MEET Y1 - Module 1 - Lab 1

Intro to **Linux**

In this lab, you will learn how to use basic **Linux** commands. These will help you organize your work for this year and for the rest of your time at MEET!

The **most important** **Linux** shell commands are:

- `ls`……..(that's "ell ess") means '**l**i**s**t'-- lists all files in your current folder

- `cd`…….means '**c**hange **d**irectory' -- takes you to the folder you specify, e.g. '`cd folderName`'

- `mkdir`...means '**make dir**ectory' -- makes a new folder in your current folder with the name you specify, e.g. '`mkdir newFolder`'

- `&`..........put this after a **Linux** command to run the program in the background, e.g. ‘`idle3 &`’

Other useful Linux commands are:

- `cp`……means ‘**c**o**p**y’ -- copies the file you specify to the folder you specify, e.g. ‘`cp fileName folderName`’
- `mv`…...means ‘**m**o**v**e’ -- moves the file you specify to the folder you specify, e.g. ‘`mv fileName folderName`’

- `pwd`….means ‘**p**rint **w**orking **d**irectory’ -- prints out the folder you are currently in

To open up a program from the Linux terminal, type…

- `idle3`…………..to open IDLE3 -- you will learn more about programming in IDLE3 later

- `firefox`……….to open the Firefox web browser

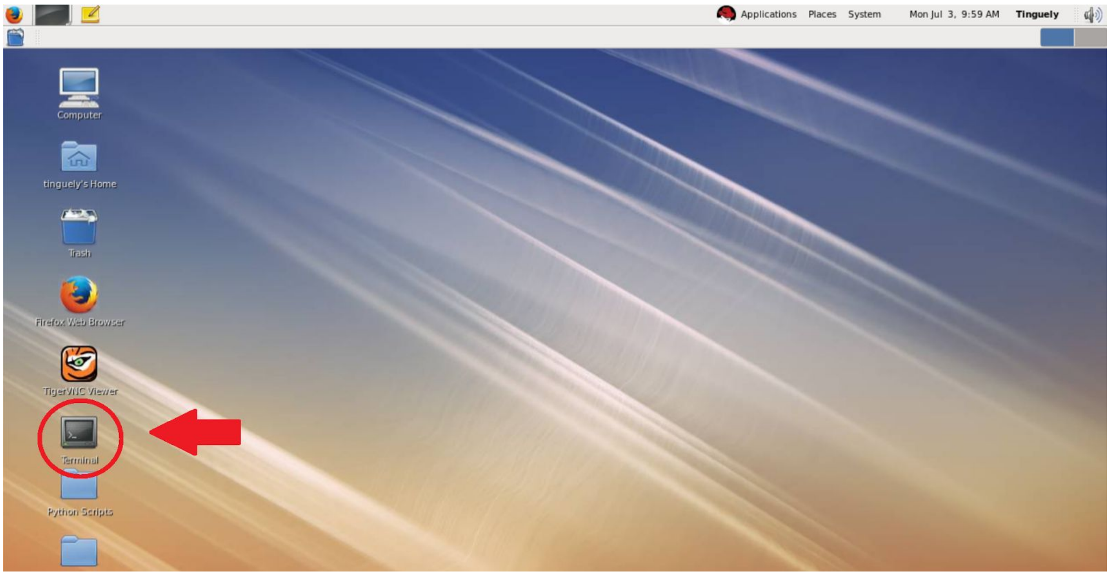
- `nautilus`……...   to open the file browser **nautilus**

And don’t forget the ampersand ‘&’ afterward!

