**Python**

**Exercises**

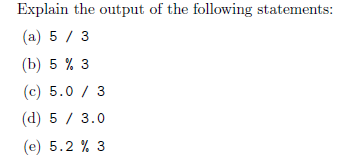
The code must be submitted under your name in GitHub in a repository called Python. Work individually.

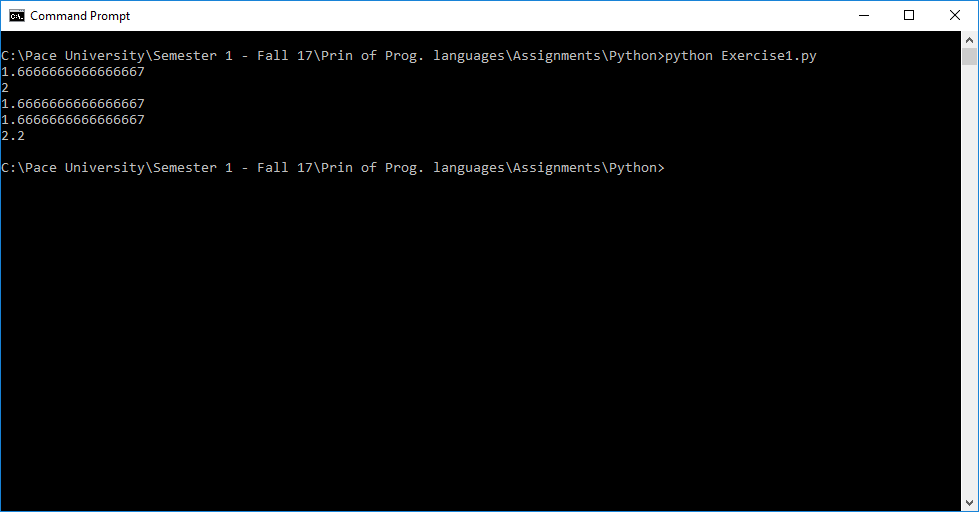
Each file will have the name: exerciseX.py where X is the exercise number. You will have 13 files at most.

Do not commit code that does not compile. The code that you commit should have been tested. -10 points for code that does not compile on the top of your grade.

You will provide a hardcopy with your code to Dr. Scharff on 12/4.

