What is Computer Science?

- Computer science is no more about computers than astronomy is about telescopes. - Edsger Dijkstra

- Computer science is not as old as physics; it lags by a couple hundred years. However this does not mean that there is significantly less on the computer scientist’s plate than on the physicist’s: younger it may be, but it has had a far more intense upbringing! - Richard Feynman
What is Computer Science?

- Artificial Intelligence
  - Roomba
  - CMU’s Sandstorm

What is Computer Science?

- Animation
  - Finding Nemo

What is Computer Science?

- The Organization of Data, and Searching

What is Computer Science?

- Medicine, Genomics
What is Computer Science?

• Devices

Computer Science and Programming

• Computer Science is more than programming
  – Called Informatics in many countries
  – Elements of both science and engineering
  – Elements of math, physics, cognitive science, music, art, and many other fields
• To some programming is an art, to others a science, to others an engineering discipline.

What Will We Do in CompSci 94?

• Web pages/html (one week)
• Learn to program with Alice 2.3
• Try some Alice 3
• Logistics – bring to class
  – laptop
  – textbook.

How CompSci 94 Will Work

• In Class
  – Lecture/demos
  – Tutorials
  – Classwork (in assigned pairs)
  – REQUIRED ATTENDANCE
• Outside of class
  – Complete work not finished in class
  – Reading
  – Assignments
What Is Alice?

• A modern programming tool
  – 3-D graphics
  – 3-D models of objects
• Animation
  – Objects can be made to move around virtual world (a simulation or video game)

What does Alice run on?

• Alice is written in Java – should run on many systems
  – supports Mac and PC
• Which version of Alice are we using?
  – Alice 2.3
  – don’t use the CD with the book, but go to alice.org web page, see the CompSci 94 resources page
  – May also use Alice 3.1 some

Fast Start Up

• Can quickly learn to create
  – A simple animation in a few minutes
  – A non-trivial animation in a few class periods
• Can learn to use the Alice interface after a few more class periods

The Power of Alice

• Automatically keeps track of 3-D objects
  – What objects are in the virtual world
  – Types of objects
  – Positions of objects in the world
Objects Have Multiple Parts that are moveable

- Objects already exist in libraries

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Demo Program an Object

- world.my first method
  - No parameters
  - No variables

- chicken: Neck, Head, LeftLeg, RightLeg, Foot

For Thursday!

- Finish classwork from today
- Download Alice 2.3 from [www.alice.org](http://www.alice.org) – NOT Alice 3.1 – they are different!
- Assignment 1 out
- Read through HTML tutorial on calendar page for Aug 29
- No reading quiz or reading in Alice book yet
- Plan
  - More HTML on Thursday
  - Start Alice next week

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Download Alice 2.3 from alice.org, NOT Alice 3.1!