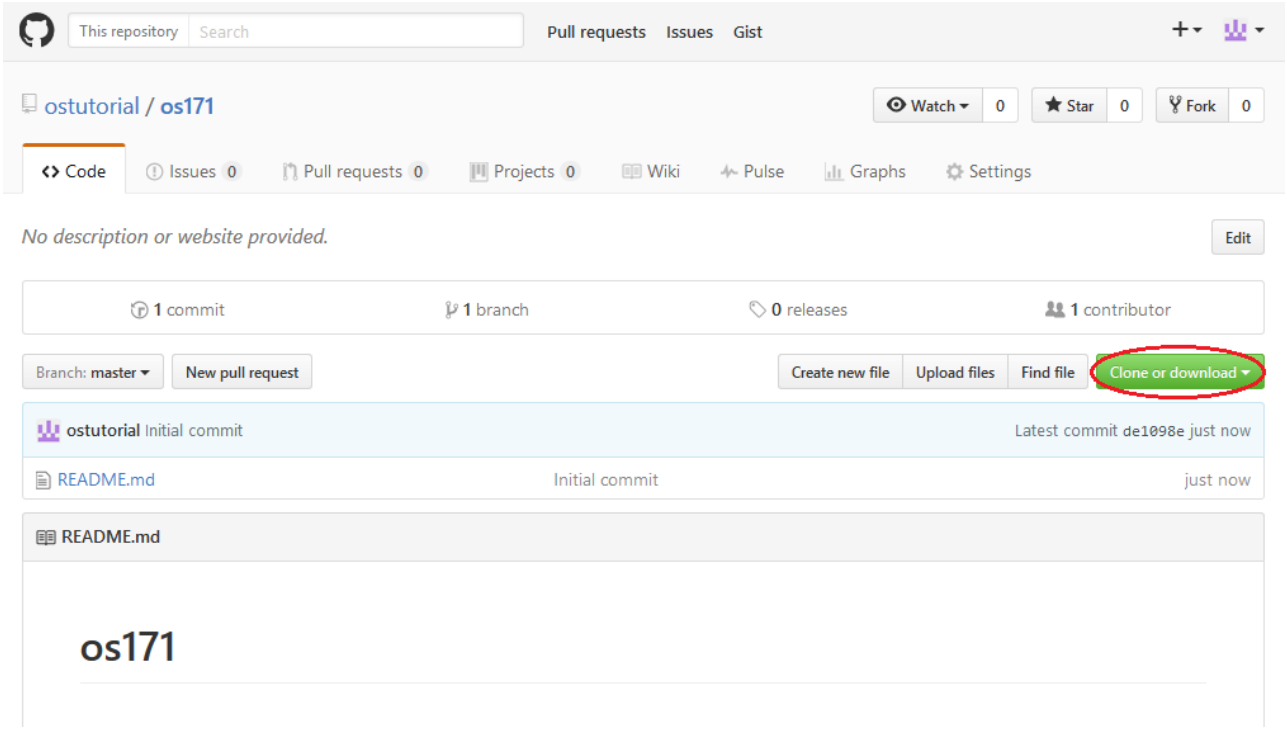
Version 15:21 Fri 10h February 2017

Week 01

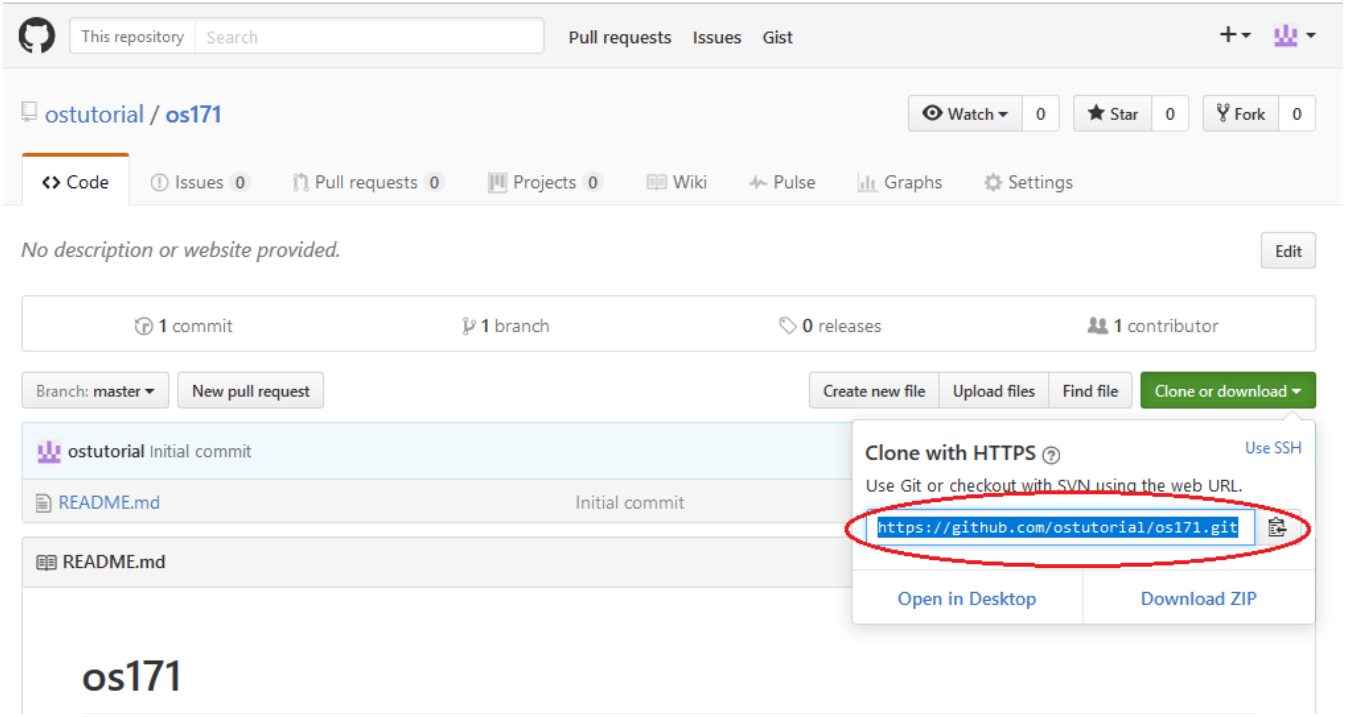
Deadline: Saturday, 18th February 2017 at 15:00

Clone Git Repository

1. Open your github repository in browser, then click on **Clone or Download** button.



2. Copy your repository link that appeared



3. Then you can clone your repository by using command "*git clone your_repository_link*" on your terminal

```
intan.dwi41@badak:~$ git clone https://github.com/ostutorial/os171.git
Cloning into 'os171'...
remote: Counting objects: 3, done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), done.
Checking connectivity... done.
intan.dwi41@badak:~$
```

4. Congratulation, your repository has been succesfully cloned. Check the cloned repository by using command "*ls -al*", make sure your cloned repository is on the list.

```
intan.dwi41@badak:~$ ls -al
total 172
drwx--x--x 20 intan.dwi41 StafCS  4096 Jan 18 16:08 .
drwxr-xr-x  7 root        root    4096 Sep  3 09:12 ..
-rw-r--r--  1 intan.dwi41 StafCS  1609 Sep  1 17:36 01-09-16
-rw-r--r--  1 intan.dwi41 StafCS  1950 Sep  4 18:31 04-09-16
-rw-------  1 intan.dwi41 StafCS 27950 Jan 17 19:05 .bash_history
drwxr-xr-x  3 intan.dwi41 StafCS  4096 Jan 18 16:08 os171
```

Intro to Git

Git is a version control system that is used for software development and other version control tasks. As a distributed revision control system it is aimed at speed, data integrity, and support for distributed, non-linear workflows (Wikipedia)

For more information about how **Git** works, take a look on <https://git-scm.com/book/en/v1>

5. Change your change directory to `os171` using command "`cd <path>`"
   ```
   $ cd os171
   ```

6. Create 11 new folders named "`weekXX`" where `XX` is number from `00-10`, `4` folders named "`log`", "`key`", "`xtra`", "`sandbox`". To create new folder, use command "`mkdir <folder_name1> <folder_name2> ...`"
   ```
   $ mkdir week00 week01 week02 … log key xtra sandbox
   ```

