

Task1作业提交

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第一题

```
cxh@LAPTOP-4GH1GF7J: ~  
To run a command as administrator (user "root"), use "sudo <command>".  
See "man sudo_root" for details.  
  
cxh@LAPTOP-4GH1GF7J:~$ date  
Sat Aug 24 23:16:32 CST 2024  
cxh@LAPTOP-4GH1GF7J:~$ echo hello  
hello  
cxh@LAPTOP-4GH1GF7J:~$ echo $SHELL  
/bin/bash  
cxh@LAPTOP-4GH1GF7J:~$ echo $SHELL  
/bin/bash  
cxh@LAPTOP-4GH1GF7J:~$
```

第一题要求：确保我们运行的是正确的程序

有效命令行：echo \$SHELL
显示用户当前使用的shell路径

echo \$SELL 显示用户当前使用的shell路径

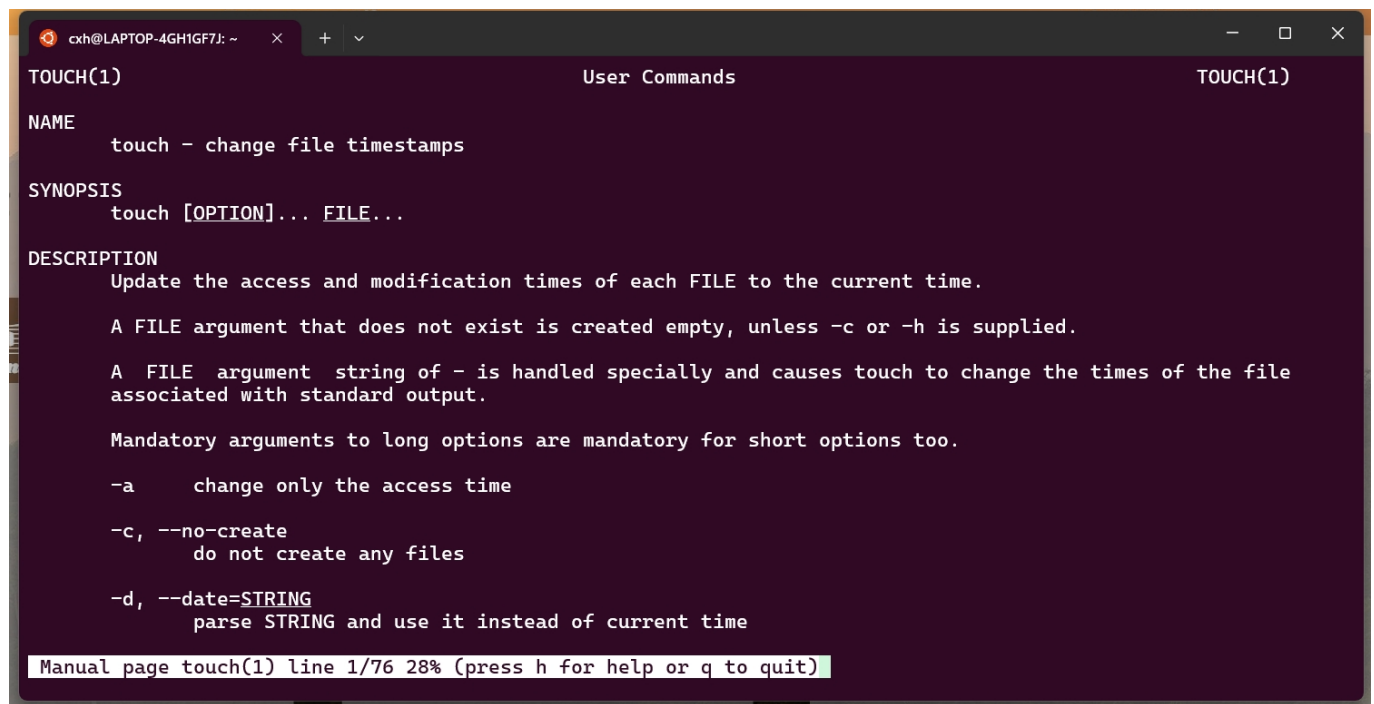
第二题

```
cxh@LAPTOP-4GH1GF7J:~/home$ cd  
cxh@LAPTOP-4GH1GF7J:~$ mkdir .missing  
cxh@LAPTOP-4GH1GF7J:~$ cd .missing  
cxh@LAPTOP-4GH1GF7J:~/.missing$ mkdir tmp  
cxh@LAPTOP-4GH1GF7J:~/.missing$ cd tmp  
cxh@LAPTOP-4GH1GF7J:~/.missing/tmp$
```

```
mkdir .missing  
cd .misssing  
mkdir tmp
```

这里我其实可以用`mkdir -p .missing/tmp`,直接在`.missing`不存在的情况下创建 而且我这里之前文件名写错了，我已经用`mv .missing missing`修正了

