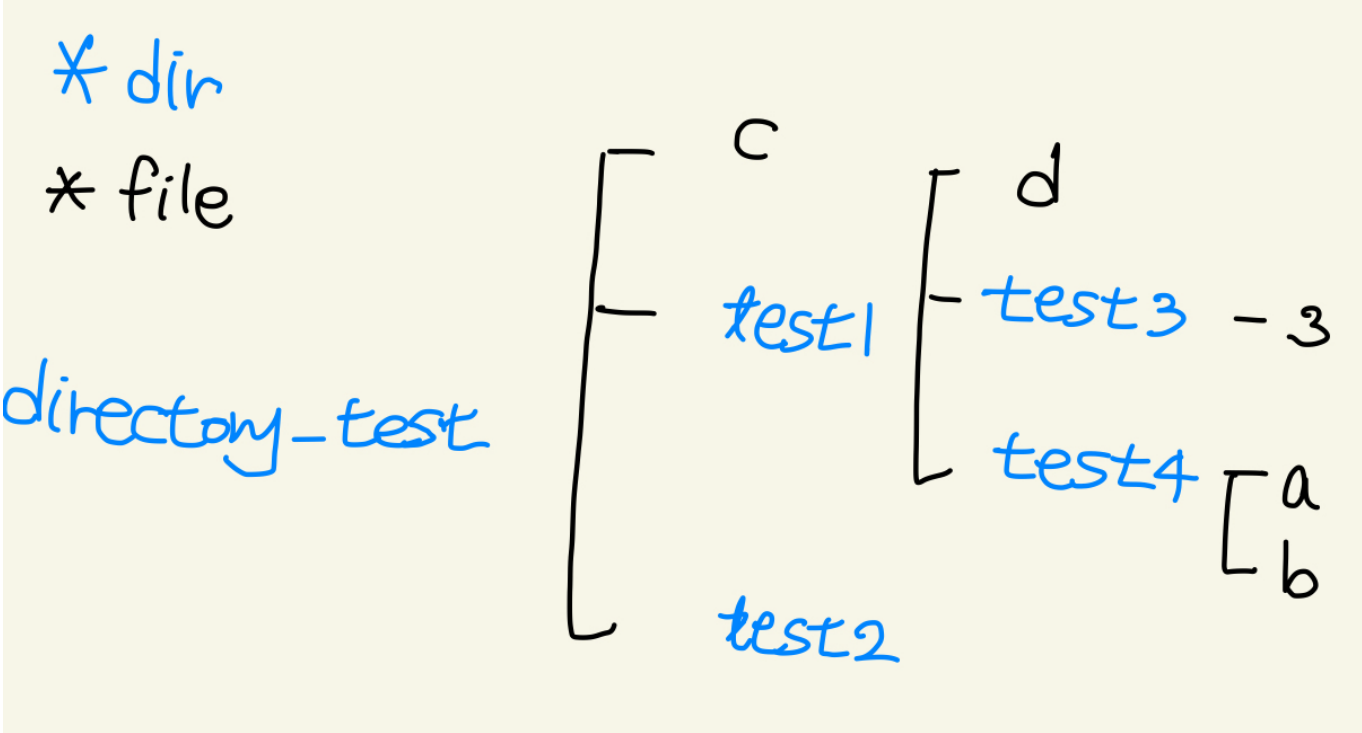
Homework #2

1. Start a new terminal,then do “cd ~”, then do “mkdir directory_test”, then do “cd directory_test”

2. do “mkdir test1”, then do “mkdir test2”, then do “mkdir test1/test3”, then do “mkdir ~/directory_test/test1/test4”

3. do “cd test1/test4”, then do “touch a”, then do “touch b”, then do “touch ../../c”, then do “touch ../d”, then do “touch ../test3/e”

(1) draw the directory structure of “~/directory_test/”



(2) describe the difference between “cd ~/directory_test” and “cd ~directory_test”

“cd ~/directory_test” 이 명령어는 /home/사용자이름/directory_test로 이동하지만 “cd ~directory_test”는 이동하지 못한다. /home/directory_test가 없기 때문이다.

4. do “clear”, then do “cd ..”, then do “ls”, then do “ls –a”, then do “ls –al”

(1) Take a screenshot

```
mtak@mtak:~/directory_test/test1/test4$ cd ..
mtak@mtak:~/directory_test/test1$ ls
d  test3  test4
mtak@mtak:~/directory_test/test1$ ls -a
.  ..  d  test3  test4
mtak@mtak:~/directory_test/test1$ ls -al
total 16
drwxrwxr-x 4 mtak mtak 4096  3월 28 11:13 .
drwxrwxr-x 4 mtak mtak 4096  3월 28 11:13 ..
-rw-rw-r-- 1 mtak mtak    0  3월 28 11:13 d
drwxrwxr-x 2 mtak mtak 4096  3월 28 11:13 test3
drwxrwxr-x 2 mtak mtak 4096  3월 28 11:13 test4
```

(2) Describe the difference between “ls”, “ls –a”, and “ls –al”

ls 는 현재 directory 에 있는 파일을 보여주고, -a 옵션은 숨긴 파일과 상위 directory 경로까지 보여준다. -al 옵션은 a 와 l 옵션이 동시에 적용되어 -a에서 파일의 세부정보까지 보여준다.