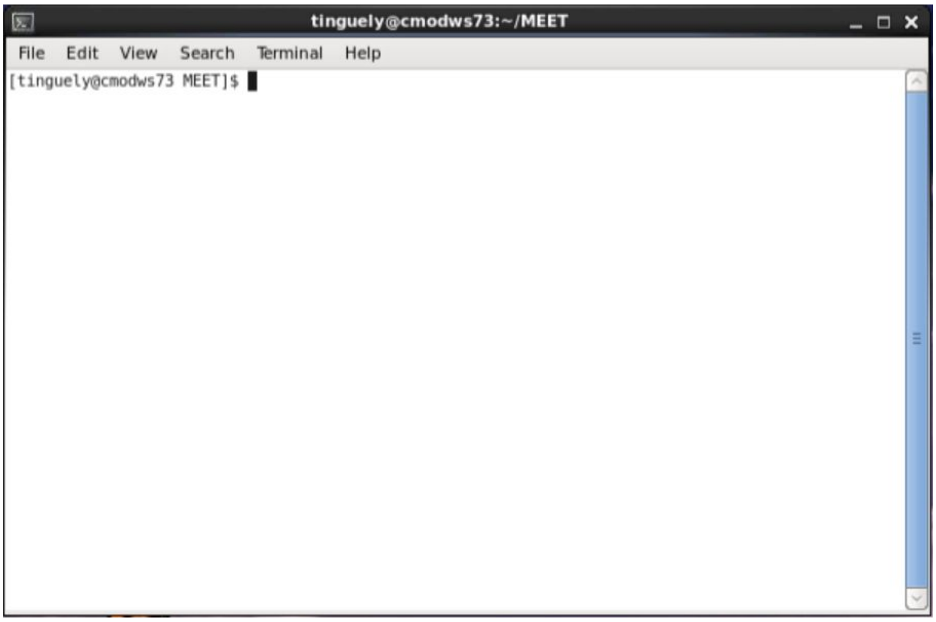
```
idle3 &
firefox &
nautilus &
```

Follow these instructions:

