

## Panduan Pengerjaan dan Pengumpulan Lab Sistem Operasi tiap Minggunya

*Tiap peserta OS wajib mencoba dan mempelajari file-file demos di folder tiap Week yang mencakup materi yang dipelajari pada minggu tersebut. file ini semua ada di folder extra yang ada di badak, karena folder extra khususnya yang demos akan diperbarui secara berkala. Setelah mencoba silahkan memperbarui file README.md di github masing masing yang telah didaftarkan atau yang terdapat pada qrcode.*

### 1. Tahap Persiapan Sebelum Mengerjakan Lab

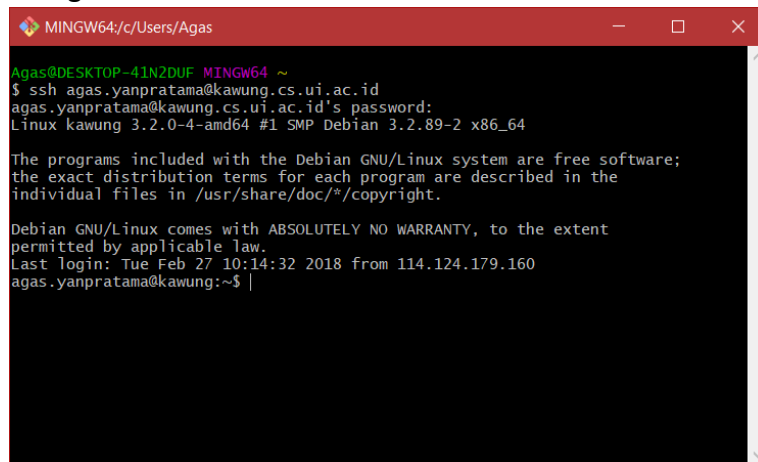
Sebelum mengerjakan lab dianjurkan untuk meng-pull repo github UI-FASILKOM-OS project os181 karena file demos akan diperbarui secara berkala oleh pengajar Mata Kuliah Sistem Operasi.

### 2. Memperbarui file demo yang sebelum mengerjakan demo pada week tersebut.

#### a. Jika belum mempunyai folder demo pada localdir di server badak

##### i. **Clone repository 'OS181' ke localdir yang ada di badak**

1. Buat koneksi ke server kawung dari laptop pribadi Anda untuk mengakses server badak.

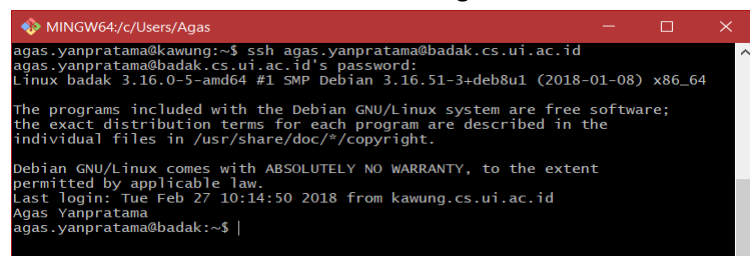


```
MINGW64/c/Users/Agas
Agas@DESKTOP~41N2DUF MINGW64 ~
$ ssh agas.yanpratama@kawung.cs.ui.ac.id
agas.yanpratama@kawung.cs.ui.ac.id's password:
Linux kawung 3.2.0-4-amd64 #1 SMP Debian 3.2.89-2 x86_64

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Tue Feb 27 10:14:32 2018 from 114.124.179.160
agas.yanpratama@kawung:~$
```

2. Setelah masuk ke dalam server kawung buat koneksi ke server badak.



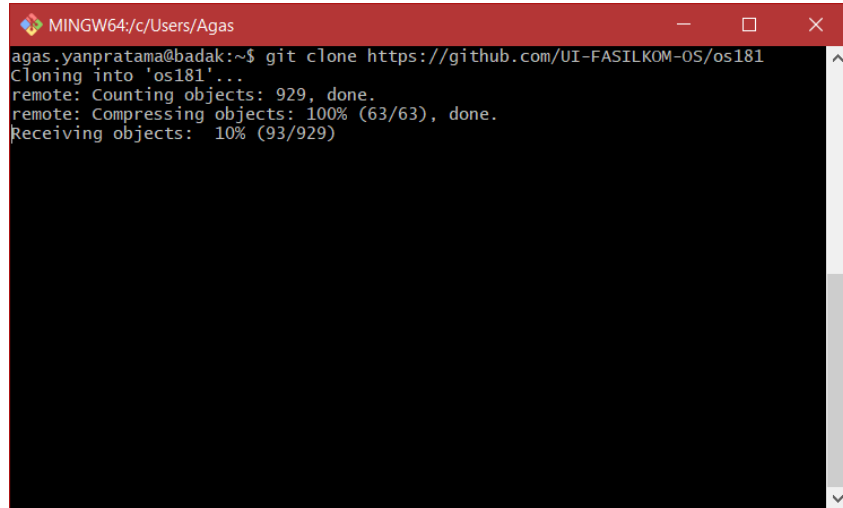
```
MINGW64/c/Users/Agas
agas.yanpratama@kawung:~$ ssh agas.yanpratama@badak.cs.ui.ac.id
agas.yanpratama@badak.cs.ui.ac.id's password:
Linux badak 3.16.0-5-amd64 #1 SMP Debian 3.16.51-3+deb8u1 (2018-01-08) x86_64

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Last login: Tue Feb 27 10:14:50 2018 from kawung.cs.ui.ac.id
Agas Yanpratama
agas.yanpratama@badak:~$
```

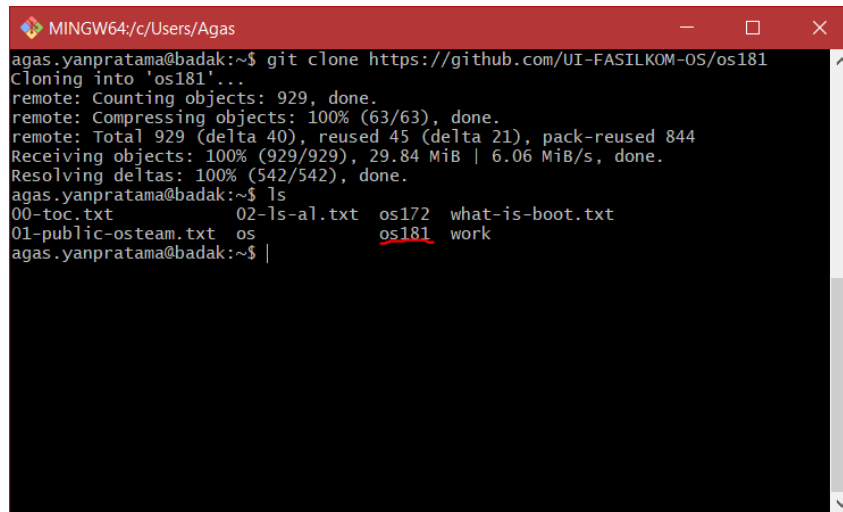
- Gunakan perintah *git clone* untuk men-*clone* repo 'OS181' ke local dir badak Anda. Dengan format :

