Homework 5

Programming for Scientists
Due on: Feb 24

§1   QUESTIONS

Question I: What is wrong with the following code?

```python
from os.path import exists
...

assert exists(inputfilename), 'User typed in wrong file name'
input = file(inputfilename)
...
```

Question II: What is "regression testing"?

Question III: Bob tells Alice that his program is running too slow and that he can't understand what's taking so long. What should Alice tell him to use to know where the code is taking up its time?

Question IV: What is are some advantages of using something like nosetests to simply having a file called `tests.py` with your tests?

(There are multiple answers to this question, you just need to give a couple. You can also list disadvantages.)

§2   PROGRAMMING ASSIGNMENT

The first implementation of `bst.remove` that I wrote didn't correctly remove the last element of a set (calling remove() to remove the last element had no effect). Write a test for this behaviour using the nose conventions.