* ownership and file permissions.

User permissions are related to reading, writing and executing files.

ls → list files and folders.

ls -a → list all files and folders (hidden also)

ls -l ~ permissions of files and folders in that directory.

* Ownership.

Ownership.

① Who owns the file/folder?

② each file/folder has 2 different → user, group

owner

-rw-rw-r-- 1 yash yash 305 sep 20 01:09 config.yaml

yash (user) → user owner of file

yash (group) → group as owner

Owner of file is usually, user that created that file.

Owning group is primary group of that user. (both user and group)

② change owner of file/folder.

sudo chown tom : admin test.txt → file.

tom → change owner to user tom

admin → change group owner to admin

③ change owner (only user) of file

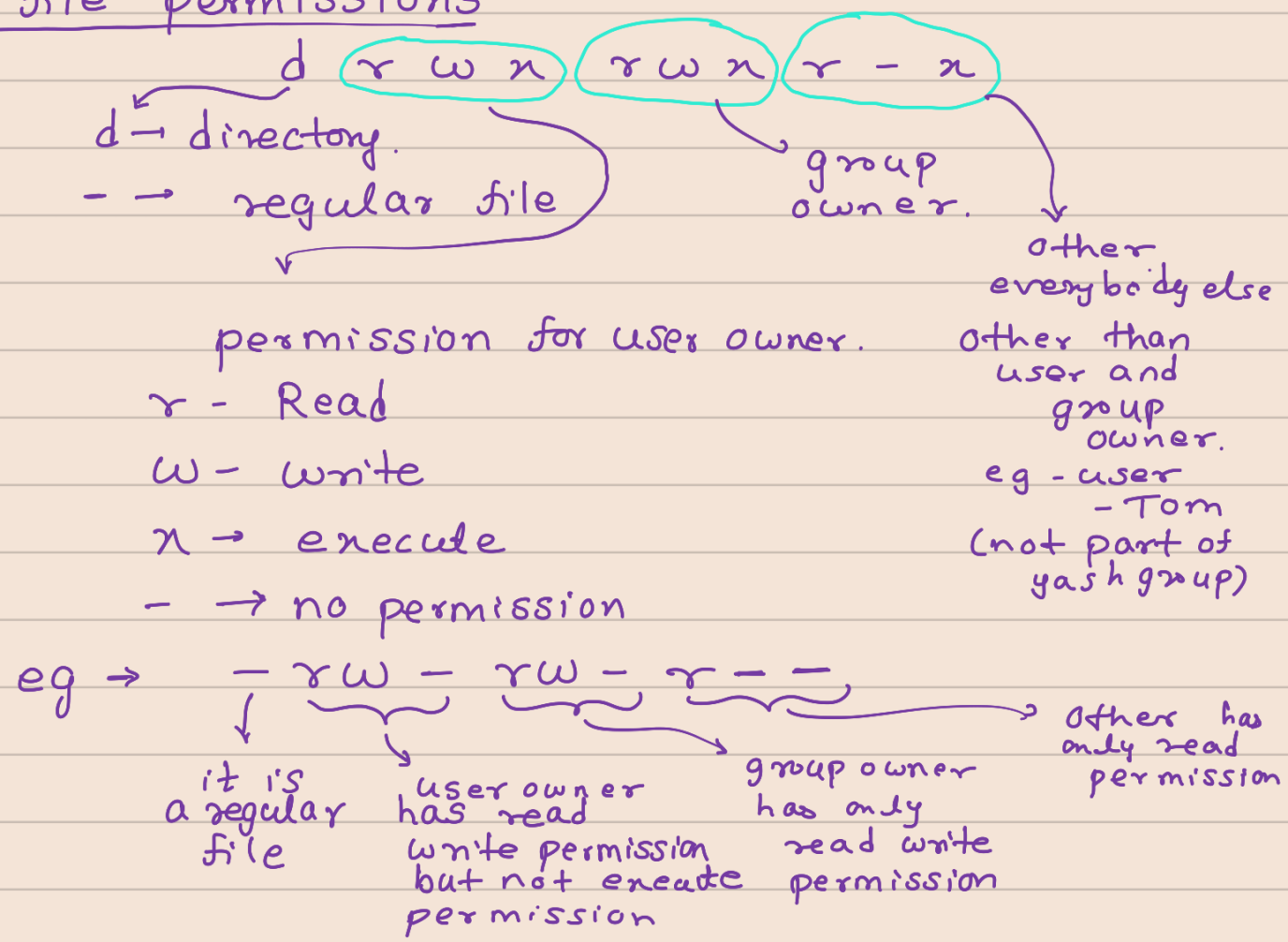
sudo chown admin test.txt.

admin → change owner user from tom to admin

④ change owner (only group) of file

```
sudo chgrp devops test.txt
```

* file permissions



* modifying permissions.

① remove execute permission of a folder for all three owner (user, group, other)

```
sudo chmod -x api
```

folder.

② change permission for one specific owner. (eg- group)

```
sudo chmod g-w config.yaml
```

group → remove write permission file

owner	group	other
u	g	o

③ add permission for specific owner

eg- add execute permission for group yash

sudo chmod g+x config.yaml

g → group
+x → add execute permission
config.yaml → file.

④ change multiple permission of a owner

eg group - yash → add write & execute permission (config.yaml)

sudo chmod g=rwx config.yaml

group will have all 3 permissions.

what if user should have only read permission

sudo chmod u=r-- config.yaml

* wrap up.

1.) Symbolic mode
+ add
- remove
r Read
w write
x execute
- no permission

2.) Set permission = set the permission

3.) Numeric mode
0 no permission
1 execute
2 write
4 Read.

⑤ Show hidden files as well along with permissions.

ls -la