***git clone https://github.com/UI-FASILKOM-OS/os181***



```
MINGW64/c/Users/Agas
agas.yanpratama@badak:~$ git clone https://github.com/UI-FASILKOM-OS/os181
Cloning into 'os181'...
remote: Counting objects: 929, done.
remote: Compressing objects: 100% (63/63), done.
Receiving objects: 10% (93/929)
```

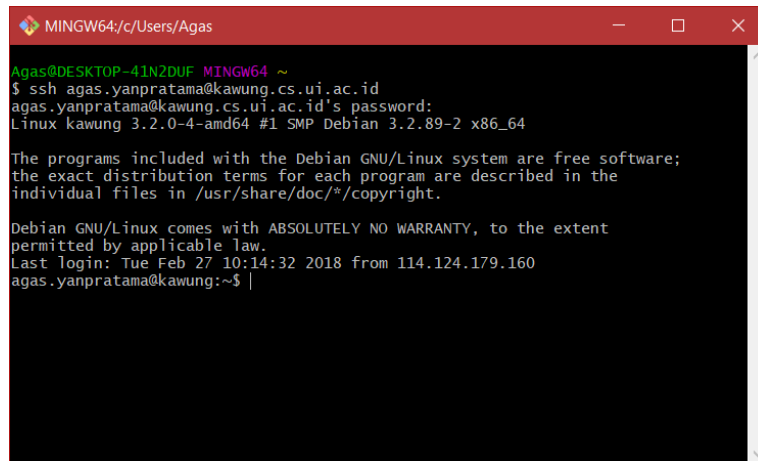
- Tunggu hingga proses selesai, setelah selesai maka file dan folder yang ada di OS181 sudah ada di localdir badak Anda dan bisa mencoba-coba dan menjalankan demo yang ada di dalam folder tersebut.



```
MINGW64/c/Users/Agas
agas.yanpratama@badak:~$ git clone https://github.com/UI-FASILKOM-OS/os181
Cloning into 'os181'...
remote: Counting objects: 929, done.
remote: Compressing objects: 100% (63/63), done.
remote: Total 929 (delta 40), reused 45 (delta 21), pack-reused 844
Receiving objects: 100% (929/929), 29.84 MiB | 6.06 MiB/s, done.
Resolving deltas: 100% (542/542), done.
agas.yanpratama@badak:~$ ls
00-toc.txt          02-ls-al.txt      os172  what-is-boot.txt
01-public-osteam.txt os                  os181  work
agas.yanpratama@badak:~$
```

**ii. Copy folder extra yang ada di badak ke localdir milik sendiri yang ada di badak**

- Buat koneksi ke server kawung dari laptop pribadi Anda untuk mengakses server badak.

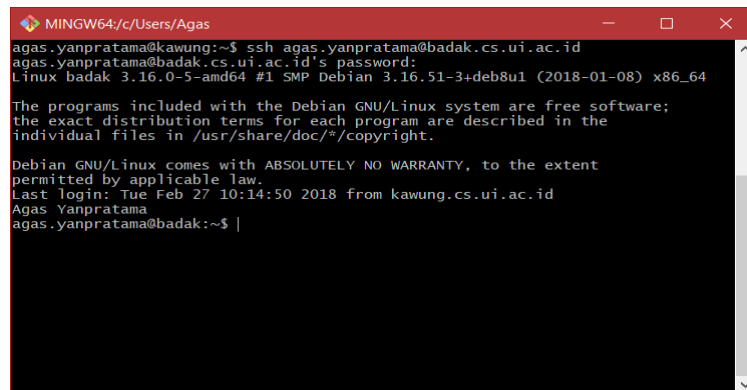


```
MINGW64/c/Users/Agas
Agas@DESKTOP-41N2DUF MINGW64 ~
$ ssh agas.yanpratama@kawung.cs.ui.ac.id
agas.yanpratama@kawung.cs.ui.ac.id's password:
Linux kawung 3.2.0-4-amd64 #1 SMP Debian 3.2.89-2 x86_64

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agas.yanpratama@kawung:~$
```

- Setelah masuk ke dalam server kawung buat koneksi ke server badak.



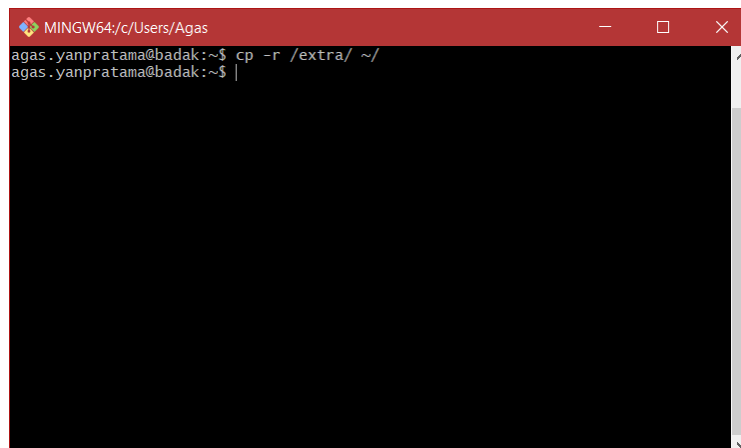
```
MINGW64/c/Users/Agas
agas.yanpratama@kawung:~$ ssh agas.yanpratama@badak.cs.ui.ac.id
agas.yanpratama@badak.cs.ui.ac.id's password:
Linux badak 3.16.0-5-amd64 #1 SMP Debian 3.16.51-3+deb8u1 (2018-01-08) x86_64

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Agas Yanpratama
agas.yanpratama@badak:~$
```