5. do “clear”, then do “pwd”, then do “cd ..” then, do “pwd”, do “cd test1/test4”, then do “pwd, then do “cd ../../”, then do “pwd”, then do “cd ~/directory_test/test1”, then do “pwd”

(1) Take a screenshot

```
mtak@mtak:~/directory_test/test1$ pwd
/home/mtak/directory_test/test1
mtak@mtak:~/directory_test/test1$ cd ..
mtak@mtak:~/directory_test$ pwd
/home/mtak/directory_test
mtak@mtak:~/directory_test$ cd test1/test4/
mtak@mtak:~/directory_test/test1/test4$ pwd
/home/mtak/directory_test/test1/test4
mtak@mtak:~/directory_test/test1/test4$ cd ../../
mtak@mtak:~/directory_test$ pwd
/home/mtak/directory_test
mtak@mtak:~/directory_test$ cd ~/directory_test/test1/
mtak@mtak:~/directory_test/test1$ pwd
/home/mtak/directory_test/test1
```

(2) describe the meaning of “..” and “~”

.. 은 상위 디렉토리를 의미하고 ~는 홈 디렉토리인 /home/mtak을 의미한다.

6. do “cd ~/directory_test”, then do “tar cvf test1.tar test1”, then do “tar zcvf test1.tar.gz test1”, then do “tar jcvf test1.tar.bz2 test1”, then do “zip test1_1.zip test1”, then do “zip –r test1.zip test1”, then do “ls –al”

(1) Take a screenshot

```
mtak@mtak:~/directory_test$ cd ~/directory_test/
mtak@mtak:~/directory_test$ tar cvf test1.tar test1
test1/
test1/d
test1/test4/
test1/test4/b
test1/test4/a
test1/test3/
test1/test3/3
mtak@mtak:~/directory_test$ tar zcvf test1.tar.gz test1
test1/
test1/d
test1/test4/
test1/test4/b
test1/test4/a
test1/test3/
test1/test3/3
mtak@mtak:~/directory_test$ tar jcvf test1.tar.bz2 test1
test1/
test1/d
test1/test4/
test1/test4/b
test1/test4/a
test1/test3/
test1/test3/3
mtak@mtak:~/directory_test$ zip test1_1.zip test1
  adding: test1/ (stored 0%)
mtak@mtak:~/directory_test$ zip -r test1.zip test1
  adding: test1/ (stored 0%)
  adding: test1/d (stored 0%)
  adding: test1/test4/ (stored 0%)
  adding: test1/test4/b (stored 0%)
  adding: test1/test4/a (stored 0%)
  adding: test1/test3/ (stored 0%)
  adding: test1/test3/3 (stored 0%)
mtak@mtak:~/directory_test$ ls -al
total 44
drwxrwxr-x  4 mtak mtak  4096  3월 28 11:40 .
drwxr-x--- 16 mtak mtak  4096  3월 28 11:12 ..
-rw-rw-r--  1 mtak mtak     0  3월 28 11:13 c
drwxrwxr-x  4 mtak mtak  4096  3월 28 11:13 test1
-rw-rw-r--  1 mtak mtak   162  3월 28 11:40 test1_1.zip
-rw-rw-r--  1 mtak mtak 10240  3월 28 11:39 test1.tar
-rw-rw-r--  1 mtak mtak   205  3월 28 11:40 test1.tar.bz2
-rw-rw-r--  1 mtak mtak   206  3월 28 11:40 test1.tar.gz
-rw-rw-r--  1 mtak mtak  1070  3월 28 11:40 test1.zip
drwxrwxr-x  2 mtak mtak  4096  3월 28 11:12 test2
mtak@mtak:~/directory_test$
```

(2) Describe the difference between “zip test1_1.zip test1” and “zip –r test1.zip test1”.

zip -r test1.zip test1 은 -r 옵션이 있는데 이는 해당 폴더 내에 있는 하위 폴더의 모든 파일을 한꺼번에 압축하라는 명령이다.

(3) Describe the size difference of compressed files and indicate which one is best in this situation.

zip -r은 용량 압축률이 tar jcvf/zcvf보다 적다. tar bz2를 사용해야겠다.