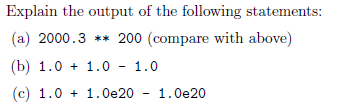
**Exercise 1**

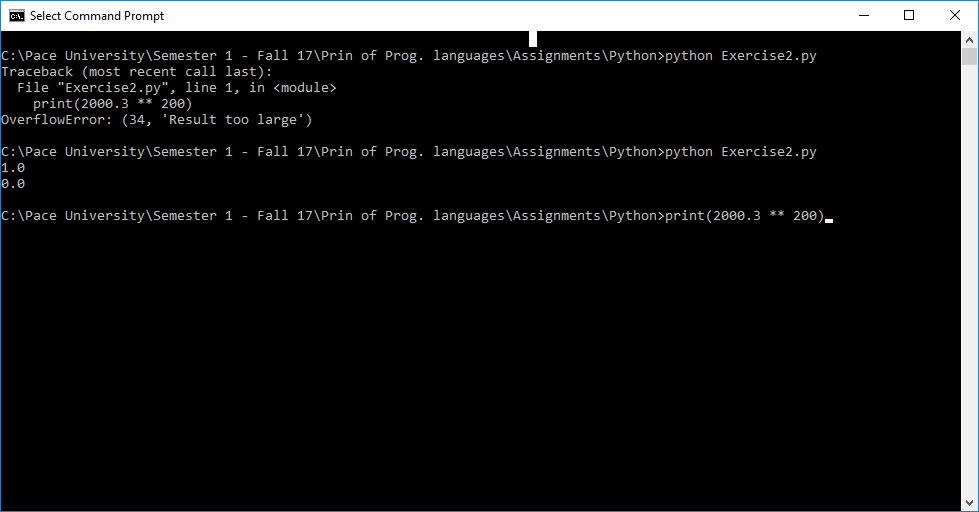




/ operator divides number and % returns the mod

**Exercise 2**

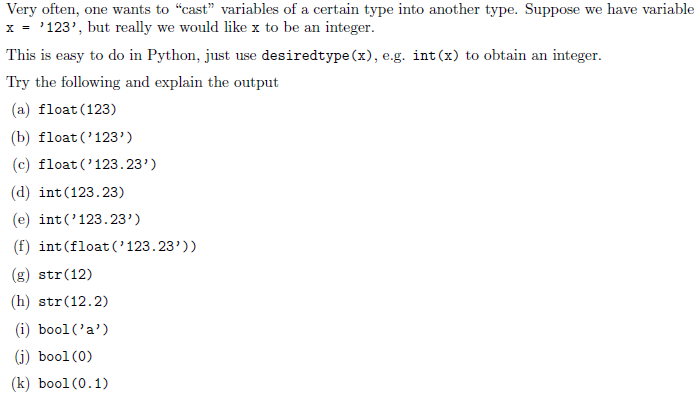


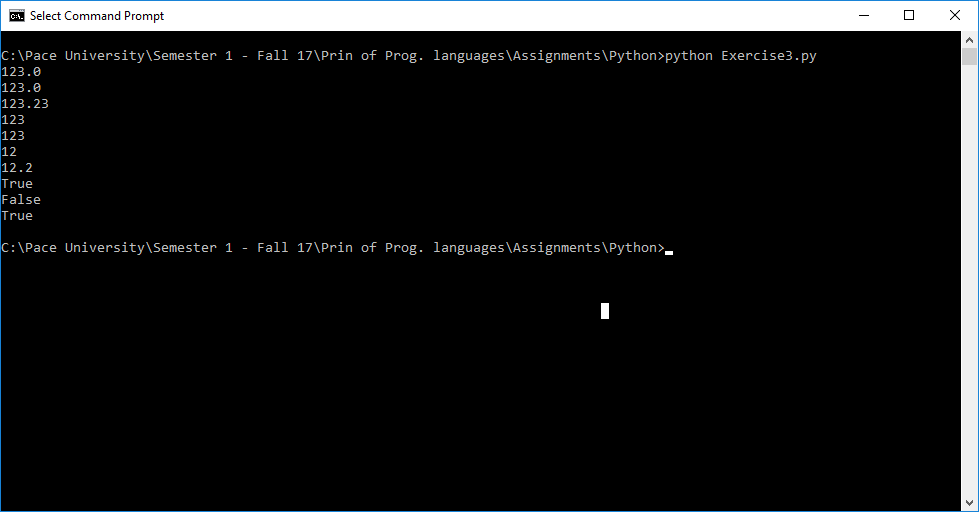


Explanation**:**

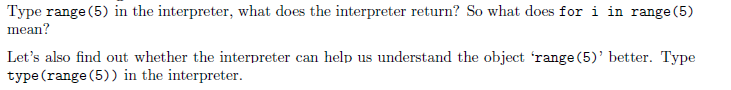
1. The output throws OverflowError : because the result is too large.
2. Gives the output of the equation