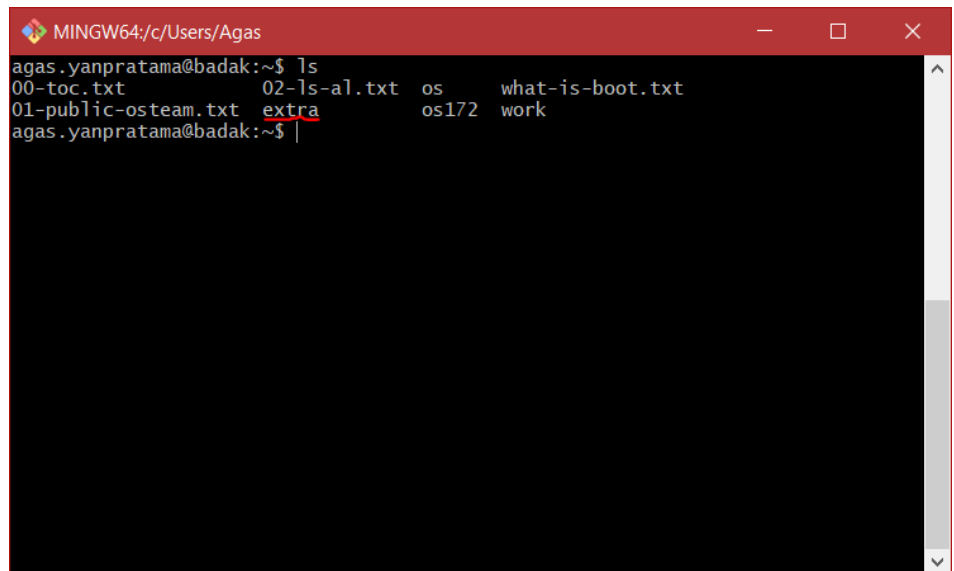
- Gunakan perintah *copy* yang merupakan command ubuntu untuk men-copy semua file dan folder yang ada di dalam folder extra pada server badak. Dengan perintah :

***cp -r /extra/ ~/***



```
MINGW64/c/Users/Agas
agas.yanpratama@badak:~$ cp -r /extra/ ~/
agas.yanpratama@badak:~$
```

4. Tunggu sampai proses selesai, lalu bisa dicek bahwa sudah ada folder extra di dalam localdir kita

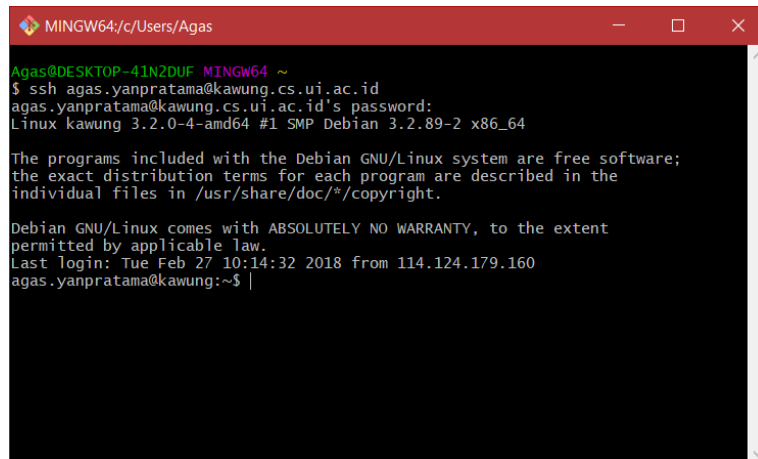


```
MINGW64:/c/Users/Agas
agas.yanpratama@badak:~$ ls
00-toc.txt      02-ls-al.txt  os      what-is-boot.txt
01-public-osteam.txt  extra        os172   work
agas.yanpratama@badak:~$
```

b. Jika sudah mempunyai folder demo pada localdir di server badak

i. **Pull repository 'OS181' ke localdir yang sudah ada di badak**

1. Buat koneksi ke server kawung dari laptop pribadi Anda untuk mengakses server badak.

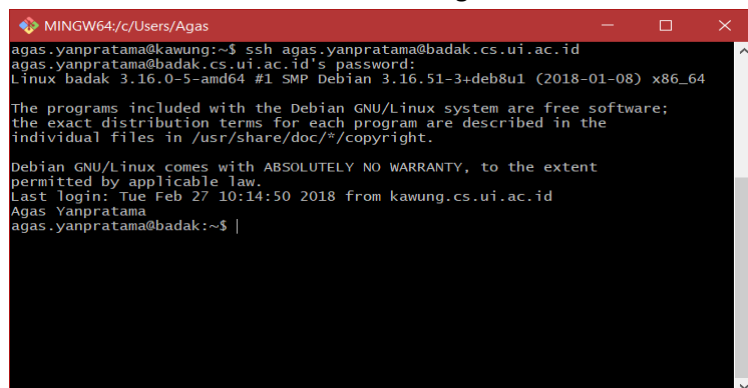


```
MINGW64:/c/Users/Agas
Agas@DESKTOP-41N2DUF MINGW64 ~
$ ssh agas.yanpratama@kawung.cs.ui.ac.id
agas.yanpratama@kawung.cs.ui.ac.id's password:
Linux kawung 3.2.0-4-amd64 #1 SMP Debian 3.2.89-2 x86_64

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agas.yanpratama@kawung:~$
```

