

CSCI 314 : Algorithms

Note Title

8/26/2013

Announcements

- Syllabus

- HW 0 - due next wed.

What is an algorithm?

set of steps to solve a problem.

Side question: what is a program?

- program could be built from algorithms
- implementation of an algorithm

Origins:

- Greek algos ($\alpha\lambda\gamma\omicron\varsigma$): "pain"
- 9th century writer & mathematician
Abu 'Abd Allah Muhammad ibn Mūsā
Al-Khwārizmī
(also origin of algebra)
- Popularized the decimal system, including 0 as a place-holder.
- Later known as algorism & popularized by Leonardo of Pisa (Fibonacci)

Example: a song

BOTTLESOFBEER(n):

For $i \leftarrow n$ down to 1

 Sing "*i bottles of beer on the wall, i bottles of beer,*"

 Sing "*Take one down, pass it around, i - 1 bottles of beer on the wall.*"

 Sing "*No bottles of beer on the wall, no bottles of beer,*"

 Sing "*Go to the store, buy some more, n bottles of beer on the wall.*"

