**Part One: Linux Gianfranco Di Battista E**

1) Read Chapter 2 of Linux at Olin, available [here](https://sites.google.com/site/sd13fa/homeworks/homework-01/linux.pdf?attredirects=0&d=1).  
Answer the following reading questions:  
    a) What does grep do?

**Is to search for a file for a certain word and print all the lines that match**

    b) What's the difference between a pipe and a redirect?

**Redirect displays on the same screen and the pipe can redirect the output to another process**

    c) What's so great about plain text?

**Is that it can be read by practically any application.**

    d) If you rm a file by accident, how do you get it back?

**If unforgiving, is impossible to recover it**

**Part Two: Python**

2) Read Chapter 2 of Think Python and answer the following questions:

    a) In script mode, what happens if you put an expression, like math.sin(math.pi) on a line all by itself (without a print statement)?

**Is going to be a longer number, when you use print command the number is shorter and is also an approximated number. You are not getting also a print statement**

    b) What is the value of the expression 1.0 / 2.0 \* math.pi?  What about 1 / 2 \* math.pi?

**First we might import math library *“import math”* and then the answer is 1.5707. And if we do ½ the answer is 0.0. This is because we are using 1 and 2 as an integer and when is a division between 2 integer python give you the answer as the approximated integer, this is call floor division.**

    c) Do Exercise 2.4 (Practice using Python as a calculator).  For part 3, consider using Unum.

1. *Import math*

*R=5*

*4.0/3.0\*math.pi\*R\*\*3*

*Answer 523.598*

1. *(24.95\*0.6)\*60+3+0,75\*59*

*Answer 945.4499999999*

1. *From unum.units import \**

*Pace=8\*min+15\*s*

*Tempo=7\*min+12\*s*

*Total=Pace\*2+Tempo*

*Inicio=6\*h+52\*min*

*Final=inicio+total*

*Print final*

3-Read [Chapter 3 of Am Git](https://github.com/AllenDowney/amgit/blob/master/en/03-git-branching/01-chapter3.markdown) and answer these questions:

1. What is an "untracked" file?

An Untracked file is if is in the project folder but you have never told git to keep track of it

    b) Why are files containing object code and executables generally not tracked?

Because if they are in the project folder doesn’t means that is tracked, you need to tell git to track them.

Because there are no necessary

1. In Git vocabulary, what is a remote?

Its refer to something that is not in the computer, that is in another server saved.

5) Start your repo for this class.

* On Github, find and fork amonmillner/SoftwareDesign
* Clone a local copy
* Create a directory called "hw2" to hold your files for homework 2.
* Create a file in hw2/grid.py with your solution to exercise 3.5 (see part 4).  Don't forget to add your name as author.
* Create a file in hw2/fermat.py with your solution to exercise 5.3 (see part 4)
* Create a file in hw2/compare.py with your solution to exercise 6.1 (see part 4)
* Push the commit to your repo.  Then follow the directions below to add me as a collaborator:

<https://help.github.com/articles/how-do-i-add-a-collaborator>

**Part Four: More Python!**

6) Read Chapter 3 of Think Python and answer the following questions:

    a) What's the difference between a fruitful function and a void function?

Void function perform an action but not a value and fruitful function give you a value

1. What are functions good for anyway?

Creating a new function gives you an opportunity to name a group of statements,

which makes your program easier to read and debug.

1. What are the two forms of the import statement?

Read a module file and create a module object

7) Do Exercise 3-5 (grid drawing program)

8) Do Exercise 5-3 (Fermat's last theorem)

9) Do Exercise 6-1 (compare function)