2. Setelah masuk ke dalam server kawung buat koneksi ke server badak.

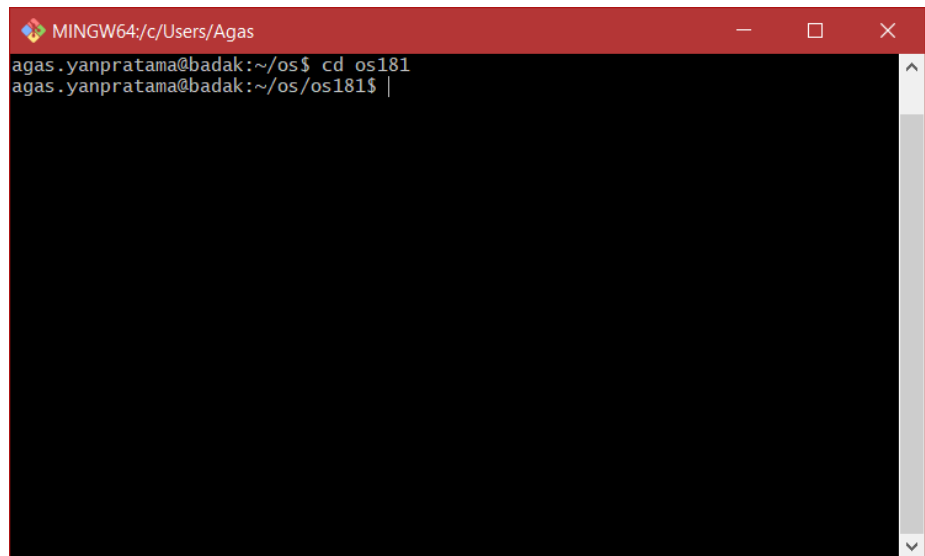


```
MINGW64:/c/Users/Agas
agas.yanpratama@kawung:~$ ssh agas.yanpratama@badak.cs.ui.ac.id
agas.yanpratama@badak.cs.ui.ac.id's password:
Linux badak 3.16.0-5-amd64 #1 SMP Debian 3.16.51-3+deb8u1 (2018-01-08) x86_64

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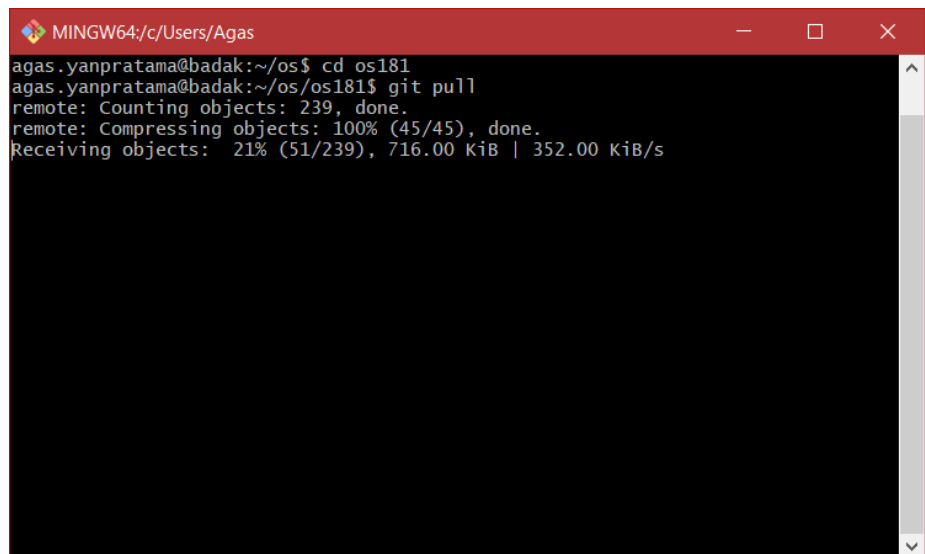
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Last login: Tue Feb 27 10:14:50 2018 from kawung.cs.ui.ac.id
Agas Yanpratama
agas.yanpratama@badak:~$
```

3. Pindah ke directory dengan nama os181, untuk navigasinya silakan menggunakan *command* 'cd' dan 'ls'

A terminal window titled 'MINGW64/c/Users/Agas' with standard window controls. The command prompt shows the user 'agas.yanpratama@badak' in the directory '~/os'. The command 'cd os181' is entered and executed, changing the directory to '~/os/os181'.

```
MINGW64/c/Users/Agas
agas.yanpratama@badak:~/os$ cd os181
agas.yanpratama@badak:~/os/os181$ |
```

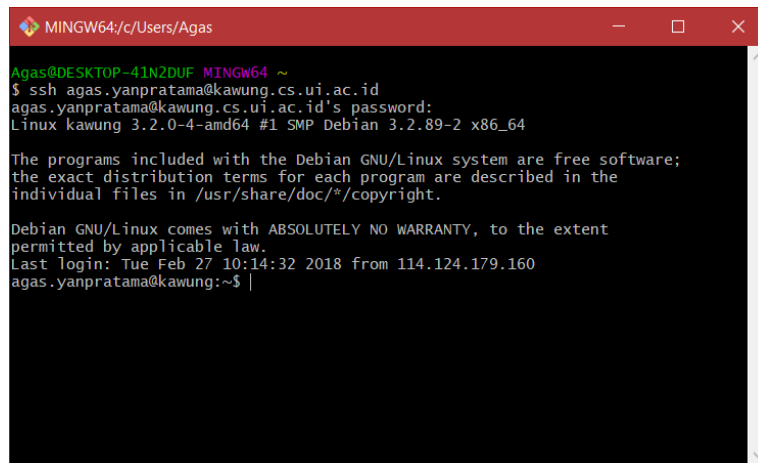
4. Gunakan perintah *git pull* untuk men-pull repo 'OS181' ke localdir badak Anda jika ada *update* pada repo 'OS181' tersebut, tunggu hingga proses selesai dan anda bisa melakukan demo pada *week* tersebut.

A terminal window titled 'MINGW64/c/Users/Agas' with standard window controls. The command prompt shows the user 'agas.yanpratama@badak' in the directory '~/os/os181'. The command 'git pull' is entered and executed, showing progress for counting, compressing, and receiving objects.

```
MINGW64/c/Users/Agas
agas.yanpratama@badak:~/os$ cd os181
agas.yanpratama@badak:~/os/os181$ git pull
remote: Counting objects: 239, done.
remote: Compressing objects: 100% (45/45), done.
Receiving objects: 21% (51/239), 716.00 KiB | 352.00 KiB/s
```

## ii. *Pull repository* 'OS181' ke localdir yang sudah ada di badak

1. Buat koneksi ke server kawung dari laptop pribadi Anda untuk mengakses server badak.

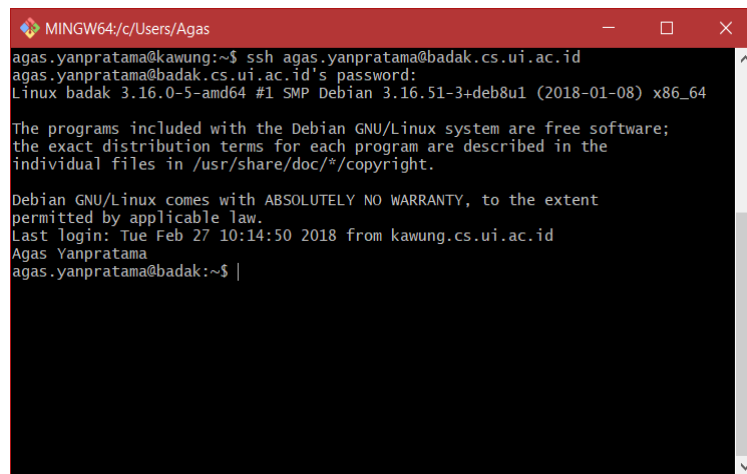


```
MINGW64/c/Users/Agas
Agas@DESKTOP-41N2DUF MINGW64 ~
$ ssh agas.yanpratama@kawung.cs.ui.ac.id
agas.yanpratama@kawung.cs.ui.ac.id's password:
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Last login: Tue Feb 27 10:14:32 2018 from 114.124.179.160
agas.yanpratama@kawung:~$
```