0. Open a **Linux** terminal by double-clicking on this icon:

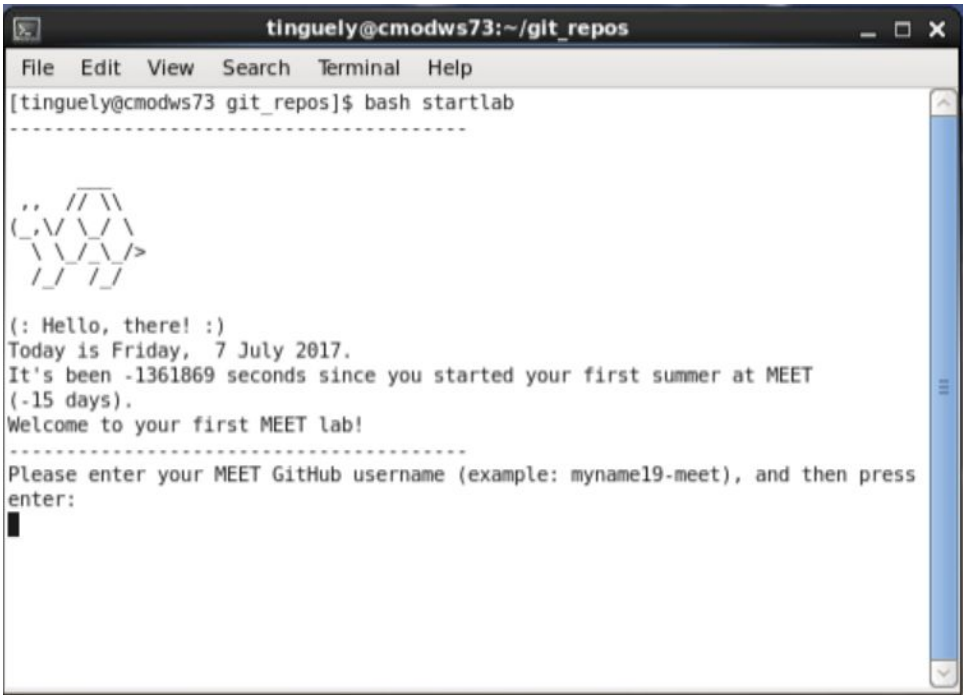


You should see something like this pop up:



```
[tinguely@cmodws73 MEET]$ 
```

1. Type `bash startlab` to “begin” the lab. Follow the directions. Enter your username and the module number `1`.



tinguely@cmodws73:~/git_repos
File Edit View Search Terminal Help

```
[tinguely@cmodws73 git_repos]$ bash startlab
----------------------------------------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(: Hello, there! :)
Today is Friday,  7 July 2017.
It's been -1361869 seconds since you started your first summer at MEET
(-15 days).
Welcome to your first MEET lab!
----------------------------------------
Please enter your MEET GitHub username (example: myname19-meet), and then press
enter:
█
```
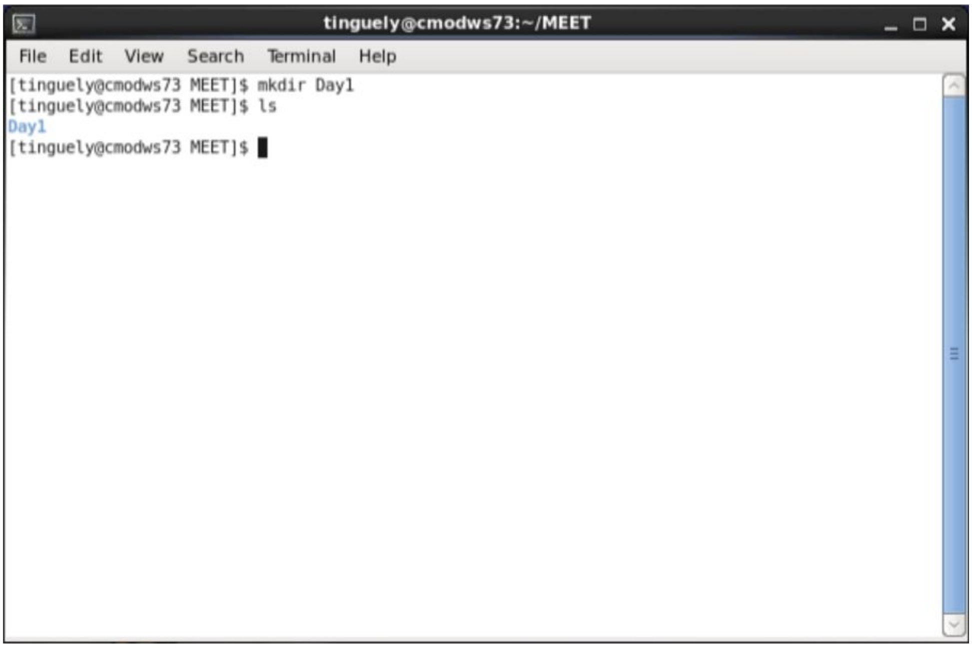

2. **Change directory** using `cd`, following the instructions.
   Type `ls` to **list** what files and folders you already have.

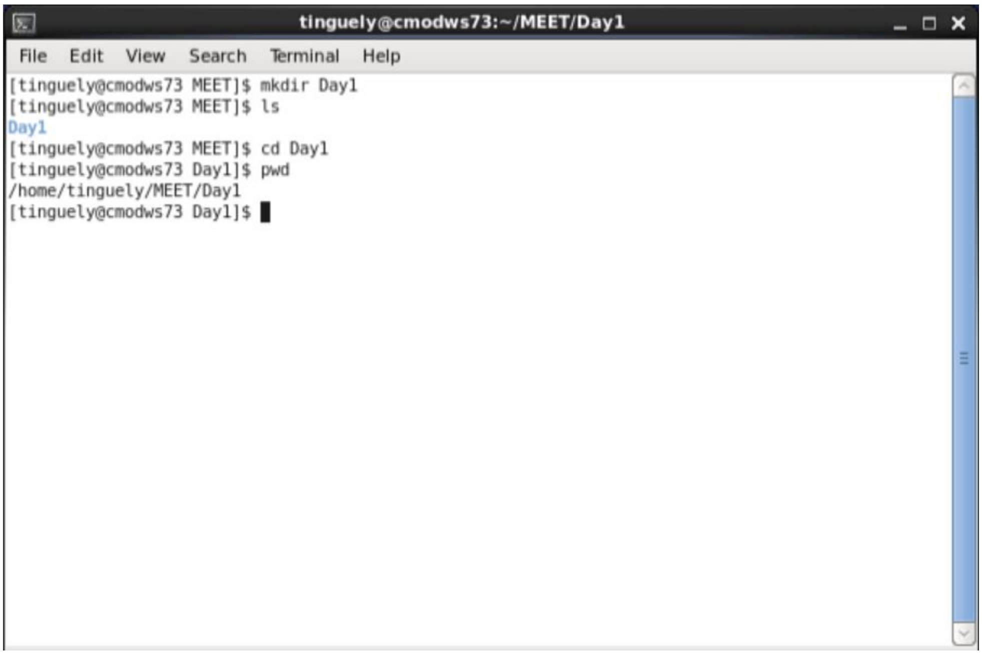
   What do you see?
   (Hint: You should see two files: `LICENSE` and `README.md`)

3. **Make a directory** called `Day1` using `mkdir`. Now type `ls` again. What do you see now?



