

CS350: Data Structures Class Notes

Class 8: Wednesday, September 17, 2008

Complexity

We looked at several pieces of code used to determine if two strings were anagrams examining their complexity. We discussed the measure of the size of a problem and growth in complexity. We talked about big-O notation and the algebra of big-O. What is $O(2n)$? $O(n^3+n^2)$? etc.

Examples: If `ham()` is $O(n^2)$ and `eggs()` is $O(n \log n)$, what is:

- a) `for i in range(n):`
 `ham()`
- b) `ham() + eggs()`
- c) `ham() * eggs()`
- d) `ham(eggs())`

Profiling with Python

```
import cProfile
import pstats
cProfile.run('fib(3)')
```

Homework for Friday

Redo the exhaustive solution to the anagram problem presented in class using recursion.