2. Setelah masuk ke dalam server kawung buat koneksi ke server badak.



```
MINGW64/c/Users/Agas
agas.yanpratama@kawung:~$ ssh agas.yanpratama@badak.cs.ui.ac.id
agas.yanpratama@badak.cs.ui.ac.id's password:
Linux badak 3.16.0-5-amd64 #1 SMP Debian 3.16.51-3+deb8u1 (2018-01-08) x86_64

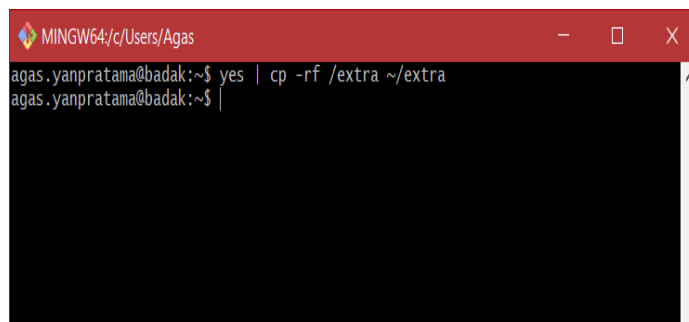
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Last login: Tue Feb 27 10:14:50 2018 from kawung.cs.ui.ac.id
Agas Yanpratama
agas.yanpratama@badak:~$
```

3. Jalankan command ini, agar folder extra ter-update dengan yang ada di /extra/

***yes | cp -rf /extra ~/extra***

*Untuk yang digarisbawahi silahkan ubah dengan directory dimana anda menyimpan folder extra di localdir Anda di badak*



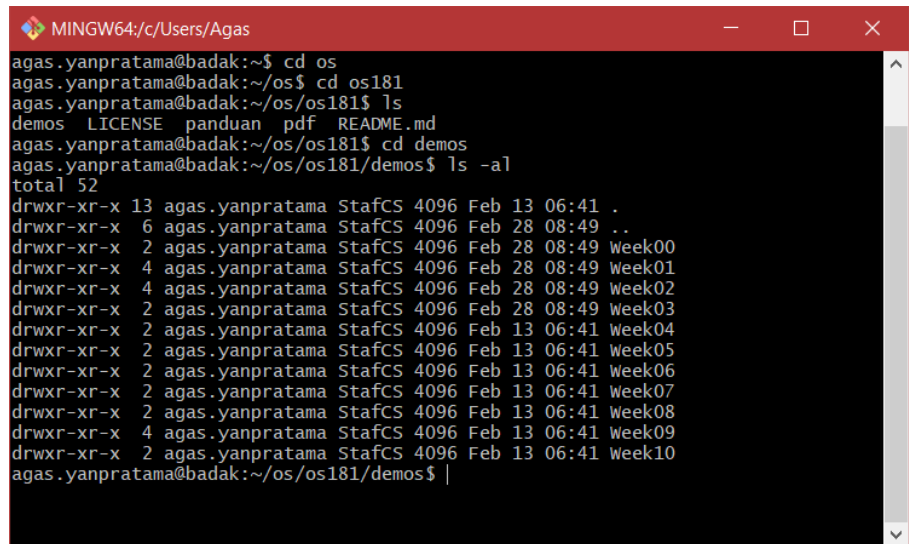
```
MINGW64/c/Users/Agas
agas.yanpratama@badak:~$ yes | cp -rf /extra ~/extra
agas.yanpratama@badak:~$
```

### 3. Mengerjakan file demo pada *Week* tersebut.

#### a. Pindah directory dimana file demo disimpan

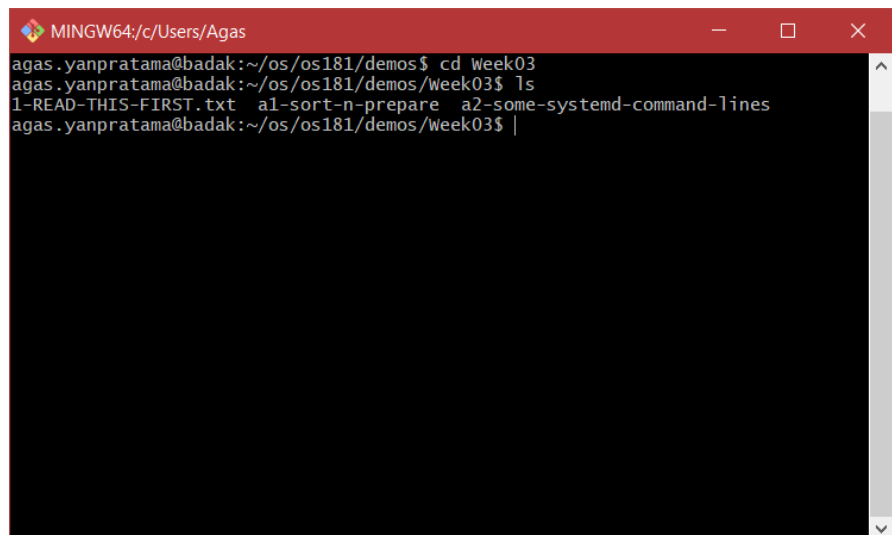
##### i. *Jika* men-clone dari repository “OS181” yang ada di github UI-FASILKOM-OS