7. verify is the folders created using command "`ls -al`". This command do listing files and folders in current directory
   ```
   $ ls -al
   ```

8. change your current directory to `week00`
   ```
   $ cd week00
   ```

9. create an empty file with the name "dummy". To create a file from nothingness, use command "`touch <filename>`"
   ```
   $ touch dummy
   ```

10. go back to previous directory
    ```
    $ cd ..
    ```

11. do step **8** and **9** on each of this following directory: week01, week02, week03, week04, week05, week06, week07, week08, week09, week10, log, key, xtra

12. push all newly created folders to github and then check if it pushed successfully. You can see how to do that on 03_TutorialPushandPullRepository.pdf file

13. change your current directory to `sandbox`

```
$ cd sandbox
```

*linux is case-sensitive. "`sandbox`" is different with "`Sandbox`" or "`SandBox`".

Do you not believe it? Try executing command "`ls`" and "`LS`" :)

please make sure your folder/file name is as expected, because you will get **penalty for each wrong name.

14. create an empty file (the name is up to you).

    `Example:`

    ```
    $ touch rotibakarenak
    ```

15. push that file to github and check if it pushed successfully.

16. change current directory to `week00`

    ```
    $ cd ../week00
    ```

    *"`..`" means "go to parent directory". So in this case, we go from our current directory (`sandbox`) to it's parent directory (`os171`) and then go to `week00`

17. Remove the "dummy" file that you have made before at this file by using this command "rm -f <filename>" like this:

    ```
    $ rm -f dummy
    ```

18. Write short description of task from week 0 (last week) using your favorite text editor (e.g `vi`, `vim`, `nano`) and named it "`report.txt`"

    short guide using text editor (vi and nano)

- `$ vi report.txt     # for geek person`
  - By executing the above command you will enter `vi`. By default the first time you enter `vi` you will be in command mode. This mode is used to access commands in `vi`, not to write, so that when you try to type (try typing letter **g**), it's not printed in the text area because vi translate your typing into commands that can be accessed by typing letter **g**. This command mode can be accessed anytime by pushing **Esc** (Escape) button on the left side of your keyboard. Now go ahead and press **Esc**.

- To be able to write we will have to enter insert mode. There are few ways to get into insert mode. For now let's try typing letter **i**. And you can see on the bottom of `vi` that you are in insert mode

- Now everything that you type will be written in the text area. Write your name with format "`#your_name`"
- Your writing will be input as a text. Now get back into command mode (by clicking **Esc** button), then save and quit from your work by typing **:wq** and click **Enter**.

- `$ nano report.txt  # for normal person`
  - nano is super-friendly text editor. I bet you can use it at the first glance.
  - You just need to know some shortcut
    - ctrl + o save
    - ctrl + k cut (one line)
    - ctrl + u paste
    - ctrl + x exit

19. push that file to github and check if it pushed successfully.

Intro to CLI

20. change current directory to `os171`

21. prepare a file to record your work progress named "`lab01.txt`"

    ```
    $ touch lab01.txt
    ```

22. record the contents of current directory to `lab01.txt` using command

    "`ls -al > lab01.txt`".

    * The "`>`" operator means "redirect the output of command on left (`ls -al`) to the file on the right (`lab01.txt`)". Beside that operator, there is "`>>`" operator too. It is similar to the other one but "used when you want the output appended to the bottom of the file on the right file's content".

23. move `lab01.txt` to folder named `week01`. Use command "`mv <source> <destination>`" to do that

    ```
    $ mv lab01.txt week01
    ```

24. change your current directory to `week01`

    ```
    $ cd week01
    ```

25. verify your current directory using command "`pwd`" and check is there is `lab01.txt`

    ```
    $ pwd
    /home/XXX/os171/week01
    $ ls -al
    ```

26. record your current directory to `lab01.txt` using command "`pwd >> lab01.txt`". Note it's using "`>>`" operator. What the different? The "`>>`" operator means "redirect the output of command in left (`pwd`) and **append it** to file in right (`lab01.txt`)"

27. create file "`myExpectation.txt`" with content:

