

# HW1

## Missing-Semester of Your CS Education

17 May 2021

### Problem 1

1. Create a new directory called **missing** under **/tmp**;  $\rightarrow$  *one line command on bash/zsh*.
2. Look up the **touch** program. The **man** program is your friend.  $\rightarrow$  *one line command on bash/zsh*.
3. Use **touch** to create a new file called **semester** in **missing**.
4. Write the following into that file, one line at a time:

```
#!/bin/sh
curl --head --silent https://github.com/siyuanluo
```

**NOTICE:** The first line might be tricky to get working. It's helpful to know that **#** starts a comment in Bash, and **!** has a special meaning even within double-quoted (") strings. Bash treats single-quoted strings (') differently: they will do the trick in this case. See the Bash **quoting** manual page for more information.

5. Try to execute the file, i.e. type the path to the script (**./semester**) into your shell and press enter. Understand why it doesn't work by consulting the output of **ls** (hint: look at the permission bits of the file).

6. Run the command by explicitly starting the **sh** interpreter, and giving it the file **semester** as the first argument, i.e. **sh semester**. Why does this work, while **./semester** didn't?

7. Look up the **chmod** program  $\rightarrow$  *one line command on bash/zsh*.

8. Use **chmod** to make it possible to run the command **./semester** rather than having to type **sh semester**. How does your shell know that the file is supposed to be interpreted using **sh**? See this page on the **shebang** line for more information.

9. Use **|** and **>** to write the "last modified" date output by **semester** into a file called **last-modified.txt** in your home directory.

#### Answer:

*Add your answer here!*

#### IMPORTANT!

1. We recommend that you can use the *LaTeX* to finish the homework. But if you are not familiar with this, You can also use *Markdown* to write (here is a really tiny and efficient software which called **Typora**). Actually, we don't quite recommend *Word*, but it's OK to finish the homework in *Word*, but remember to submit your homework as a "**PDF**" format, but not ".md" or ".docx".

2. We know that there is an official solution on the website, but we hope that's just be **Reference**, but not your final answer. You should not only write the code and paste the terminal windows in your computer, but try

to explain the reason why these commands works. We prefer your homework contains more words to explain the reasons but not just capture of the windows.

3.Everyone should submit the homework by yourself. This is not a teamwork!!!

4.The deadline for this homework is **1 August**, but we recommend that you can finish and submit this before **24 May**.

5.**The Chinese Homework Webpage(Without NO.10)**