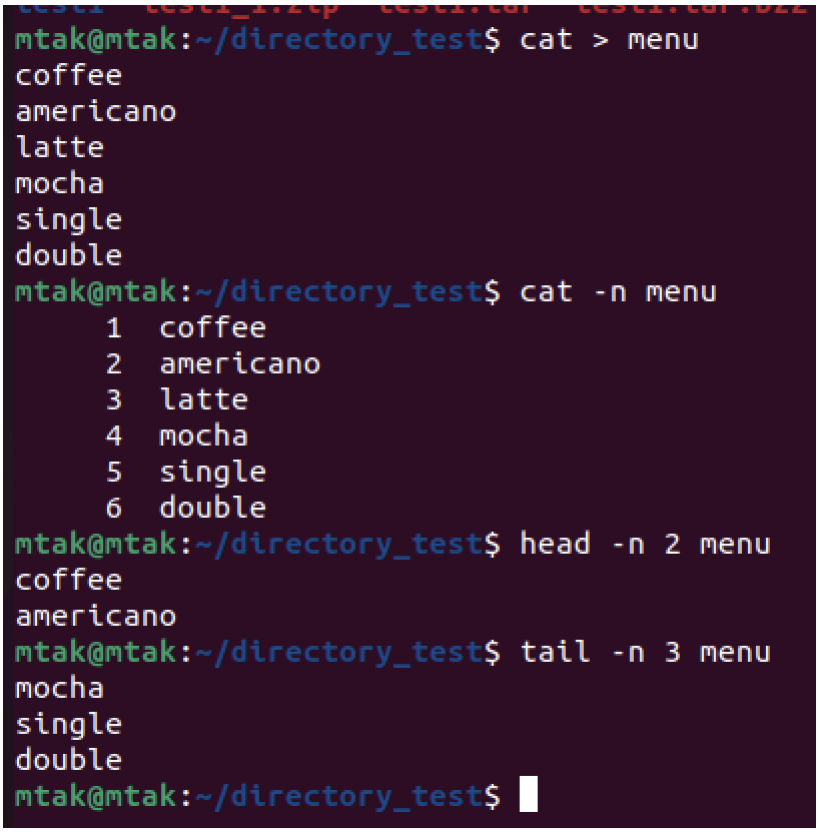
7. do “clear”, then do “rmdir test2”, do “rmdir test1”, then do “rm –rf test1”, then do “tar zxvf test1.tar.gz”

(1) Describe why “rmdir test1” cannot be operational

비어있는 디렉토리가 아니기 때문이다.

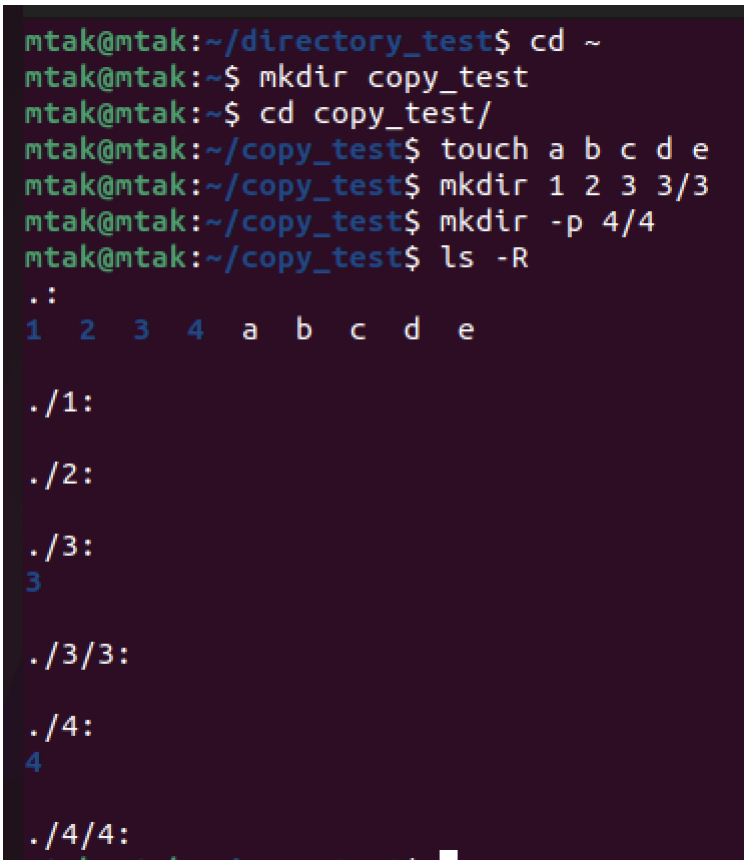
8. do “clear”, then do “cat > menu”, then insert “coffee”,”americano",”latte”,”mocha”,”single”, and“double”, then press “ctrl+D”, then do “cat –n menu”, then do “head –n 2 menu”, then do “tail –n 3 menu”