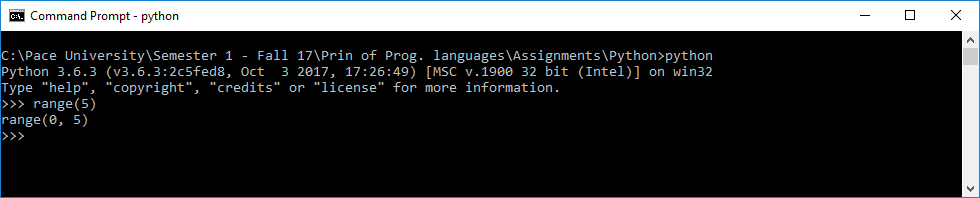
**Exercise 3**



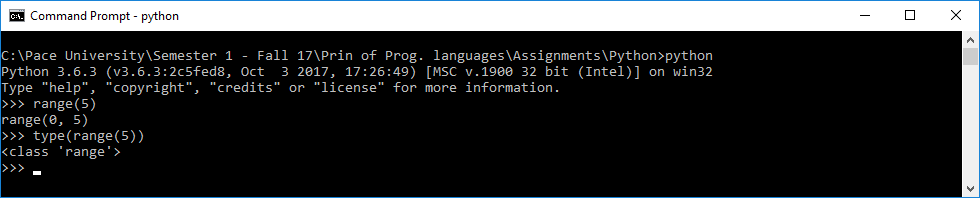


**Exercise 4**



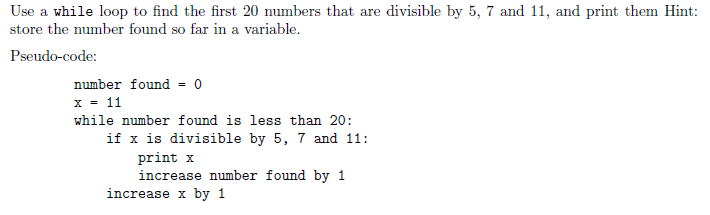


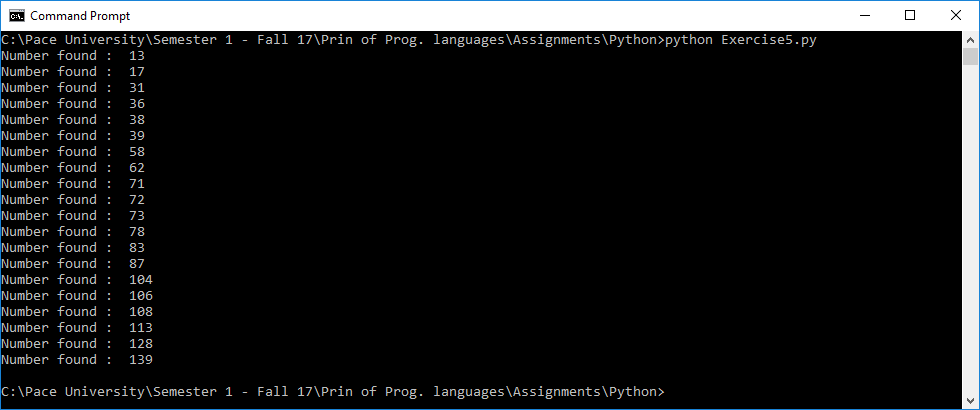
i means it’s a counter for the for loop from 0 to 5



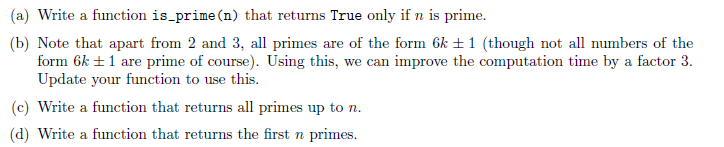
Yes. The interpreter says the range is class.

