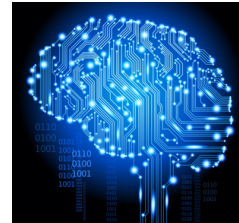


CSCI 1101B INTRODUCTION TO COMPUTER SCIENCE



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Logistics and Organizational Info

- Introductions
sbarker@bowdoin.edu
- Course web page:
<http://www.bowdoin.edu/~sbarker/1101>
- Questions about dates, times, policies, etc...
 - Check the website!

First question...

What is computer science?

Study of computers?

- "Computer science is no more about computers than astronomy is about telescopes, biology is about microscopes or chemistry is about beakers and test tubes. Science is not about tools, it is about how we use them and what we find out when we do."
– Michael Fellows & Ian Parberry



Programming?

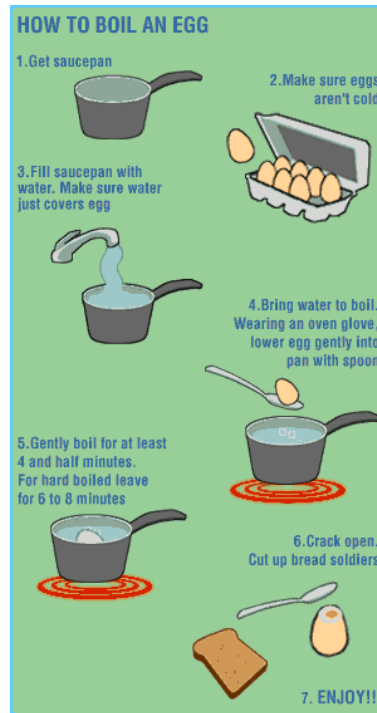
- Programming is a relevant skill
- Can do computer science without programming (or even using a computer!)



Algorithms!

Divide:	$\begin{array}{r} 2 \\ 3 \overline{)75} \\ \underline{6} \\ 15 \end{array}$ <p>3 goes into 7 2 times... with some extra!</p>
Multiply:	$\begin{array}{r} 2 \\ 3 \overline{)75} \\ \underline{6} \\ 15 \end{array}$ <p>$2 \times 3 = 6$</p>
Subtract:	$\begin{array}{r} 2 \\ 3 \overline{)75} \\ \underline{-6} \\ 15 \end{array}$
Bring Down:	$\begin{array}{r} 2 \\ 3 \overline{)75} \\ \underline{-6} \\ 15 \end{array}$
Repeat:	$\begin{array}{r} 25 \\ 3 \overline{)75} \\ \underline{-6} \\ 15 \\ \underline{-15} \\ 0 \end{array}$ <p>$15 \div 3 = 5$ $5 \times 3 = 15$</p>

Cooking an Egg



An Example Algorithm

- Input: two whole numbers
- 1. Call the larger number **X**, smaller number **Y**.
- 2. Divide **X** by **Y** and call the remainder **R**.
- 3. If **R** is *not* 0, then:
 - Change **X** to be the current value of **Y**,
 - Change **Y** to be the current value of **R**,
 - Go back to step 2.
- 4. Output **Y**.

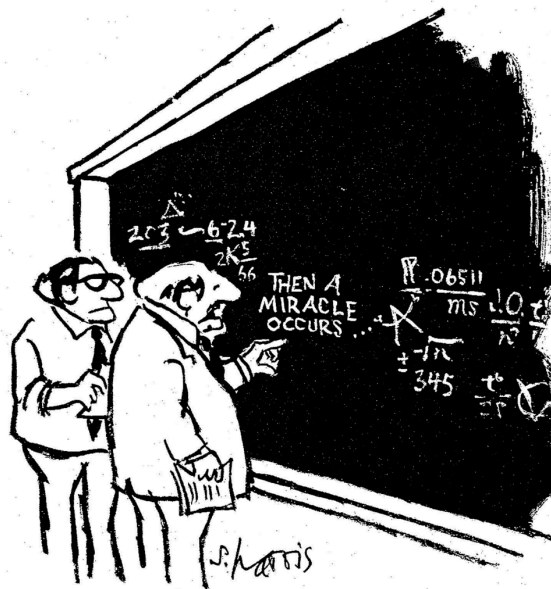
Why Learn to Program?

Everybody in this country should
learn to program a computer...
because it teaches you how to think

Steve Jobs, co-founder and CEO of Apple Inc. (1955 - 2011)



Being Explicit



"I THINK YOU SHOULD BE
MORE EXPLICIT HERE IN STEP TWO."

Programming Languages