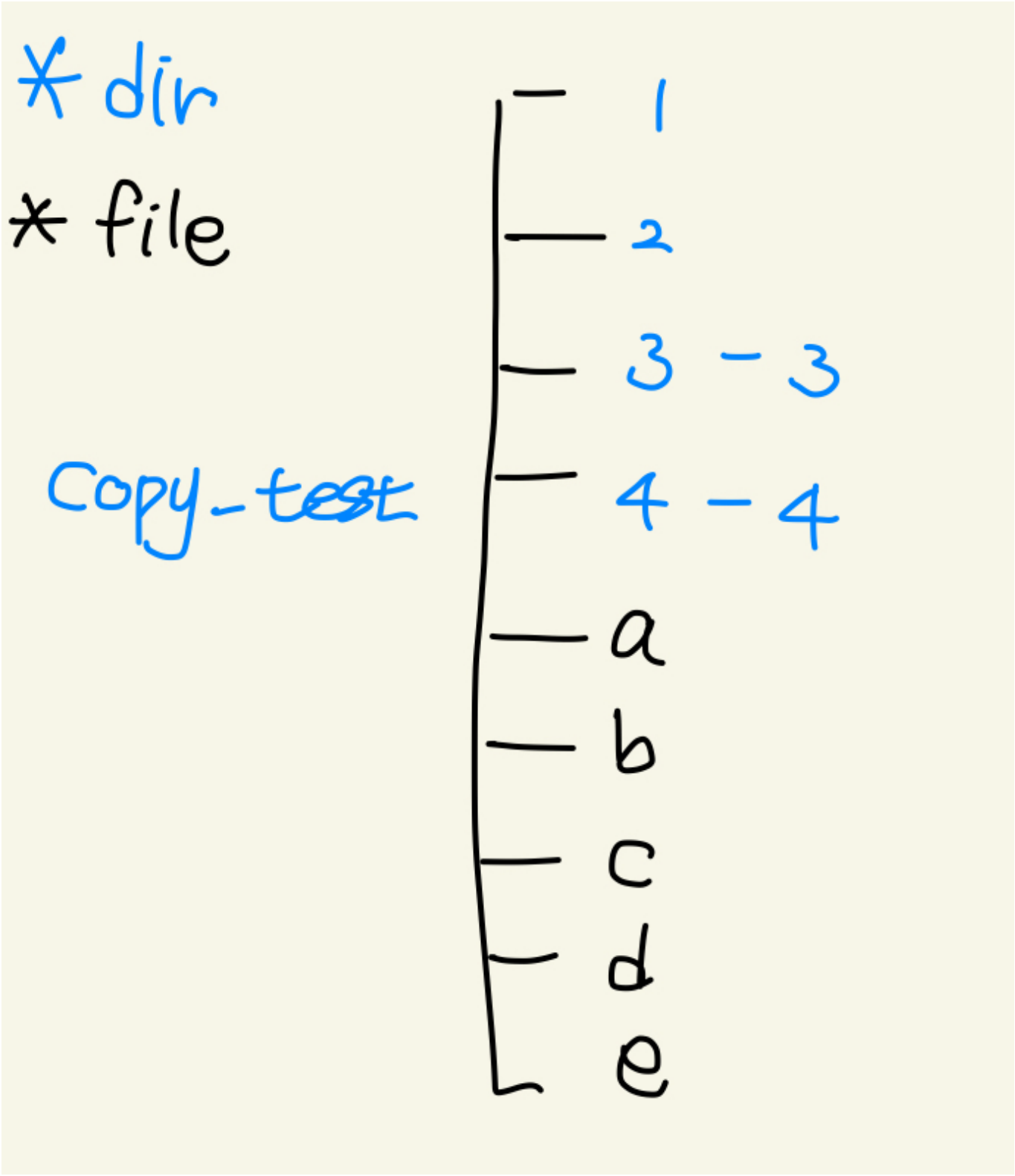
(1) Take a screenshot



9. do “clear”, then do “cd ~”, then do “mkdir copy_test”, then do “cd copy_test”, then do “touch a b c d e”, then do “mkdir 1 2 3 3/3”, them do “mkdir -p 4/4”. Then do the following instructions.

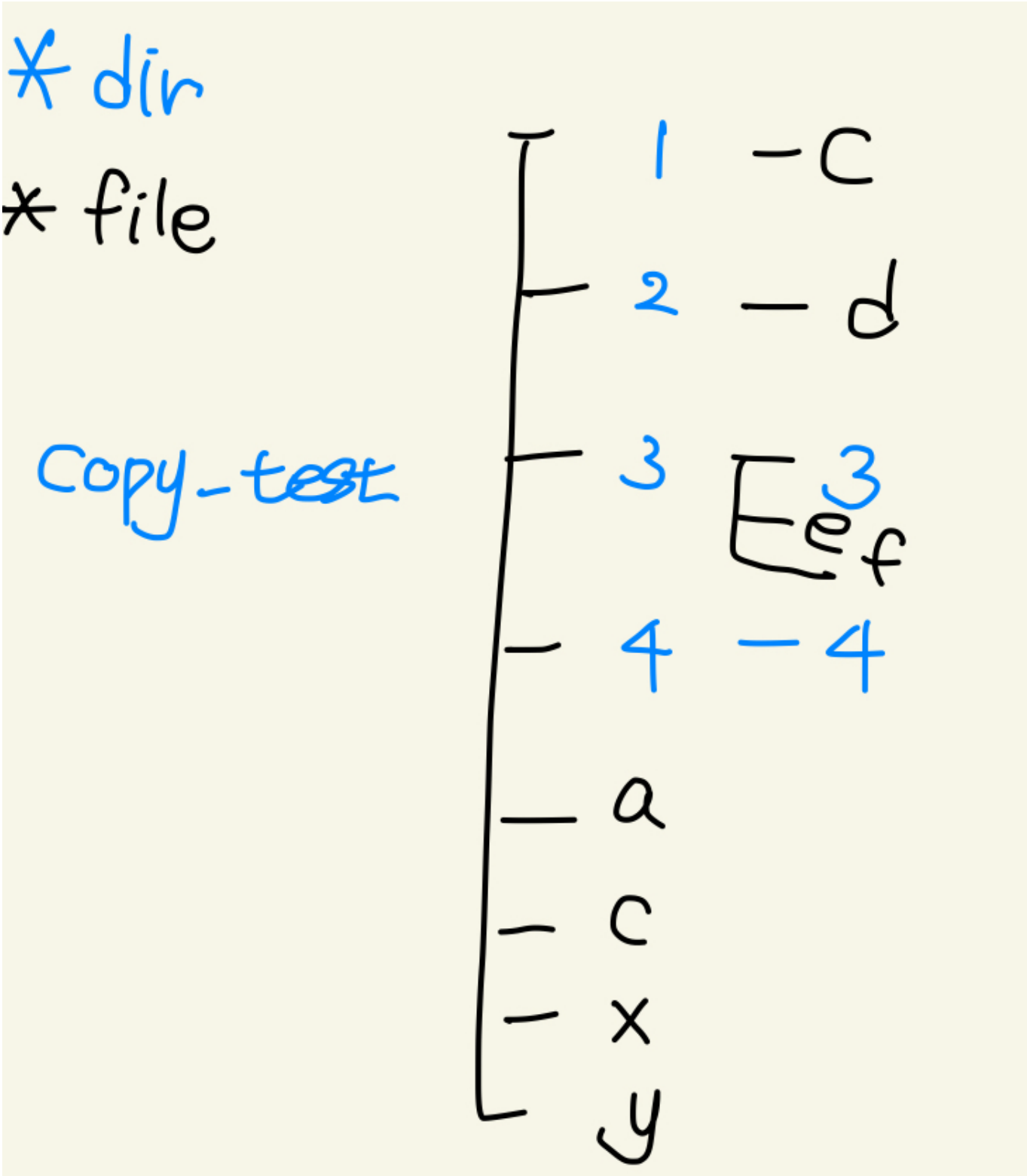
(1) do “ls –R” then take a screenshot and draw the directory structure of “~/copy_test” including files