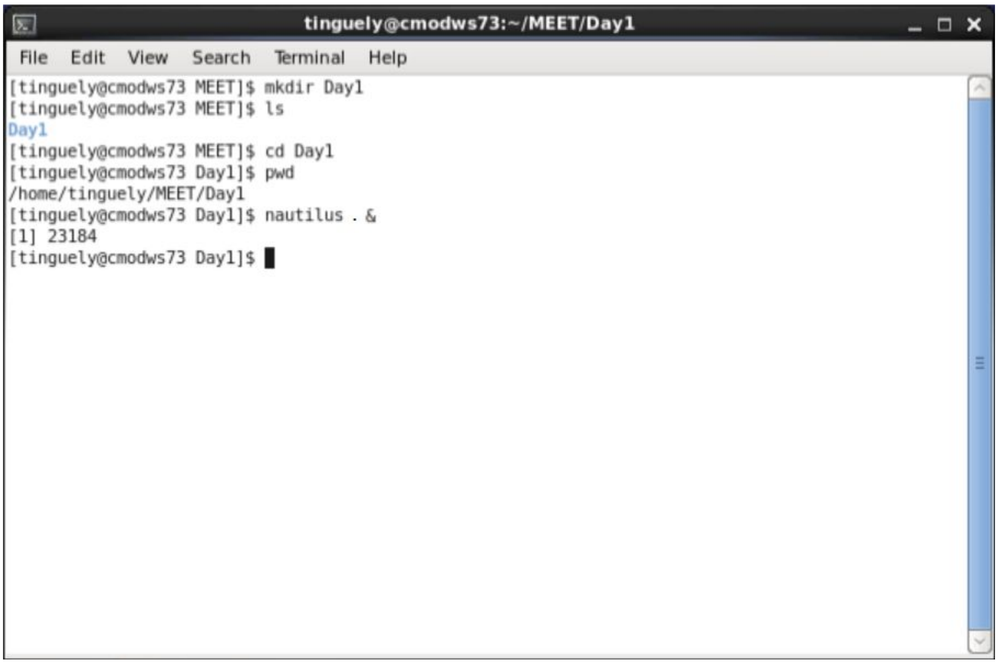
```
[tinguely@cmodws73 MEET]$ mkdir Day1
[tinguely@cmodws73 MEET]$ ls
Day1
[tinguely@cmodws73 MEET]$ 
```

4. **Change directories** to `Day1`. Type `pwd` to print the name of the current folder you are in. Does it say `Day1`?


tinguely@cmodws73:~/MEET/Day1
File Edit View Search Terminal Help

```
[tinguely@cmodws73 MEET]$ mkdir Day1
[tinguely@cmodws73 MEET]$ ls
Day1
[tinguely@cmodws73 MEET]$ cd Day1
[tinguely@cmodws73 Day1]$ pwd
/home/tinguely/MEET/Day1
[tinguely@cmodws73 Day1]$ 
```

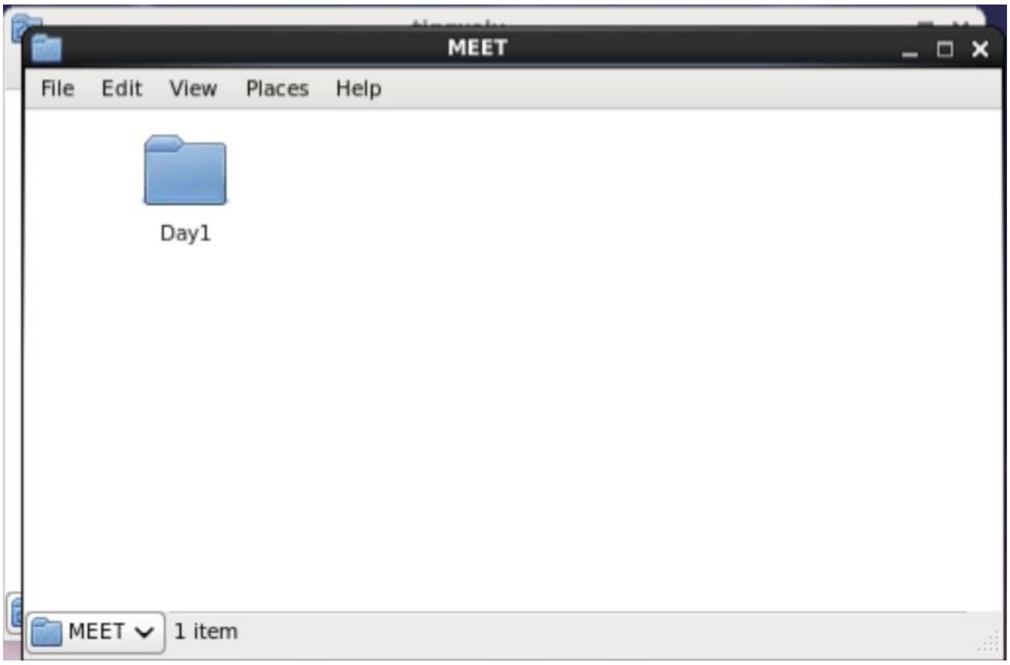
5. Open up the file browser **nautilus** using the command `nautilus . &` (Make sure you include the period!)