**Exercise 5**

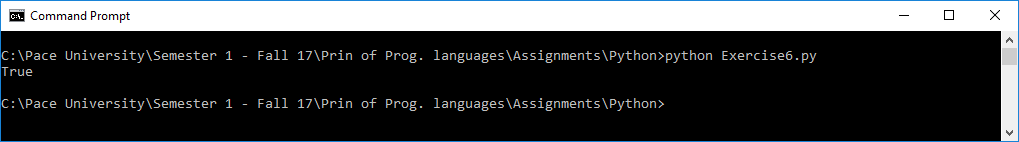




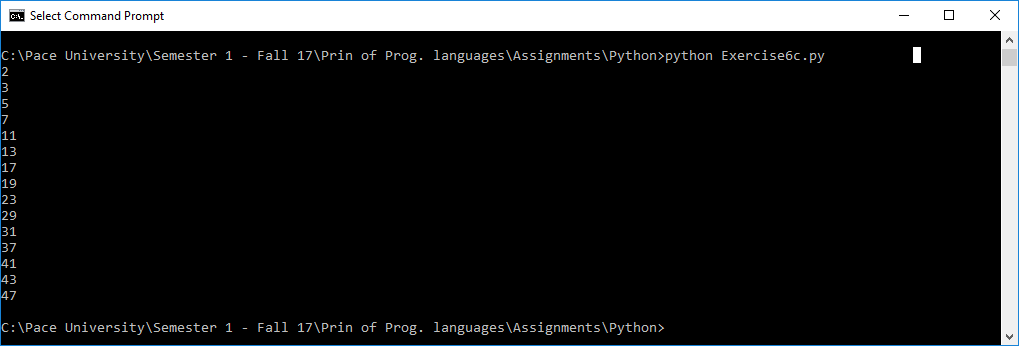
**Exercise 6**



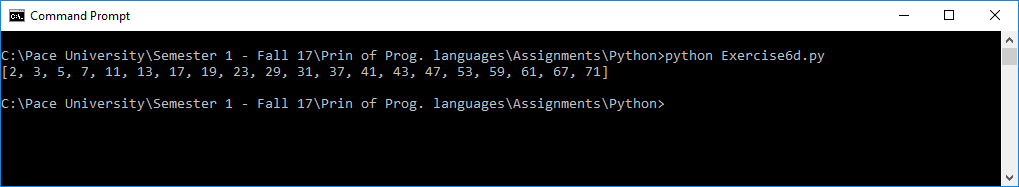
6a



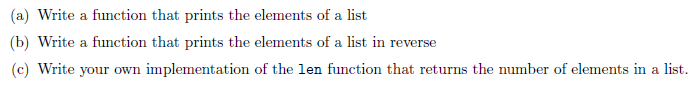
6c



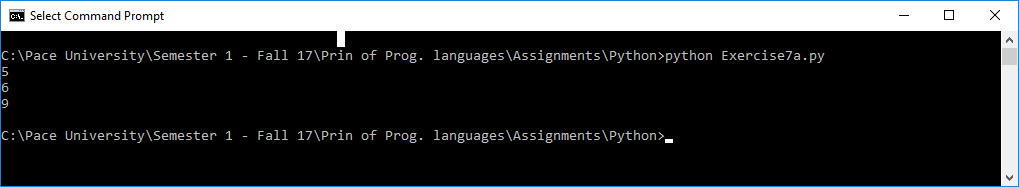
6d



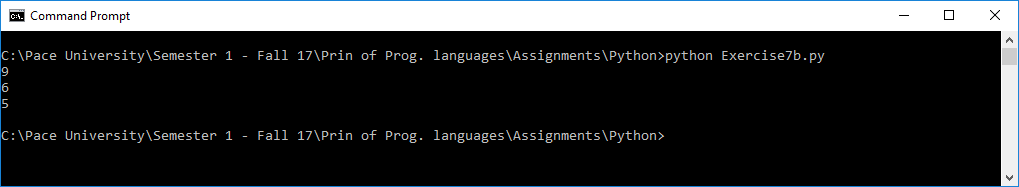
**Exercise 7**



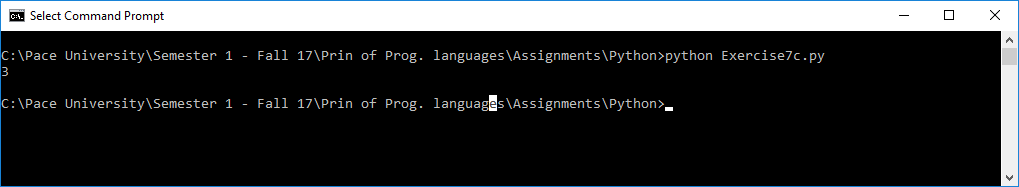
7a



7b