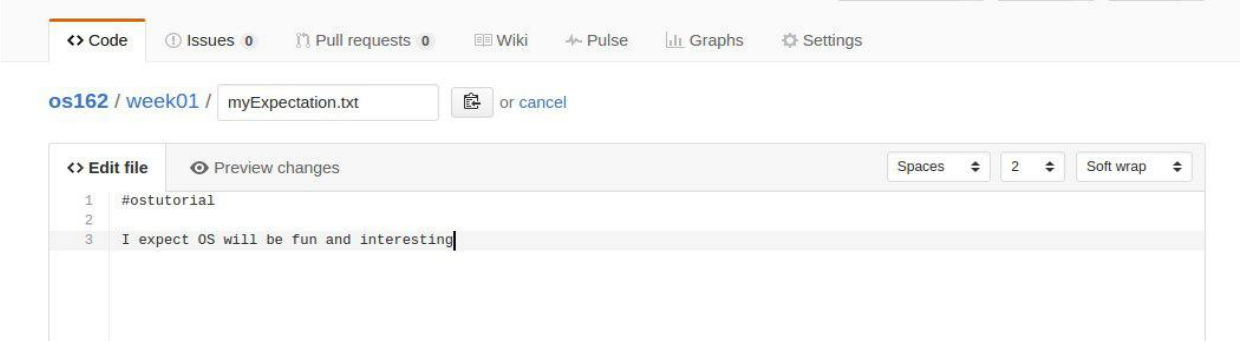
    ```
    #your_github_account
    ```

    Example:

    ```
    $ vi myExpectation.txt
    ```

28. push that file to github and check if it pushed successfully.

29. edit `myExpectation.txt` from browser. Add the content with your expectation in this class (OS)



30. commit the changes, and don't forget to give meaningfull commit message.

31. update your local repository on `badak server`. To do so, open your badak account terminal again and doing the **pull** repository tutorial on 03_TutorialPushandPullRepository.pdf file

32. change your current directory to `week01`

33. Remove the "dummy" file that you have made before at this file by using this command "rm -f <filename>" like this:
    ```
    $ rm -f dummy
    ```

34. Write short description of task from week 1 (this week) using your favorite text editor (e.g `vi`, `vim`, `nano`) and named it "`report.txt`" (just like for week 0)

35. push that file to github and check if it pushed successfully

Intro to scripting

36. well, it's just a demo to show you how to make a simple script in linux
37. change current directory to week01
38. create an empty file (name is up to you, WARNING: do not use symbols like (‘), (“), (`), (;), (>), (<), (&), (|))
    ```
    $ vi what-time-script.sh # in linux, script usually marked by
    ```

```
suffix .sh
```

39. paste the following code and save it

```
#!/bin/bash
DATE=`date +%d\ %b\ %Y\ at\ %H:%M:%S`
echo "Today is $DATE"
exit 0
```

40. change the permission so we can execute it

```
$ chmod +x what-time-script.sh
```

41. execute it

```
$ ./what-time-script.sh >> lab01.txt
Today is 08 Feb 2017 at 08:32:09
```

42. you can see the output of the script at script-output.txt by using this command:

```
$ cat lab01.txt
```

the output will be at the last line, similar to this (depends on the time set on your computer when you execute the script)

```
Today is 08 Feb 2017 at 08:32:09
```

43. now you already tried scripting. Commit and push the changes.

44. congratulation, you just complete the week 1 task. See you again on week 2 task.

P.S. : Uncle Google is your friend, jusk ask him if you have question or, ask on this forum link

Dont forget to check your files/folders. After this lab, your current `os171` folder should looks like:

```
os171
	key
		dummy
	log
		*log.txt
	sandbox
		<some_random_name>
	week00
		report.txt
	week01
		lab01.txt
		report.txt
		myExpectation.txt
		what-time-script.sh
	week02
		dummy
	week03
		dummy
	week04
		dummy
	week05
		dummy
	week06
		dummy
	week07
		dummy
	week08
```

```
        dummy
    week09
        dummy
    week10
        dummy
    xtra
        dummy
```

PS: *Follow the instruction on 01_LOG-additionaltaskforeveryweek.pdf on https://github.com/UI-FASILKOM-OS/os171/blob/master/Task-os171/log/01_LOG-additionaltaskforeveryweek.pdf