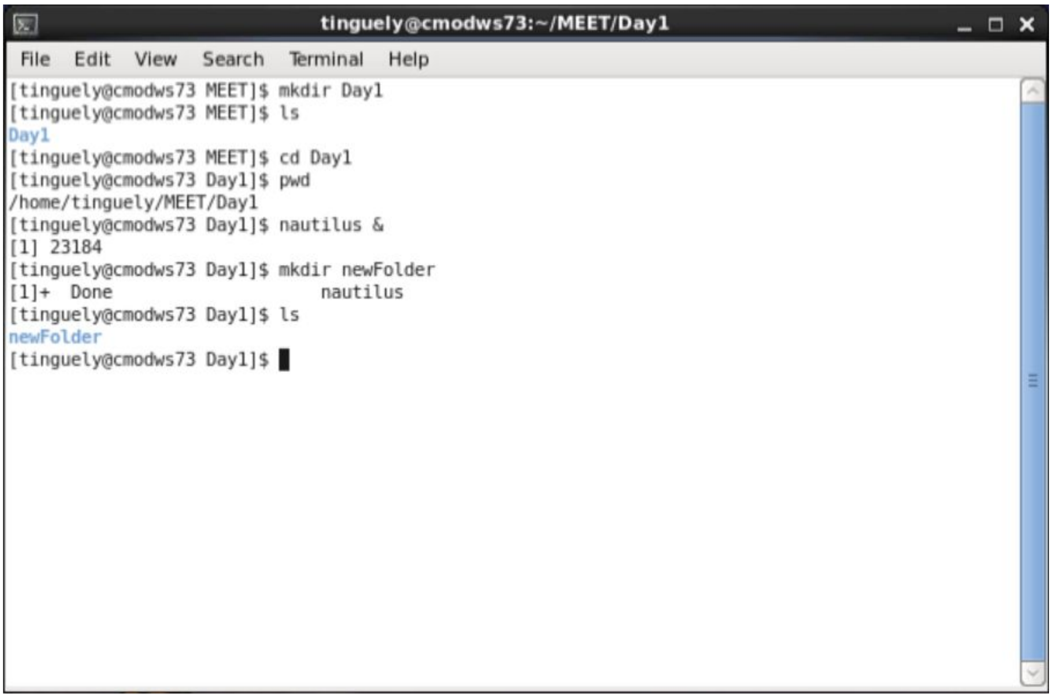
tinguely@cmodws73:~/MEET/Day1
File Edit View Search Terminal Help

```
[tinguely@cmodws73 MEET]$ mkdir Day1
[tinguely@cmodws73 MEET]$ ls
Day1
[tinguely@cmodws73 MEET]$ cd Day1
[tinguely@cmodws73 Day1]$ pwd
/home/tinguely/MEET/Day1
[tinguely@cmodws73 Day1]$ nautilus . &
[1] 23184
[tinguely@cmodws73 Day1]$ 
```

You should see something like this pop up:

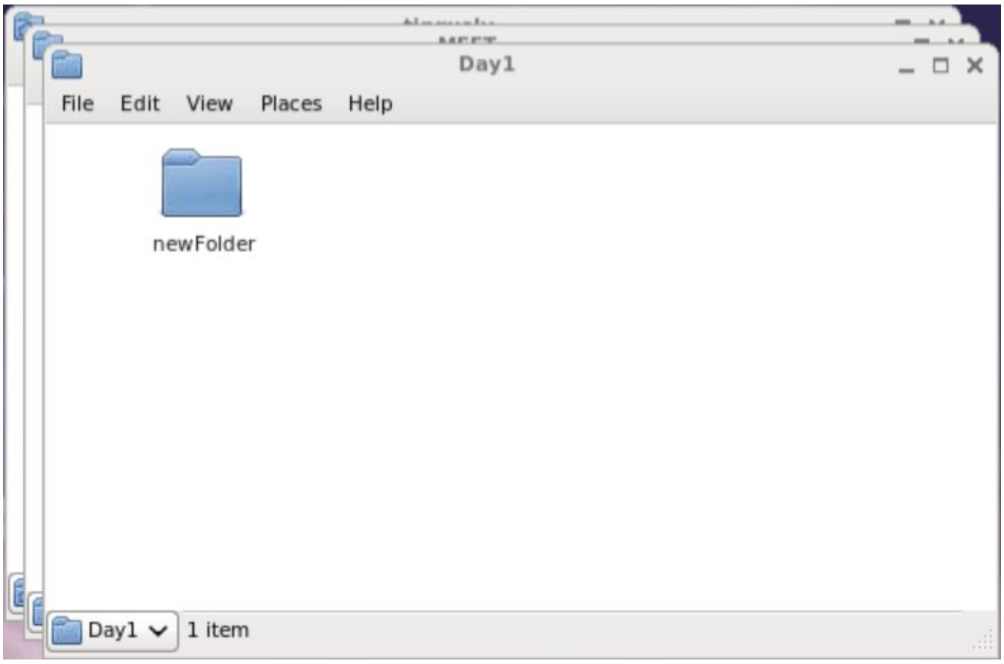


6. In `Day1`, make a new folder using `mkdir` called `newFolder`. Use `ls` to see check that `newFolder` is there.

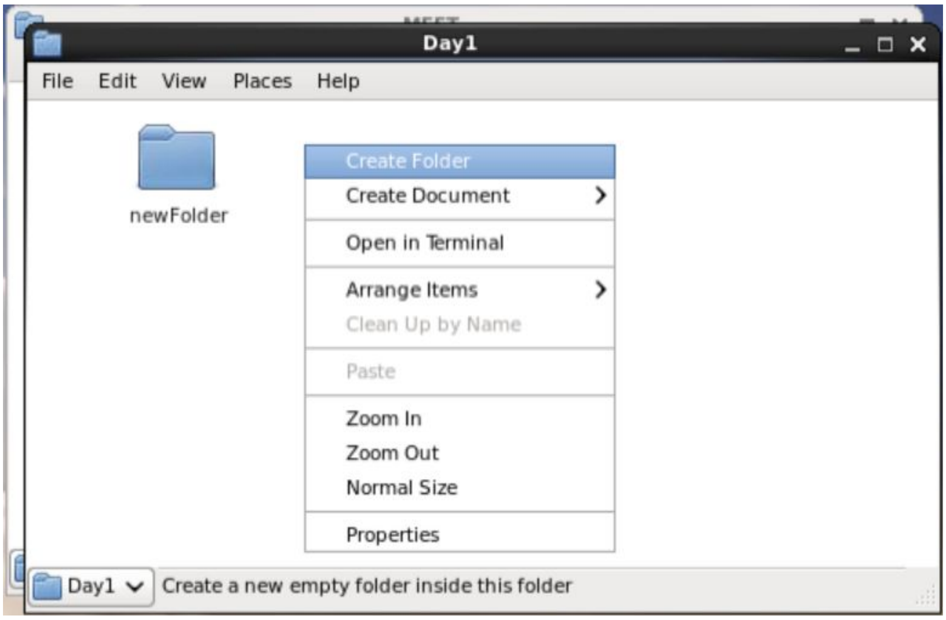

tinguely@cmodws73:~/MEET/Day1
File Edit View Search Terminal Help

```
[tinguely@cmodws73 MEET]$ mkdir Day1
[tinguely@cmodws73 MEET]$ ls
Day1
[tinguely@cmodws73 MEET]$ cd Day1
[tinguely@cmodws73 Day1]$ pwd
/home/tinguely/MEET/Day1
[tinguely@cmodws73 Day1]$ nautilus &
[1] 23184
[tinguely@cmodws73 Day1]$ mkdir newFolder
[1]+  Done                    nautilus
[tinguely@cmodws73 Day1]$ ls
newFolder
[tinguely@cmodws73 Day1]$ 
```

7. Click on the `Day1` folder in **nautilus** to see if `newFolder` is there. (You probably already know how to explore folders this way.)