1. Pindah ke directory os181 dan cari folder demos (gunakan *command* “cd” dan “ls” untuk navigasi dalam server badak).
2. Didalam folder demos gunakan perintah ls dan pindah ke folder “WeekXX” XX adalah week yang ingin dicoba kerjakan labnya.



```
MINGW64:/c/Users/Agas
agas.yanpratama@badak:~$ cd os
agas.yanpratama@badak:~/os$ cd os181
agas.yanpratama@badak:~/os/os181$ ls
demos LICENSE panduan pdf README.md
agas.yanpratama@badak:~/os/os181$ cd demos
agas.yanpratama@badak:~/os/os181/demos$ ls -al
total 52
drwxr-xr-x 13 agas.yanpratama StafCS 4096 Feb 13 06:41 .
drwxr-xr-x  6 agas.yanpratama StafCS 4096 Feb 28 08:49 ..
drwxr-xr-x  2 agas.yanpratama StafCS 4096 Feb 28 08:49 Week00
drwxr-xr-x  4 agas.yanpratama StafCS 4096 Feb 28 08:49 Week01
drwxr-xr-x  4 agas.yanpratama StafCS 4096 Feb 28 08:49 Week02
drwxr-xr-x  2 agas.yanpratama StafCS 4096 Feb 28 08:49 Week03
drwxr-xr-x  2 agas.yanpratama StafCS 4096 Feb 13 06:41 Week04
drwxr-xr-x  2 agas.yanpratama StafCS 4096 Feb 13 06:41 Week05
drwxr-xr-x  2 agas.yanpratama StafCS 4096 Feb 13 06:41 Week06
drwxr-xr-x  2 agas.yanpratama StafCS 4096 Feb 13 06:41 Week07
drwxr-xr-x  2 agas.yanpratama StafCS 4096 Feb 13 06:41 Week08
drwxr-xr-x  4 agas.yanpratama StafCS 4096 Feb 13 06:41 Week09
drwxr-xr-x  2 agas.yanpratama StafCS 4096 Feb 13 06:41 Week10
agas.yanpratama@badak:~/os/os181/demos$ |
```

3. Contohnya adalah Week03, kita disini akan mencoba menjalankan *demo* yang ada di dalam folder *Week03*.



```
MINGW64:/c/Users/Agas
agas.yanpratama@badak:~/os/os181/demos$ cd Week03
agas.yanpratama@badak:~/os/os181/demos/Week03$ ls
1-READ-THIS-FIRST.txt a1-sort-n-prepare a2-some-systemd-command-lines
agas.yanpratama@badak:~/os/os181/demos/Week03$ |
```

4. Bisa kita lihat ada file 1-READ-THIS-FIRST.txt buka file tersebut dengan menggunakan *command* "cat".

```
MINGW64:/c/Users/Agas
=====
Folder Name:
Week03/

To copy the folder to your home directory:
cp -r /extra/Week03/W03-demos/ W03-demos/
=====

File Listing:
* 1-READ-THIS-FIRST.txt
* a1-sort-n-prepare
* a2-some-systemd-command-lines
=====

To see some "systemd" commands, run:
bash a2-some-systemd-command-lines
=====

Some useful commands:

#####
systemctl start [name.service]
systemctl stop [name.service]
systemctl restart [name.service]
systemctl reload [name.service]
systemctl status [name.service]
systemctl is-active [name.service]
systemctl list-units --type service --all
#####
systemctl list-unit-files
systemd-analyze blame
#####
systemctl list-units
systemctl list-units | grep .service
systemctl list-units | grep ssh.service
systemctl status ssh.service
systemctl is-enabled ssh
journalctl
journalctl -b
#####

REF:
- https://www.youtube.com/watch?v=AtEqbYTLHfs
- https://www.linux.com/learn/understanding-and-using-systemd

=====
REV03: Mon Feb 26 19:40:59 WIB 2018
START: Tue Feb 20 09:12:43 WIB 2018

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# This free document is distributed in the hope that it will be
# useful, but WITHOUT ANY WARRANTY; without even the implied
# warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.

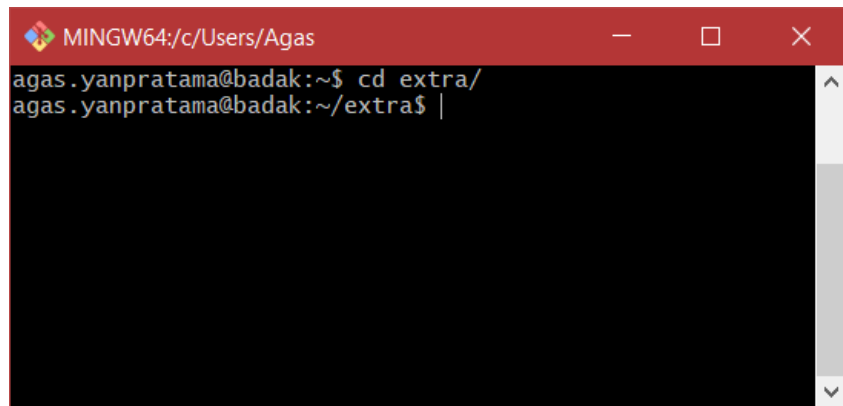
agas.yanpratama@badak:~/os/os181/demos/Week03$ |
```



5. Baca apa isi file tersebut biasanya di tiap Week akan ada sebuah file panduan yang telah disiapkan untuk week tersebut untuk menjalankan perintah-perintah maupun program seperti script dan program c.

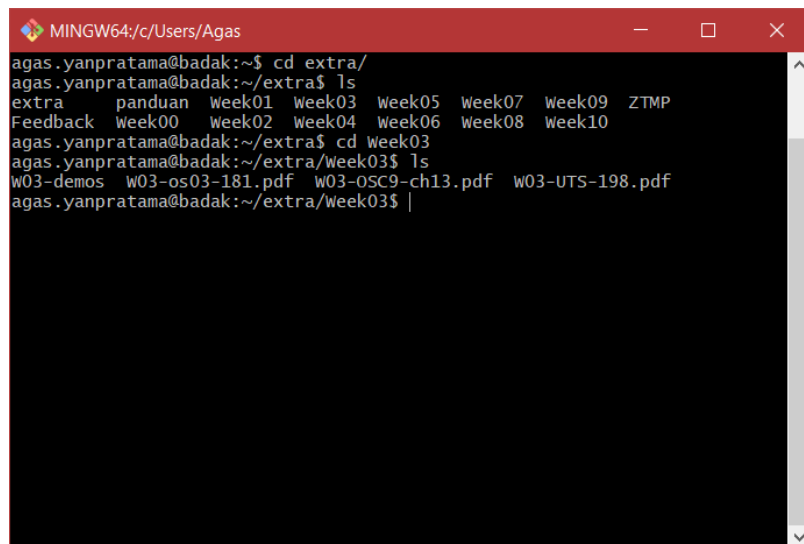
ii. **Jika men-clone dari repository “OS181” yang ada di github UI-FASILKOM-OS**

