Announcement

Spring 2025 OS
National Taiwan University

TA Information

- These are the TAs responsible for MP0:

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Summary

‣ **What you have to do in MP0:**

- Launch Docker

- Write your programs in `mp0.c` and `Makefile`

- Compile and run your code on QEMU

NEWS Lab
嵌入式系統暨無線網路實驗室

Docker Installation

- **Linux user:**

  - Follow the steps in mp0.pdf

- **MacOS user:**

  - Optional: [An alternative to setup xv6 environment](#)

- **Windows user:**

  - Use WSL2 to run Docker & QEMU

Run Docker on Windows

▸ **Install WSL2**

- Open PowerShell as admin and run

    - `wsl --install`

- Use `wsl -l –v` to check the OS version

- Full documentation: Install WSL | Microsoft Learn

Run Docker on Windows

▸ **Install Docker**

- Follow the steps in MP0.pdf or <u>Official Guide</u>

- Run commands below in `~/mp0/` to build xv6

```
$  sudo apt install make
$  sudo apt install gcc-ricv64-unknown-elf
$  sudo apt install qemu-system-misc
$  make
```

```
os_mp0@709f378ece4a:~/xv6$ |
```

Run QEMU in Docker

‣ Run `$ make qemu` in `~/xv6/`

```
xv6 kernel is booting

hart 1 starting
hart 2 starting
init: starting sh
$
```

MP0 Homework

‣ Build your own `mp0.c` and `Makefile`

‣ `mp0.c`:

- Details are in MP0.pdf

- The result should look like this:

‣ `Makefile`:

- It should allow you to run `mp0` command after `$ make qemu`

```
$ testgen
$ mp0 os2025 d
os2025 0
os2025/d1 1
os2025/d2 1
os2025/d2/a 1
os2025/d2/b 1
os2025/d2/c 1
os2025/d3 1
os2025/d3/a 1
os2025/d3/b 1

6 directories, 2 files
```

Grading Policy

- The total point of this MP is 100 points and will account for 4 points in your semester grade.

- Since this MP serves as the basis for all subsequent MPs, we highly encourage you to attempt it on your own.

- **Due Date: 2025/2/24(Mon.) 23:59:00**

Any Questions?