第三题



```
cxh@LAPTOP-4GH1GF7J: ~  
TOUCH(1) User Commands TOUCH(1)  
NAME  
touch - change file timestamps  
SYNOPSIS  
touch [OPTION]... FILE...  
DESCRIPTION  
Update the access and modification times of each FILE to the current time.  
A FILE argument that does not exist is created empty, unless -c or -h is supplied.  
A FILE argument string of - is handled specially and causes touch to change the times of the file associated with standard output.  
Mandatory arguments to long options are mandatory for short options too.  
-a change only the access time  
-c, --no-create do not create any files  
-d, --date=STRING parse STRING and use it instead of current time  
Manual page touch(1) line 1/76 28% (press h for help or q to quit)
```

`man touch` 查看touch的命令手册

第四题



```
cxh@LAPTOP-4GH1GF7J: ~/m  
To run a command as administrator (user "root"), use "sudo <command>".  
See "man sudo_root" for details.  
cxh@LAPTOP-4GH1GF7J: ~$ cd missing  
cxh@LAPTOP-4GH1GF7J: ~/missing$ touch semester  
cxh@LAPTOP-4GH1GF7J: ~/missing$ ls  
semester tmp  
cxh@LAPTOP-4GH1GF7J: ~/missing$
```

`touch semester` 在missing文件夹里创建名为semester的文件

第五题

```
cxh@LAPTOP-4GH1GF7J: ~/m × + v
cxh@LAPTOP-4GH1GF7J:~/missing$ touch semester
cxh@LAPTOP-4GH1GF7J:~/missing$ echo '#!/bin/sh' >> semester
cxh@LAPTOP-4GH1GF7J:~/missing$ echo 'curl --head --silent https://missing.csail.mit.edu' >> semester
cxh@LAPTOP-4GH1GF7J:~/missing$ cat semester
#!/bin/sh
curl --head --silent https://missing.csail.mit.edu
cxh@LAPTOP-4GH1GF7J:~/missing$
```

`echo '....' >> semester` 将题目指定内容定向输入semester文件中

第六题

```
cxh@LAPTOP-4GH1GF7J:~/missing$ ./semester ls
-bash: ./semester: Permission denied
cxh@LAPTOP-4GH1GF7J:~/missing$
```

没有权限

第七题

```
cxh@LAPTOP-4GH1GF7J: ~/m  X + v
cxh@LAPTOP-4GH1GF7J:~/missing$ sh semester
HTTP/2 200
server: GitHub.com
content-type: text/html; charset=utf-8
last-modified: Thu, 08 Aug 2024 20:16:01 GMT
access-control-allow-origin: *
etag: "66b52781-205d"
expires: Sun, 25 Aug 2024 04:35:06 GMT
cache-control: max-age=600
x-proxy-cache: MISS
x-github-request-id: B0FF:2C0B0:21DF03F:22EA45A:66CAB222
accept-ranges: bytes
age: 0
date: Sun, 25 Aug 2024 04:54:11 GMT
via: 1.1 varnish
x-served-by: cache-tyo11959-TYO
x-cache: HIT
x-cache-hits: 0
x-timer: S1724561651.288686,VS0,VE161
vary: Accept-Encoding
x-fastly-request-id: fdc6b81a11d6bf6d84f9bef8a22095e44863fdbf
content-length: 8285

cxh@LAPTOP-4GH1GF7J:~/missing$ ./semester
-bash: ./semester: Permission denied
cxh@LAPTOP-4GH1GF7J:~/missing$
```