1. Pindah ke folder extra yang sudah di-copy yang ada di dalam directory pribadi. **BUKAN YANG ADA DI DALAM /extra.**



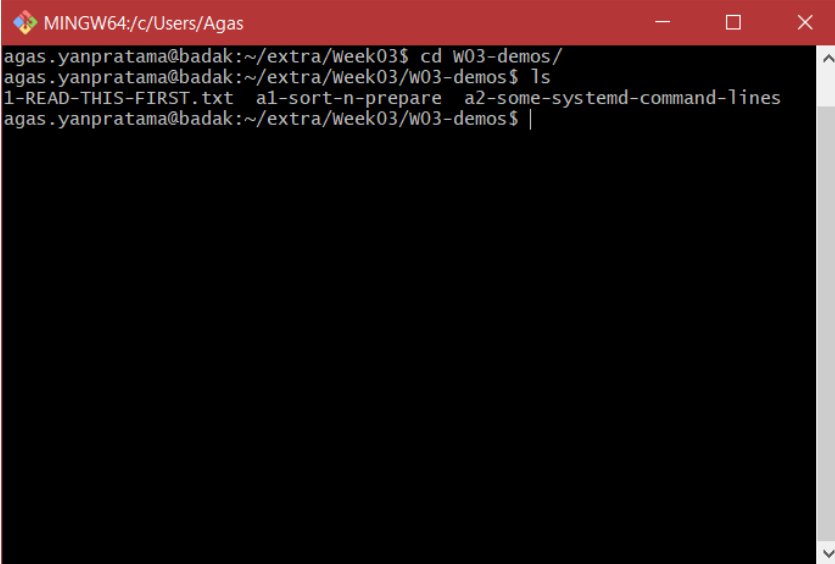
```
MINGW64/c/Users/Agas
agas.yanpratama@badak:~$ cd extra/
agas.yanpratama@badak:~/extra$ |
```

2. Navigasi ke folder demo yang akan dikerjakan pada week tersebut (gunakan *command*: ls dan cd untuk navigasi).
3. Contoh yang akan dijelaskan adalah pengerjaan Week03.
4. Masuk ke dalam folder 'Week03'



```
MINGW64/c/Users/Agas
agas.yanpratama@badak:~$ cd extra/
agas.yanpratama@badak:~/extra$ ls
extra  panduan  Week01  Week03  Week05  Week07  Week09  ZTMP
Feedback Week00  Week02  Week04  Week06  Week08  Week10
agas.yanpratama@badak:~/extra$ cd Week03
agas.yanpratama@badak:~/extra/Week03$ ls
W03-demos  W03-os03-181.pdf  W03-OSC9-ch13.pdf  W03-UTS-198.pdf
agas.yanpratama@badak:~/extra/Week03$ |
```

5. Buka folder 'W03-demos'



```
MINGW64/c/Users/Agas
agas.yanpratama@badak:~/extra/week03$ cd w03-demos/
agas.yanpratama@badak:~/extra/week03/w03-demos$ ls
1-READ-THIS-FIRST.txt  a1-sort-n-prepare  a2-some-systemd-command-lines
agas.yanpratama@badak:~/extra/week03/w03-demos$ |
```

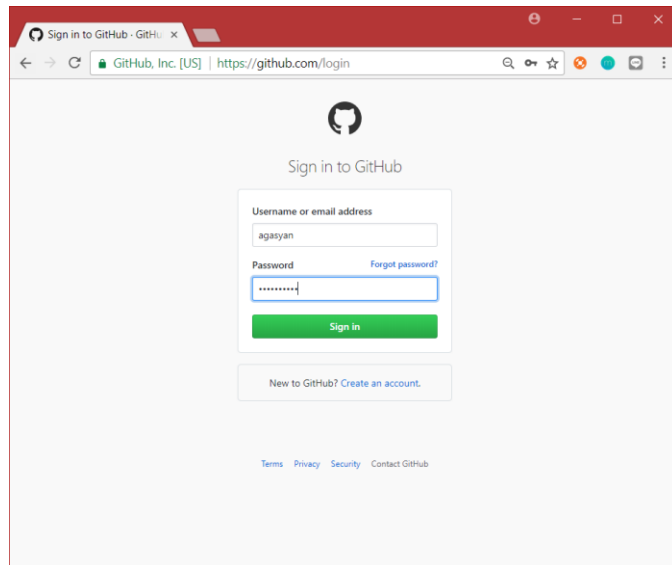
6. Biasanya dalam tiap folder demo ada sebuah *readme* atau panduan dalam mengerjakan demo tersebut, silakan dibuka dan dibaca. Gunakan perintah 'cat' untuk membuka, argumen untuk *command* cat adalah:

**cat [nama file yang ingin dibuka]**

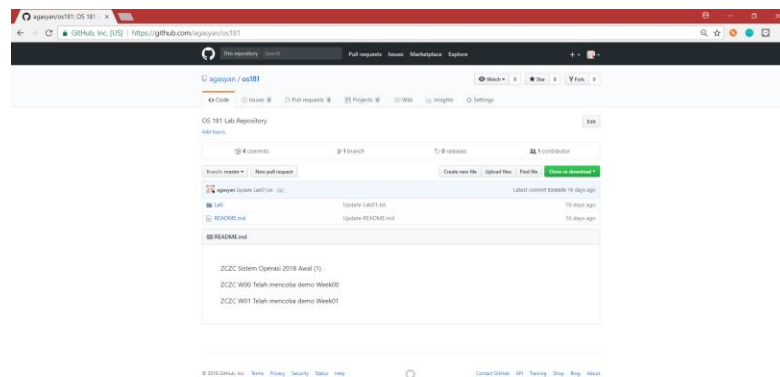
contoh :

