61A Lecture 1

Friday, August 26, 2011
Welcome to Berkeley Computer Science!
The Course Staff

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Google Cal

http://inst.eecs.berkeley.edu/~cs61a/fa11/www/staff.html
What is Computer Science?
What is Computer Science?

Systems
What is Computer Science?

Systems

Artificial Intelligence
What is Computer Science?

Systems

Artificial Intelligence

Graphics
What is Computer Science?

Systems

Artificial Intelligence

Graphics

Security
What is Computer Science?

Systems

Artificial Intelligence

Graphics

Security

Networking
What is Computer Science?

Systems

Artificial Intelligence

Graphics

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Networking

Programming Languages
What is Computer Science?

Systems

Artificial Intelligence

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Programming Languages

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- Systems
- Artificial Intelligence
- Graphics
- Security
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What is Computer Science?

- Systems
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- Graphics
- Security
- Networking
- Programming Languages
- Computer Vision

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What is Computer Science?

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- Computer Vision
- Planning

...
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- Robotics
- Programming Languages

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What is Computer Science?

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- Computer Vision
- Planning
- Robotics
- Natural Language Processing
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- ...
- ...
What is Computer Science?

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What is Computer Science?
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Building things
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Building things

Engineering, theory, and experimentation
What is Computer Science?

Building things

Engineering, theory, and experimentation

A battle against complexity
What is Computer Science?

Building things

Engineering, theory, and experimentation

A battle against complexity

Our champion: abstraction
What is 61A?
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What is 61A?

- A course about the art and science of managing complexity
What is 61A?

• A course about the art and science of managing complexity
  ▪ Formalizing abstraction
What is 61A?

- A course about the art and science of managing complexity
  - Formalizing abstraction
  - Not about 1’s and 0’s
What is 61A?

- A course about the art and science of managing complexity
  - Formalizing abstraction
  - Not about 1’s and 0’s
- An introduction to the Python programming language
What is 61A?

• A course about the art and science of managing complexity
  ▪ Formalizing abstraction
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• An introduction to the Python programming language
  ▪ All the features we really need: introduced next week
What is 61A?

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  ▪ Formalizing abstraction
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• An introduction to the Python programming language
  ▪ All the features we really need: introduced next week
  ▪ Understanding through implementation
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• A course about the art and science of managing complexity
  ▪ Formalizing abstraction
  ▪ Not about 1’s and 0’s

• An introduction to the Python programming language
  ▪ All the features we really need: introduced next week
  ▪ Understanding through implementation
  ▪ Programs that run other programs: meta-evaluation
What is 61A?

Plone Conference. Photo courtesy of Kriszta Szita
What is 61A?
What is 61A?

- An invitation to the software developer community
What is 61A?

- An invitation to the software developer community
  - Computer science is a social discipline
What is 61A?

• An invitation to the software developer community
  ▪ Computer science is a social discipline
  ▪ Learn how to write programs for other people
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• An intellectual challenge
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• An intellectual challenge
  ▪ In computer science, we solve puzzles
What is 61A?

• An invitation to the software developer community
  ▪ Computer science is a social discipline
  ▪ Learn how to write programs for other people

• An intellectual challenge
  ▪ In computer science, we solve puzzles
  ▪ You too can build complex things
Alternatives to 61A
Alternatives to 61A

CS 10: The Beauty and Joy of Computing
Alternatives to 61A

CS 10: The Beauty and Joy of Computing

CS 61AS
Course Policies
The purpose of this course is to help you learn
Course Policies

The purpose of this course is to help you learn

The staff is here to make you successful
Course Policies
Course Policies

• Sections & Lab (Meet in 273 Soda next week)
Course Policies

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• Online Materials
Course Policies

- Sections & Lab (Meet in 273 Soda next week)
- Online Materials
- Assignments & Grading
Course Policies

• Sections & Lab (Meet in 273 Soda next week)

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• Assignments & Grading
  
  ▪ Two midterms in the evening (100 points total)
Course Policies

• Sections & Lab (Meet in 273 Soda next week)

• Online Materials

• Assignments & Grading
  
  ▪ Two midterms in the evening (100 points total)
    7pm–9pm on Mondays, September 19 & October 24
Course Policies

• Sections & Lab (Meet in 273 Soda next week)

• Online Materials

• Assignments & Grading
  
  ▪ Two midterms in the evening (100 points total)
    • 7pm–9pm on Mondays, September 19 & October 24
  
  ▪ One final exam (80 points)
Course Policies

• Sections & Lab (Meet in 273 Soda next week)

• Online Materials

• Assignments & Grading
  
  ▪ Two midterms in the evening (100 points total)
    • 7pm–9pm on Mondays, September 19 & October 24
  
  ▪ One final exam (80 points)

  ▪ Four projects (90+ points total)
Course Policies

• Sections & Lab (Meet in 273 Soda next week)

• Online Materials

• Assignments & Grading
  ▪ Two midterms in the evening (100 points total)
    • 7pm–9pm on Mondays, September 19 & October 24
  ▪ One final exam (80 points)
  ▪ Four projects (90+ points total)
  ▪ Homework and Participation (30 points total)
Collaboration Policy
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• *We want you to discuss everything with each other*
Collaboration Policy

• We want you to discuss everything with each other
• **EPA:** Effort, participation, and altruism
Collaboration Policy

• We want you to discuss everything with each other
• **EPA:** Effort, participation, and altruism
• Find a project partner in your section!
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The limits of collaboration
Collaboration Policy

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The limits of collaboration

• One simple rule: don’t share code
Collaboration Policy

• We want you to discuss everything with each other
• EPA: Effort, participation, and altruism
• Find a project partner in your section!

The limits of collaboration

• One simple rule: don’t share code
• Don’t misrepresent someone else’s work as your own
What’s a Programming Language?