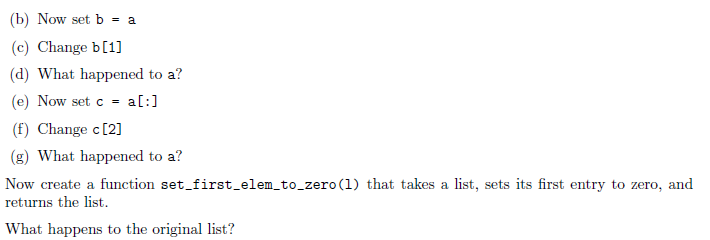


7c

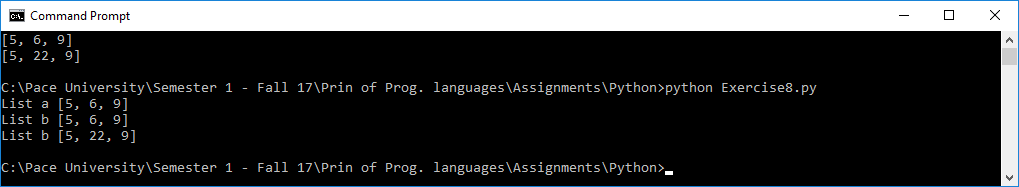


**Exercise 8**

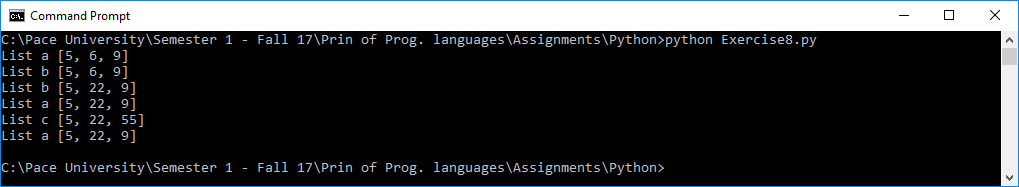




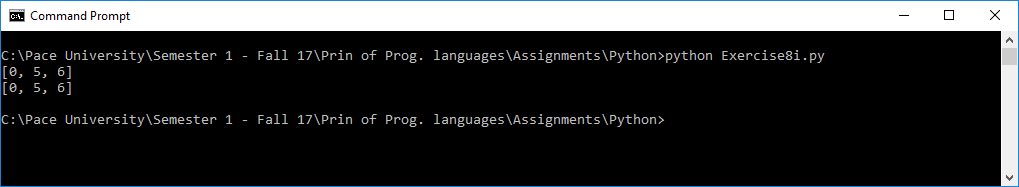
8d) List a Changed while changing the value at index 1 of b.



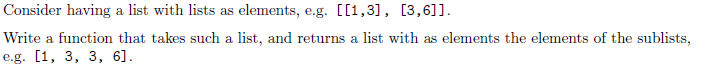
8g) List a remains unchanged even after changing the value at index 2 of list c