*cat 1-READ-THIS-FIRST.txt*

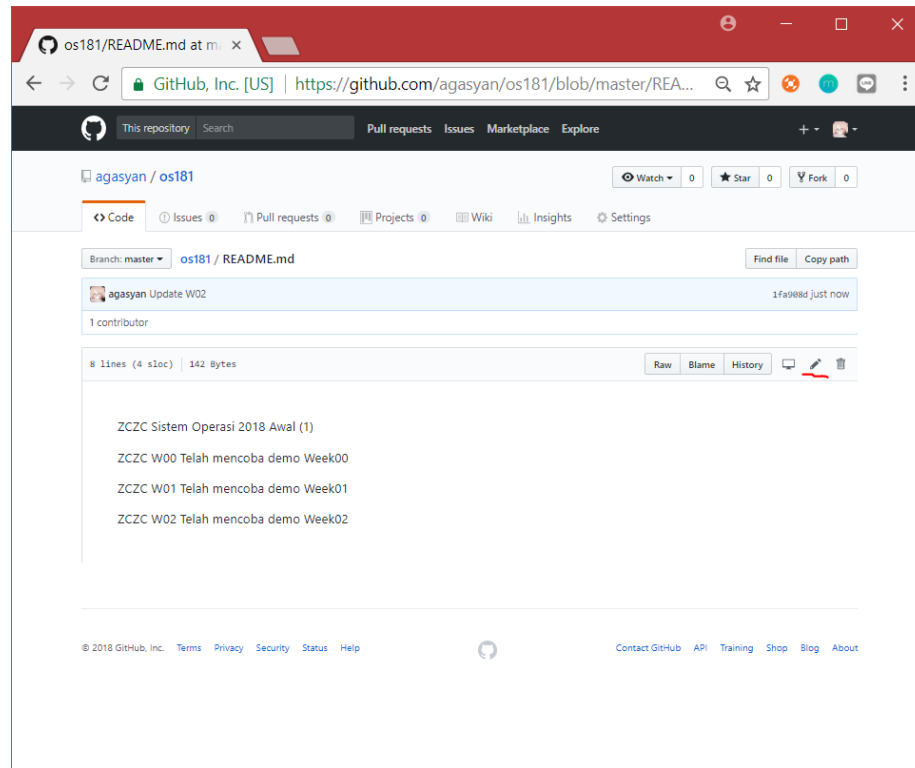
7. Coba semu file satu-satu sampai selesai, dan jika sudah selesai ikuti step selanjutya yaitu menmperbarui file README.md yang ada di github.
4. Memperbarui file README.md yang ada pada *github* pribadi. Setelah selesai mencoba demo Week tersebut.
    - a. Buka <https://github.com/login> untuk login ke github anda untuk mengakses repository os181



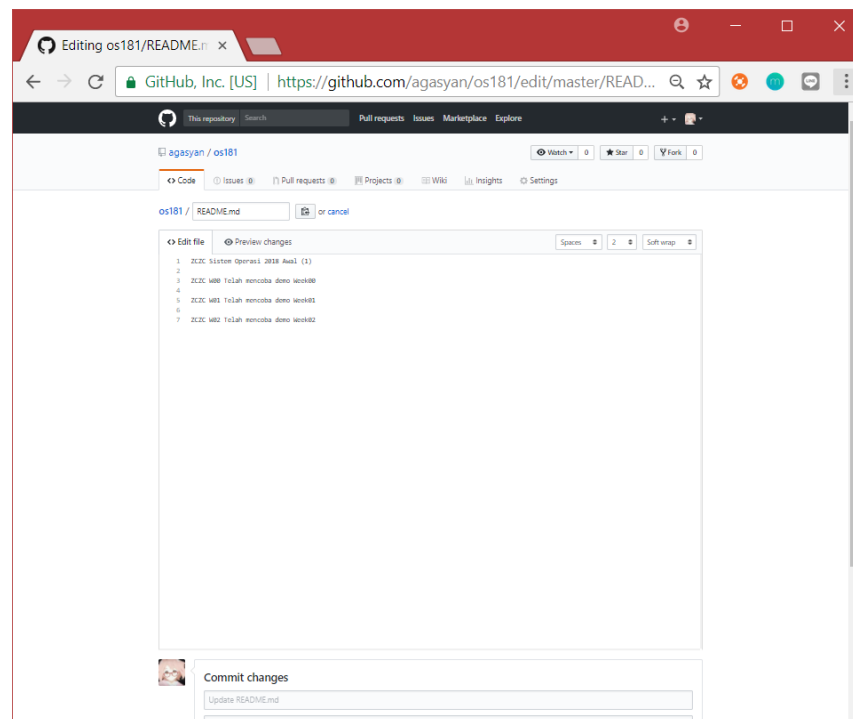
b. Buka Repo os181 pribadi yang telah dibuat pada week00



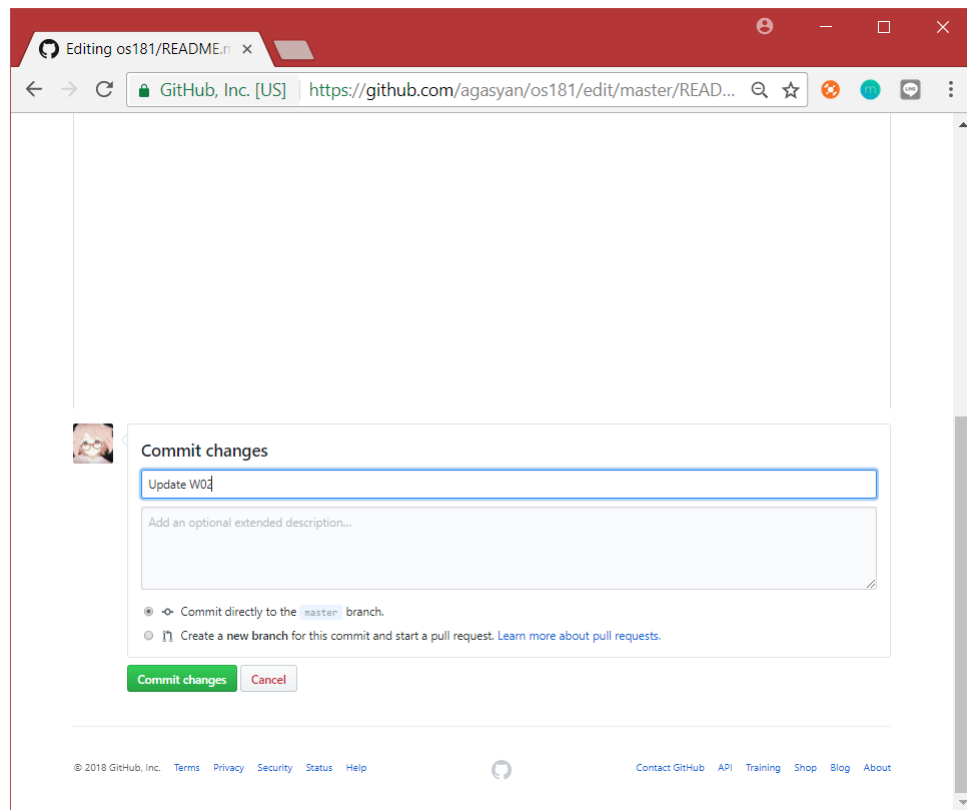
c. Buka File README.md lalu edit dengan men-klik tombol pensil.



d. Tambahkan pada line baru ***“ZCZC WXX Telah mencoba demo WeekXX”***



e. Simpan Perubahan dengan menulis commit lalu menklik ***“Commit Changes”*** dan isi commit messages



- f. Selamat, Anda telah berhasil mengerjakan lab *Week* tersebut