mtak@mtak:~/directory_test$ cd ~
mtak@mtak:~$ mkdir copy_test
mtak@mtak:~$ cd copy_test/
mtak@mtak:~/copy_test$ touch a b c d e
mtak@mtak:~/copy_test$ mkdir 1 2 3 3/3
mtak@mtak:~/copy_test$ mkdir -p 4/4
mtak@mtak:~/copy_test$ ls -R
.:
1 2 3 4 a b c d e
./1:
./2:
./3:
3
./3/3:
./4:
4
./4/4:



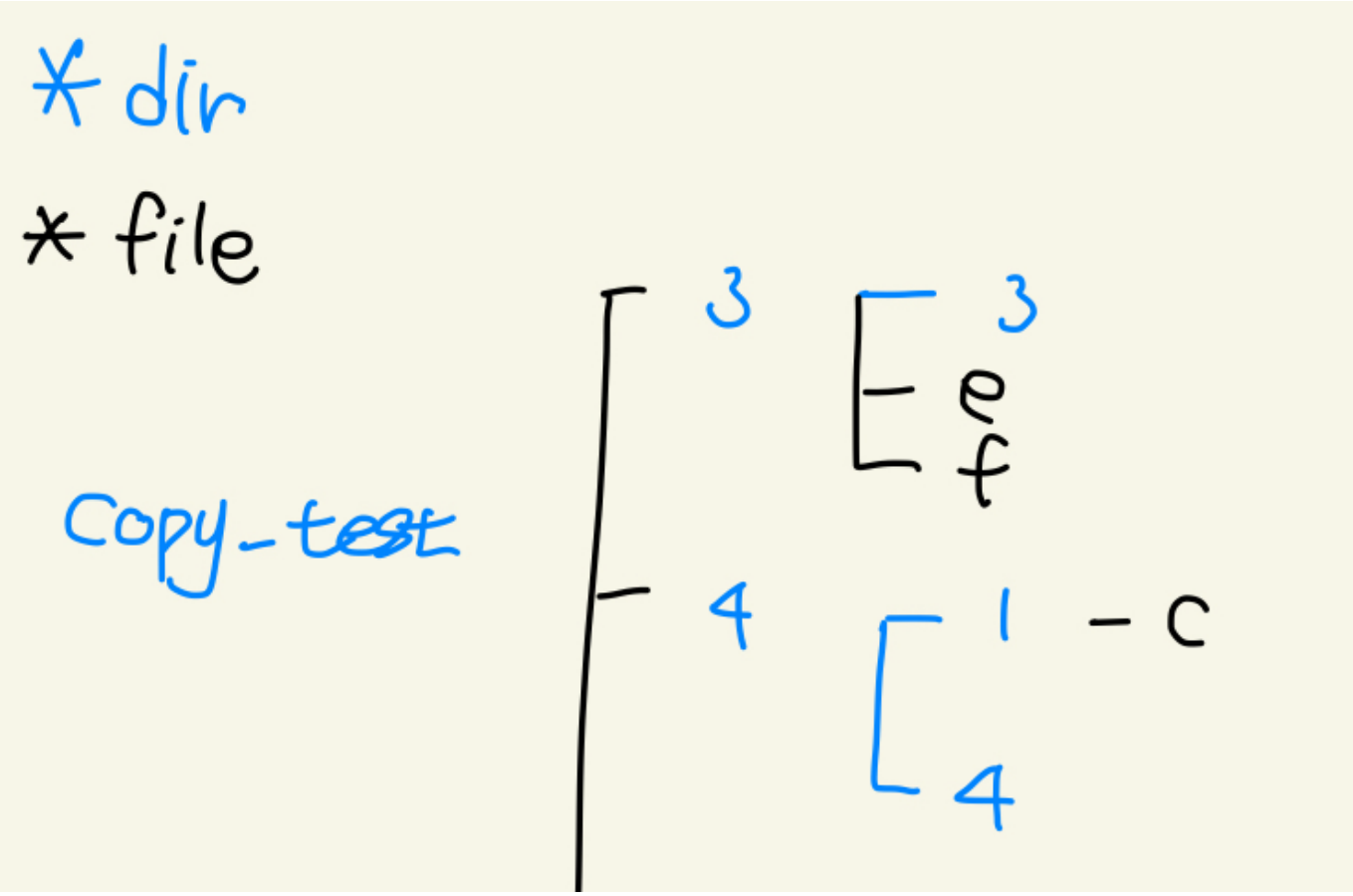
(2) do “cp a x”, then do “mv b y”, then do “cp c 1”, then do “mv d 2”, then do “cp e 3/e”, then do“mv e 3/f”, then do “ls –R” then take a screenshot and draw the directory structure of “~/copy_test” including files

