Class Today

• Go over syllabus, web page
• Introduce computer science and Alice
• Demo of Alice
  – Simple world/sample Alice worlds
• Classwork – Get to know each other

www.cs.duke.edu/courses/fall21/compsci094/sec01/
About Prof. Rodger

How do you keep your sanity?
TA/UTA introductions

• Graduate TA: Derrick Adam (3:30pm Sec.)
• Undergraduate TAs:
  – Lauren Garbett (10:15am Section)
  – Alex Slover (10:15am Section)
  – Benjamin Keschner (10:15am Section)
  – Sara Azimi (3:30pm Section)
Course Web page
www.cs.duke.edu/courses/fall21/compsci094/sec01/

CompSci 94, Fall 2021
Home

Course Announcements

- August 24, 2021 is the first day of class.
- You will need to bring a laptop to class and download a particular version of Alice 3 before coming to the first class if possible. More info on Alice 3 and downloading it is on the Resources page

CompSci 94
Introduction to Programming
Via Animation and 3D Virtual Worlds

CompSci 94 is an introductory programming course that teaches fundamental computer science concepts and animation concepts. This version of CompSci 94 uses the tool Alice 3 to create 3-D virtual worlds. You will learn programming constructs such as repetition (calculating how
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
Computer Science is a young discipline

- First computer science department formed in 1962

Samuel D. Conte
Professor emeritus of computer science and mathematics was the founding department head of the nation's first computer science program. October 1962.
What is Computer Science?

• Artificial Intelligence

Spirit, Mars Rover

Self-driving car

Roomba

Personal Robot
What is Computer Science?

• Medicine, Genomics
What is Computer Science?

• Animation
What is Computer Science?

• The Organization of Data, Sharing, and Searching
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?

• Alice 3 programming

• Logistics – bring to online lecture
  – laptop/computer
  – optional Textbook
  – Instead: Free videos
Videos – Watch and take online quiz (on Sakai) before class

Prof. Susan Rodger/Prof. Steve Cooper
How CompSci 94 Will Work

• In Class
  – Lecture/demos - short
  – Classwork
  – REQUIRED ATTENDANCE
  – Checkoff Classwork

• Outside of class
  – Complete work not finished in class
  – Watch Videos – before class
  – Online Quizzes – before class
  – Assignments
Don’t Send email, use Ed Discussion to ask questions!

Welcome! #1

Hi everyone,

We’re using Ed Discussion for class Q&A.

This is the best place to ask questions about the course, whether curricular or administrative. You will get faster answers here from staff and peers than through email.

Here are some tips:

- Search before you post
- Heart questions and answers you find useful
- Answer questions you feel confident answering
- Share interesting course related content with staff and peers

For more information on Ed Discussion, you can refer to the Quick Start Guide.

All the best this semester!

Susan Rodger
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 3 (NOT netbeans version, NOT beta)
  – Alice.org, see the CompSci 94 resources page
    • Version 3.6
  – Note: Alice 3 is quite a bit different from Alice version 2
Example from Alice 2
Some Alice 3 examples
Who are you?

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
Download Alice 3 from alice.org, NOT Alice 2! NOT netbeans, NOT Beta!
Alice Demo
Code

```
do in order

this.Cow turnToFace this.Cat add detail

this.Cat turnToFace this.Cow add detail

this.Cat say "Watch what I can do" add detail

this.Cat move UP, 2.0 add detail

this.Cat move FORWARD, 5.0 add detail

this.Cat move DOWN, 2.0 add detail

this.Cow say "Whoa!!!" add detail

this.Cow turn LEFT, 0.5 add detail

this.Cat turn RIGHT, 0.5 add detail
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For Thursday!

- No Alice classwork today but usually you would finish it
- Download Alice 3 if you haven’t yet
- Assignment 1 out – Due Sept 2
  - This assignment does not use Alice
- Watch videos and answer questions for online quiz BEFORE coming to class.