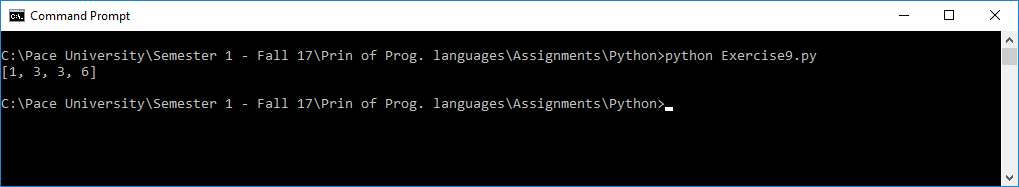


8i) original list also changed



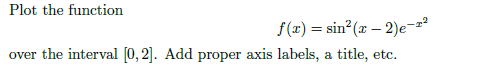
**Exercise 9**

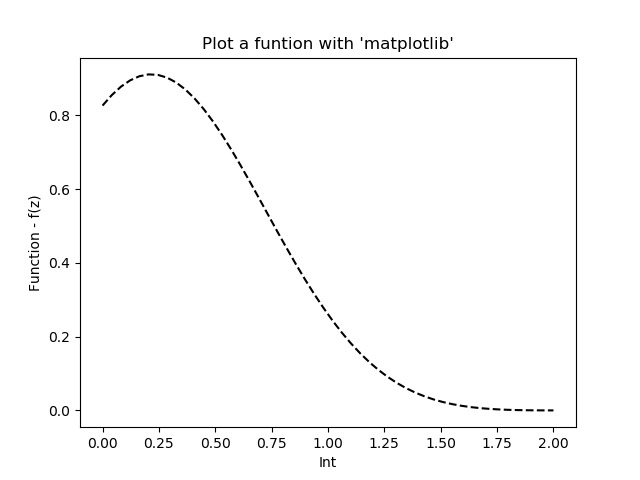




**Exercise 10**

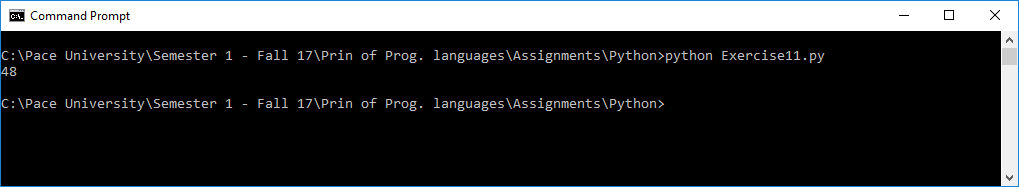
Use mathplotlib



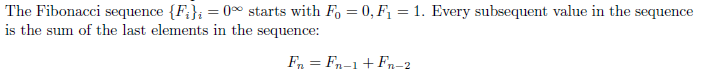


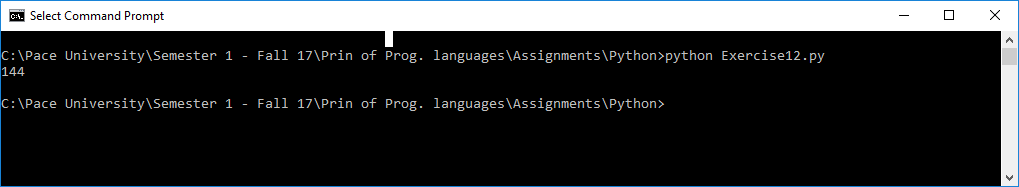
**Exercise 11**





**Exercise 12**

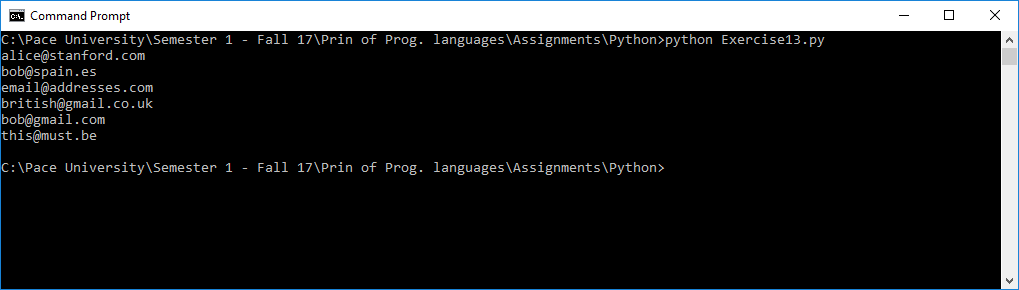




**Exercise 13**

Write a Python program that extracts the email addresses of a file. An email file emails.txt is provided to test your program.

<http://rubular.com/> is a site that can be useful to get familiar with regular expressions.



**References**

Stanford courses on Python <https://web.stanford.edu/~schmit/cme193/exercises.html>