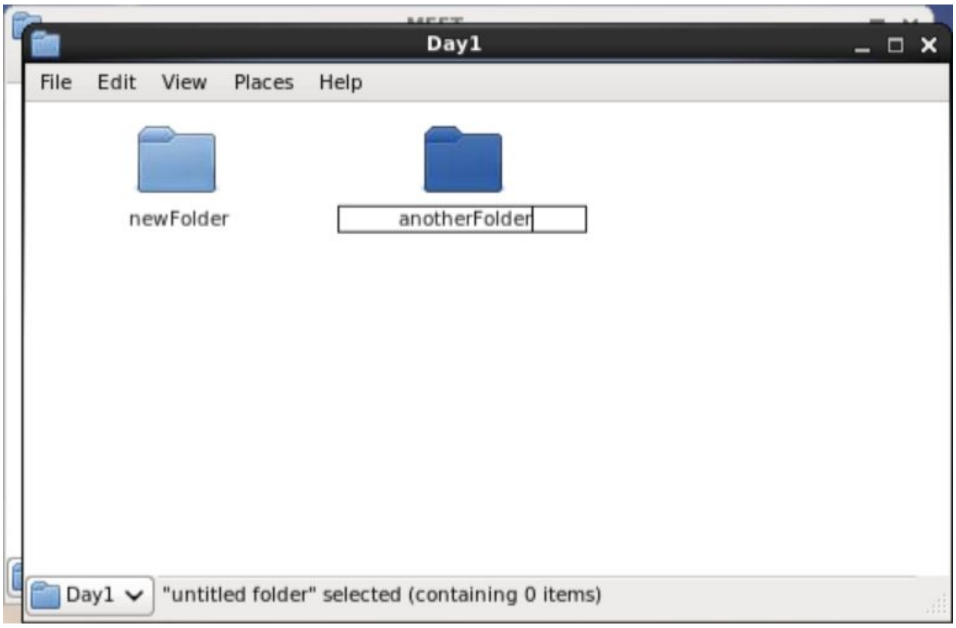


8. In your `Day1` folder in **nautilus**. Right-click and click `Create Folder` to make a new folder.



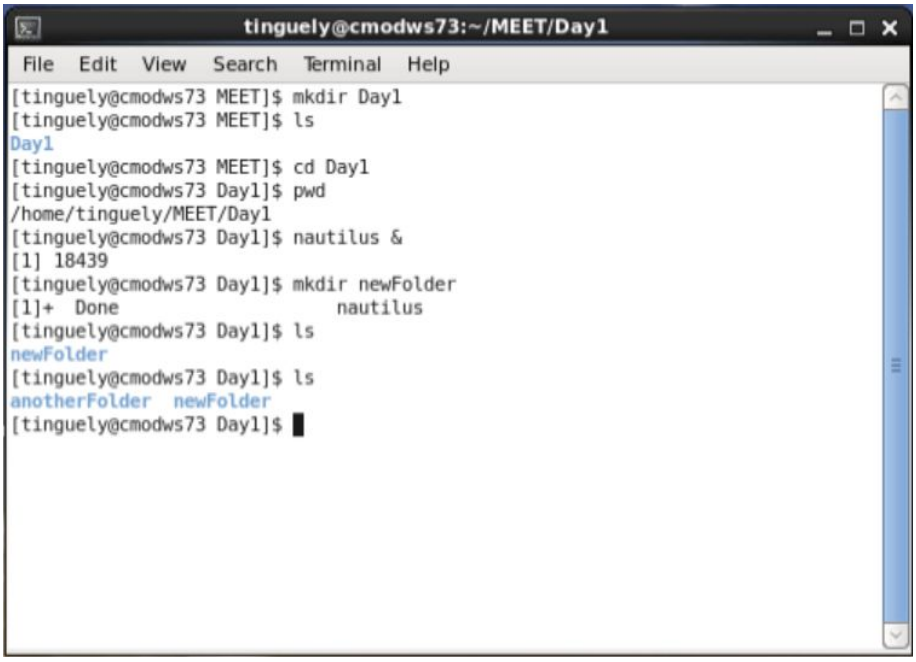
Create a new empty folder inside this folder

Name it `anotherFolder`.