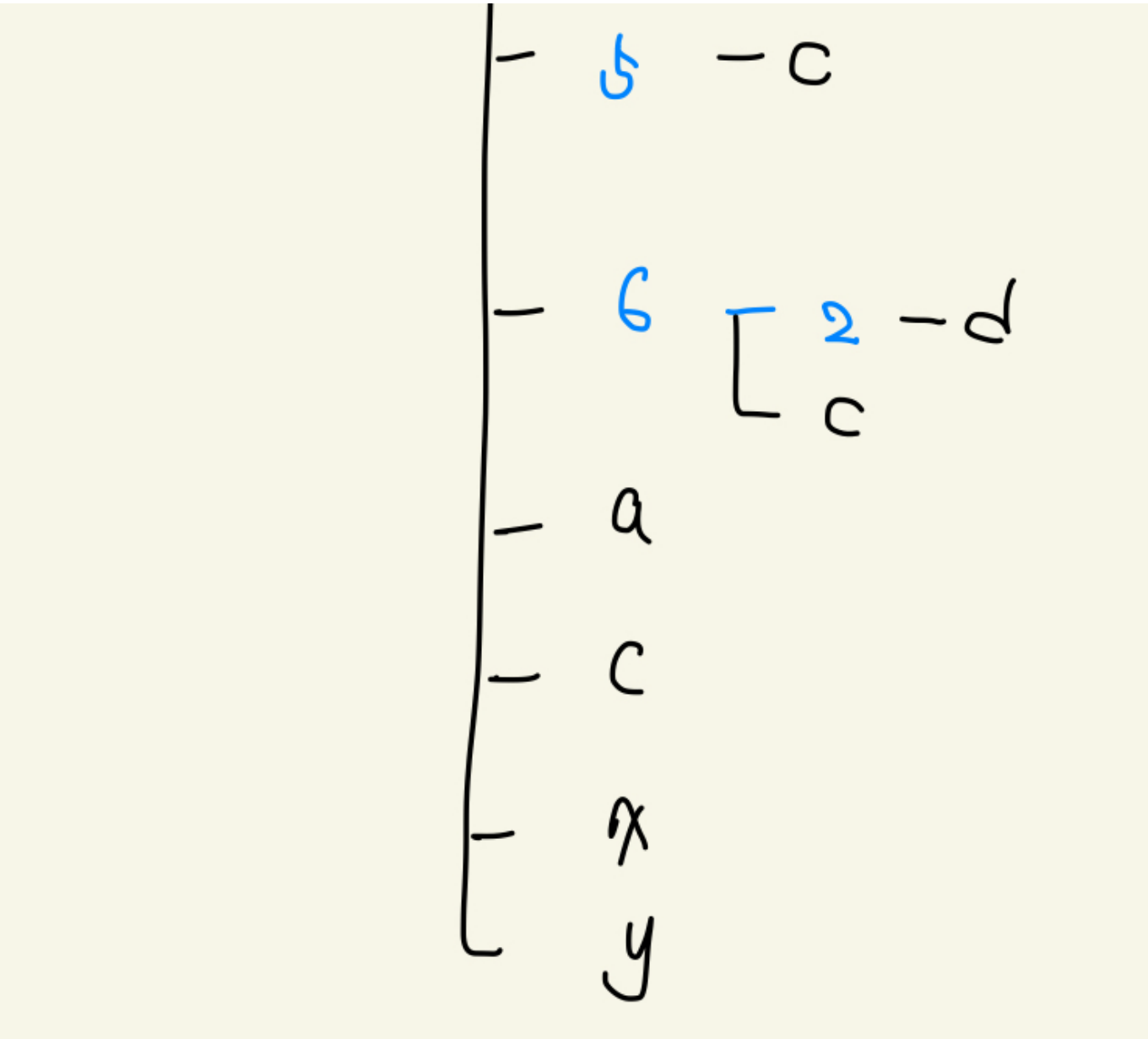
```
mtak@mtak:~/copy_test$ cp a x
mtak@mtak:~/copy_test$ mv b y
mtak@mtak:~/copy_test$ cp c 1
mtak@mtak:~/copy_test$ mv d 2
mtak@mtak:~/copy_test$ cp e 3/e
mtak@mtak:~/copy_test$ mv e 3/f
mtak@mtak:~/copy_test$ ls -R
.:
1  2  3  4  a  c  x  y

./1:
c

./2:
d

./3:
3  e  f

./3/3:

./4:
4

./4/4:
```