semester文件没有执行权限，使用sh可以绕过这个问题

第八题

```
cxh@LAPTOP-4GH1GF7J: ~/m  X + v
CHMOD(1)                                User Commands                                CHMOD(1)

NAME
    chmod - change file mode bits

SYNOPSIS
    chmod [OPTION]... MODE[,MODE]... FILE...
    chmod [OPTION]... OCTAL-MODE FILE...
    chmod [OPTION]... --reference=RFILE FILE...

DESCRIPTION
    This manual page documents the GNU version of chmod.  chmod changes the file mode bits of each given
    file according to mode, which can be either a symbolic representation of changes to make, or an oc-
    tal number representing the bit pattern for the new mode bits.

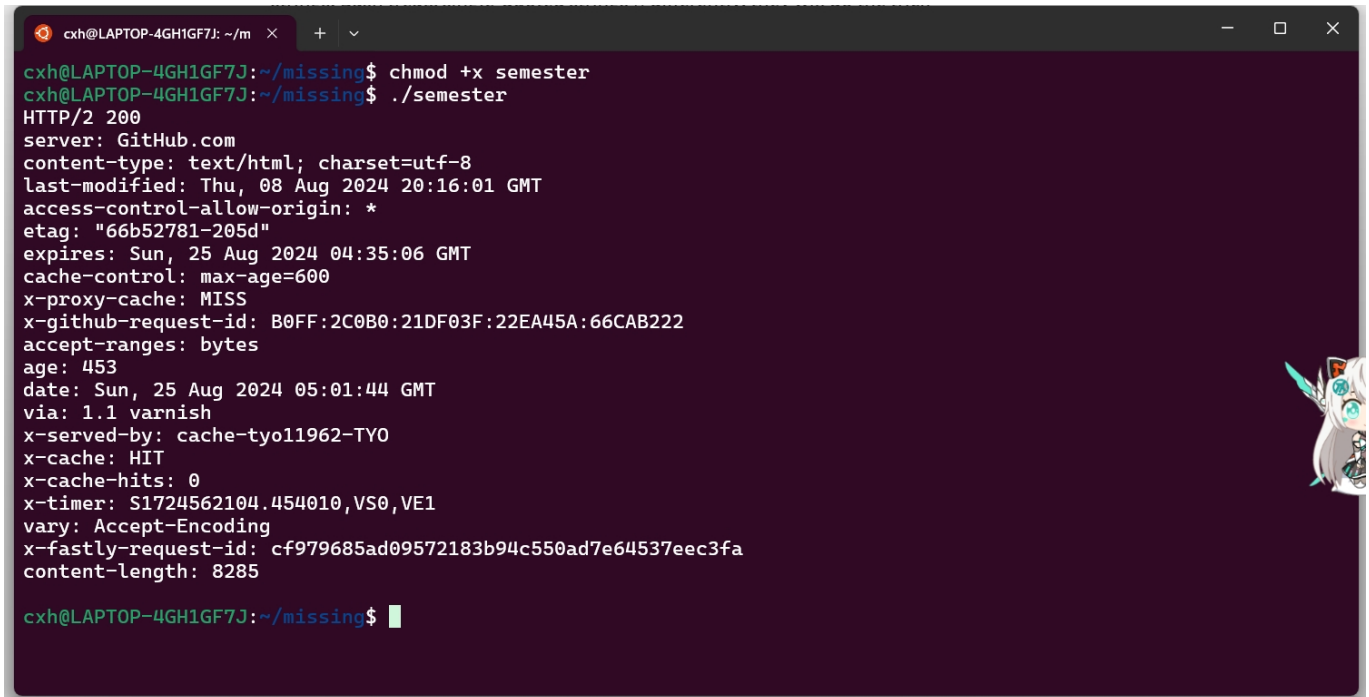
    The format of a symbolic mode is [ugoa...][[+=][perms...]...], where perms is either zero or more
    letters from the set rwXst, or a single letter from the set ugo. Multiple symbolic modes can be
    given, separated by commas.

    A combination of the letters ugoa controls which users' access to the file will be changed: the user
    who owns it (u), other users in the file's group (g), other users not in the file's group (o), or
    all users (a). If none of these are given, the effect is as if (a) were given, but bits that are
    set in the umask are not affected.

    The operator + causes the selected file mode bits to be added to the existing file mode bits of each
    file; - causes them to be removed; and = causes them to be added and causes unmentioned bits to be
    Manual page chmod(1) line 1 (press h for help or q to quit)
```

查看chmod的命令手册

第九题

A terminal window with a dark purple background. The prompt is 'cxh@LAPTOP-4GH1GF7J: ~/missing'. The user enters 'chmod +x semester' and then './semester'. The output is an HTTP/2 200 response from GitHub.com, including headers like content-type, last-modified, etag, expires, cache-control, and x-github-request-id. A small anime-style character is visible on the right side of the terminal window.

```
cxh@LAPTOP-4GH1GF7J:~/missing$ chmod +x semester
cxh@LAPTOP-4GH1GF7J:~/missing$ ./semester
HTTP/2 200
server: GitHub.com
content-type: text/html; charset=utf-8
last-modified: Thu, 08 Aug 2024 20:16:01 GMT
access-control-allow-origin: *
etag: "66b52781-205d"
expires: Sun, 25 Aug 2024 04:35:06 GMT
cache-control: max-age=600
x-proxy-cache: MISS
x-github-request-id: B0FF:2C0B0:21DF03F:22EA45A:66CAB222
accept-ranges: bytes
age: 453
date: Sun, 25 Aug 2024 05:01:44 GMT
via: 1.1 varnish
x-served-by: cache-tyo11962-TYO
x-cache: HIT
x-cache-hits: 0
x-timer: S1724562104.454010,VS0,VE1
vary: Accept-Encoding
x-fastly-request-id: cf979685ad09572183b94c550ad7e64537eec3fa
content-length: 8285

cxh@LAPTOP-4GH1GF7J:~/missing$
```

`chmod +x semester` 改变了semester文件的权限

第十题

A terminal window with a dark purple background. The prompt is 'cxh@LAPTOP-4GH1GF7J: ~/missing'. The user enters './semester | grep 'last-modified' > last-modified.txt' and then 'cat last-modified.txt'. The output shows the 'last-modified' header from the previous command.

```
cxh@LAPTOP-4GH1GF7J:~/missing$ ./semester | grep 'last-modified' > last-modified.txt
cxh@LAPTOP-4GH1GF7J:~/missing$ cat last-modified.txt
last-modified: Thu, 08 Aug 2024 20:16:01 GMT
cxh@LAPTOP-4GH1GF7J:~/missing$
```

执行semester，过滤出包含last-modified的一行并将它打印到txt文件中