"untitled folder" selected (containing 0 items)

9. In the Linux terminal, type `ls` to confirm that `anotherFolder` is now in `Day1`.

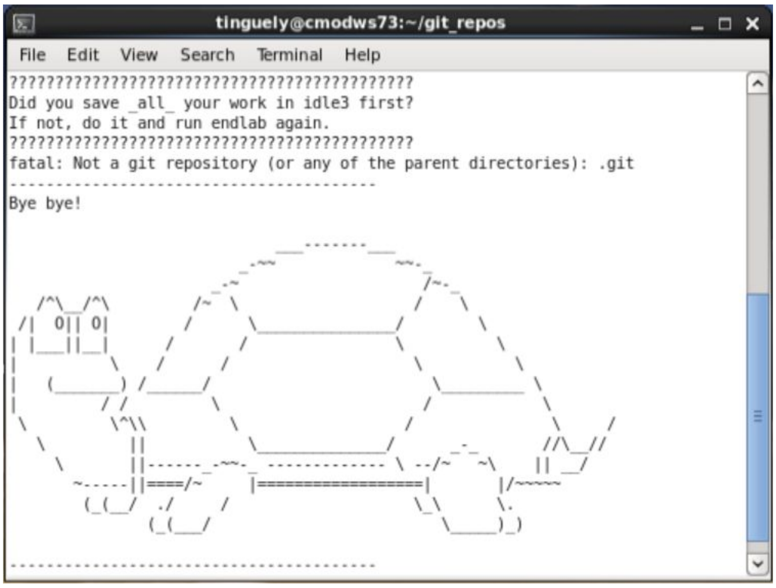

tinguely@cmodws73:~/MEET/Day1
File Edit View Search Terminal Help

```
[tinguely@cmodws73 MEET]$ mkdir Day1
[tinguely@cmodws73 MEET]$ ls
Day1
[tinguely@cmodws73 MEET]$ cd Day1
[tinguely@cmodws73 Day1]$ pwd
/home/tinguely/MEET/Day1
[tinguely@cmodws73 Day1]$ nautilus &
[1] 18439
[tinguely@cmodws73 Day1]$ mkdir newFolder
[1]+  Done                    nautilus
[tinguely@cmodws73 Day1]$ ls
newFolder
[tinguely@cmodws73 Day1]$ ls
anotherFolder  newFolder
[tinguely@cmodws73 Day1]$ 
```

10. Practice opening other programs like Firefox and IDLE3 using `firefox &` and `idle3 &`.

If you have extra time, continue on to the **Bonus Problems** on the next page.

If you are out of time, make sure you type `bash endlab`


tinguely@cmodws73:~/git_repos
File Edit View Search Terminal Help

```
???????????????????????????????????????????
Did you save _all_ your work in idle3 first?
If not, do it and run endlab again.
???????????????????????????????????????????
fatal: Not a git repository (or any of the parent directories): .git
----------------------------------------
Bye bye!

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        (_(__/  ./     /                    \_\      \.
               (_(___/                         \_____)_)

----------------------------------------
```

Bonus problems:

11. In the Linux terminal `Day1` folder, type `idle3 newFile.py &`. This makes a new **Python** file called `newFile`.

12. Type `ls` to confirm that `newFile.py` is in your `Day1` folder.

13. **Copy** `newFile.py` to `newFolder` by typing

    ```
    cp newFile.py newFolder
    ```

    Change directories to `newFolder` to check if a copy of `newFile.py` is there.

    You just copied a file!

14. Type `cd ..` (where you include two period points after `cd`) to change directories to the parent folder `Day 1`. This means you move back out of `newFolder` up to the `Day1` folder.

15. Make `anotherFile.py` using the `idle3 ____ &` command as shown in #11.
    Type `ls` to see if it's there.

16. Now **move** `anotherFile.py` to `anotherFolder` by typing

    ```
    mv anotherFile.py anotherFolder
    ```

17. Type `ls`. You should see that `anotherFile.py` is no longer in `Day1`!

    But now change directories to `anotherFolder`. And type `ls` to see that `anotherFile.py` is there!

    You just moved a file!

DONE! And don't forget to type `bash endlab` **to finish!**