(3) do “cp 1 5”, then do “cp –r 1 5”, then do “cp –r 1 4”, then do “mv 1 6”, then do “mv 2 6”, then take a screenshot and draw the directory structure of “~/copy_test” including files

```
mtak@mtak:~/copy_test$ cp 1 5
cp: -r not specified; omitting directory '1'
mtak@mtak:~/copy_test$ cp -r 1 5
mtak@mtak:~/copy_test$ cp -r 1 4
mtak@mtak:~/copy_test$ mv 1 6
mtak@mtak:~/copy_test$ mv 2 6
mtak@mtak:~/copy_test$ ls -R
.:
3  4  5  6  a  c  x  y

./3:
3  e  f

./3/3:

./4:
1  4

./4/1:
c

./4/4:

./5:
c

./6:
2  c

./6/2:
d
```





10. do “clear”, then do “cd ~/copy_test”, then do the following instructions.

(1) do “find . –print”, then take a screenshot

```
mtak@mtak:~/copy_test$ cd ~/copy_test/
mtak@mtak:~/copy_test$ find . -print
.
./3
./3/3
./3/e
./3/f
./c
./5
./5/c
./y
./a
./6
./6/c
./6/2
./6/2/d
./4
./4/1
./4/1/c
./4/4
./x
```

(2) do “find . –name c –print”, then take a screenshot

```
mtak@mtak:~/copy_test$ find . -name c -print
./c
./5/c
./6/c
./4/1/c
```

(3) do “find . –name c –exec rm {} ;”. What is the purpose of the first command?

현재 디렉토리 내에서 이름이 c 인 파일을 찾고 지우는 명령(rm)을 실행해라.

Problems

1. Create a new group “family” for wendy and peterpan. wendy and peterpan should become members of the “family” group.

(1)List the required command in successive order, then explain the role of each command.

- groupadd family : family 라는 그룹을 만든다.
- useradd -m -G family peterpan : 유저 peterpan 을 생성하고 family 서브그룹에 넣는다.
    - useradd -m -G family wendy : 유저 wendy 를 생성하고 family 서브그룹에 넣는다.

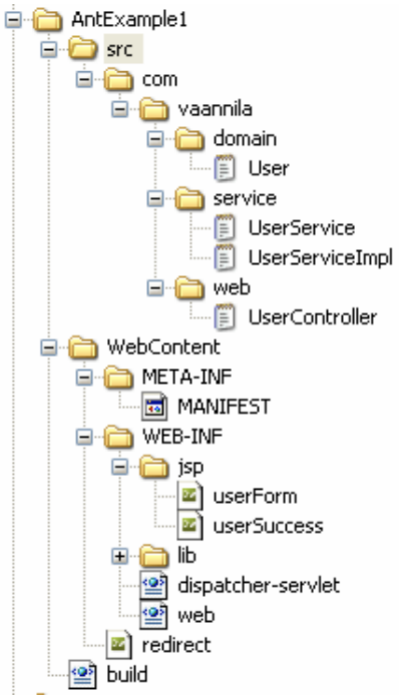
(2)For the purpose of verification, capture the contents of /etc/group by using tail command.

```
mtak@mtak:~/copy_test$ tail /etc/group
pulse-access:x:133:
gdm:x:134:
lxd:x:135:mtak
mtak:x:1000:
sambashare:x:136:mtak
admin:x:1001:
minky:x:1002:
family:x:1003:wendy,peterpan
wendy:x:1004:
peterpan:x:1005:
```

2. Create the following directory (and files) hierarchy. Then, capture the result of “ls –R” in order to

confirm the created directory.

- Set the size of each file as 0 byte.




```
Ubuntu Software
Example1$ ls -R ~/AntExample1/
xample1/:
src  WebContent

/home/mtak/AntExample1/src:
com

/home/mtak/AntExample1/src/com:
vaannila

/home/mtak/AntExample1/src/com/vaannila:
domain  service  web

/home/mtak/AntExample1/src/com/vaannila/domain:
User

/home/mtak/AntExample1/src/com/vaannila/service:
UserService  UserServiceImpl

/home/mtak/AntExample1/src/com/vaannila/web:
UserController

/home/mtak/AntExample1/WebContent:
build  META-INF  WEB-INF

/home/mtak/AntExample1/WebContent/META-INF:
MANIFEST

/home/mtak/AntExample1/WebContent/WEB-INF:
jsp  lib  redirect

/home/mtak/AntExample1/WebContent/WEB-INF/jsp:
userForm  userSuccess

/home/mtak/AntExample1/WebContent/WEB-INF/lib:
dispatcher-servlet  web
```

3. Create an archive of the above directory hierarchy where “AntExample1” is the name of the archive. (AntExample1.tar).

```
mtak@mtak:~$ tar cvf AntExample1.tar AntExample1
AntExample1/
AntExample1/AntExample1.tar
AntExample1/WebContent/
AntExample1/WebContent/WEB-INF/
AntExample1/WebContent/WEB-INF/redirect
AntExample1/WebContent/WEB-INF/jsp/
AntExample1/WebContent/WEB-INF/jsp/userSuccess
AntExample1/WebContent/WEB-INF/jsp/userForm
AntExample1/WebContent/WEB-INF/lib/
AntExample1/WebContent/WEB-INF/lib/dispatcher-servlet
AntExample1/WebContent/WEB-INF/lib/web
AntExample1/WebContent/build
AntExample1/WebContent/META-INF/
AntExample1/WebContent/META-INF/MANIFEST
AntExample1/src/
AntExample1/src/com/
AntExample1/src/com/vaannila/
AntExample1/src/com/vaannila/web/
AntExample1/src/com/vaannila/web/UserController
AntExample1/src/com/vaannila/service/
AntExample1/src/com/vaannila/service/UserServiceImpl
AntExample1/src/com/vaannila/service/UserService
AntExample1/src/com/vaannila/domain/
AntExample1/src/com/vaannila/domain/User
```

4.

(1) Make directory : exclusion_directory inside AntExample1.

(2) Make a test1.tar file with the exclusion_directory

(3) Make a test2.tar file of AntExample1 without the exclusion_directory.

```
mtak@mtak:~/AntExample1$ mkdir exclusion_directory
mtak@mtak:~/AntExample1$ tar cvf test1.tar exclusion_directory/
exclusion_directory/
mtak@mtak:~/AntExample1$ tar cvf test2.tar --exclude=exclusion_directory ./*
./AntExample1.tar
./src/
./src/com/
./src/com/vaannila/
./src/com/vaannila/web/
./src/com/vaannila/web/UserController
./src/com/vaannila/service/
./src/com/vaannila/service/UserServiceImpl
./src/com/vaannila/service/UserService
./src/com/vaannila/domain/
./src/com/vaannila/domain/User
./test1.tar
./WebContent/
./WebContent/WEB-INF/
./WebContent/WEB-INF/redirect
./WebContent/WEB-INF/jsp/
./WebContent/WEB-INF/jsp/userSuccess
./WebContent/WEB-INF/jsp/userForm
./WebContent/WEB-INF/lib/
./WebContent/WEB-INF/lib/dispatcher-servlet
./WebContent/WEB-INF/lib/web
./WebContent/build
./WebContent/META-INF/
./WebContent/META-INF/MANIFEST
```

5. Create ‘myfile_1.txt’, ‘myfile_2.txt’ and ‘myfile_3.txt’.

a. Create a new archive file named ‘myarchive.zip’ and add myfile_1.txt, myfile_2.txt. b. Add myfile_3.txt in myarchive.zip using -u option. c. Show contents of above archive file using command ‘zip -sf myarchive.zip’ Take a screenshot .

```
mtak@mtak:~/AntExample1$ touch myfile_1.txt myfile_2.txt myfile_3.txt
mtak@mtak:~/AntExample1$ zip myarchive.zip myfile_1.txt myfile_2.txt
  adding: myfile_1.txt (stored 0%)
  adding: myfile_2.txt (stored 0%)
mtak@mtak:~/AntExample1$ zip myarchive.zip  -u my
myarchive.zip  myfile_1.txt   myfile_2.txt   myfile_3.txt
mtak@mtak:~/AntExample1$ zip myarchive.zip  -u myfile_3.txt
  adding: myfile_3.txt (stored 0%)
mtak@mtak:~/AntExample1$ aip -sf myarchive.zip
Command 'aip' not found, did you mean:
  command 'wip' from snap wip (1.5.0)
  command 'gip' from deb gip (1.7.0-1-5)
  command 'bip' from deb bip (0.9.3-1)
  command 'zip' from deb zip (3.0-12build2)
  command 'sip' from deb sip-dev (4.19.25+dfsg-3build1)
  command 'asp' from deb asp (1.8-8build1)
  command 'rip' from deb exult-studio (1.6-3)
  command 'arp' from deb net-tools (1.60+git20181103.0eebece-1ubuntu5)
  command 'pip' from deb python3-pip (22.0.2+dfsg-1ubuntu0.2)
  command 'ip' from deb iproute2 (5.15.0-1ubuntu2)
  command 'aid' from deb id-utils (4.6.28-20200521ss15dab)
  command 'aim' from deb abinit (9.6.2-1build1)
See 'snap info <snapname>' for additional versions.
mtak@mtak:~/AntExample1$ zip -sf myarchive.zip
Archive contains:
  myfile_1.txt
  myfile_2.txt
  myfile_3.txt
Total 3 entries (0 bytes)
mtak@mtak:~/AntExample1$
```