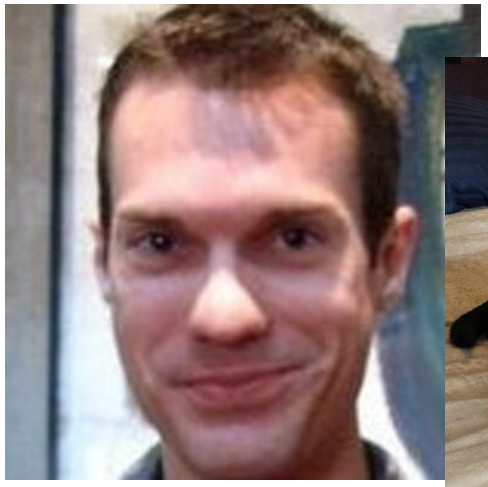
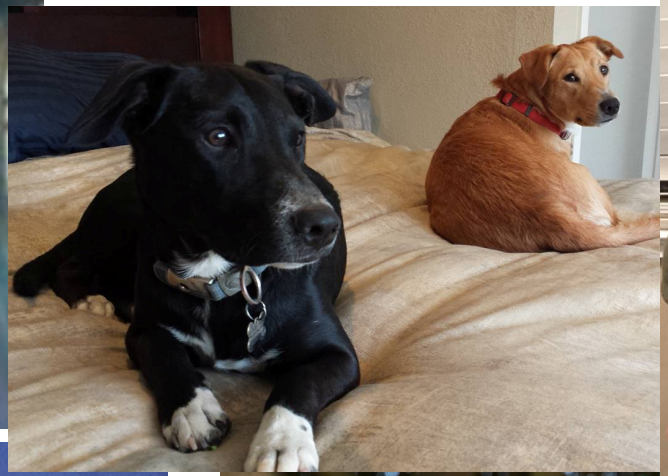
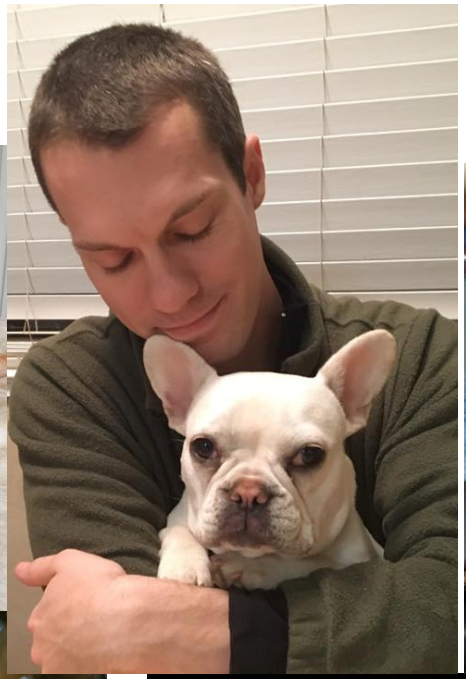
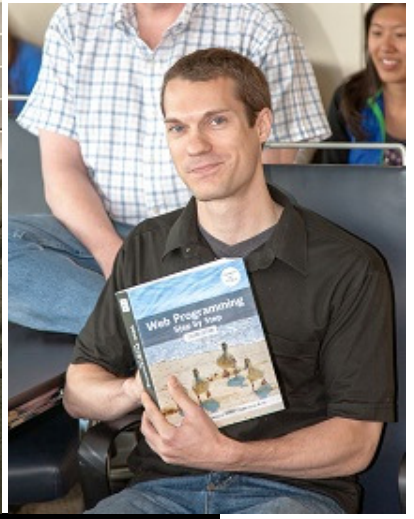
CS 106A, Lecture 0
Introduction

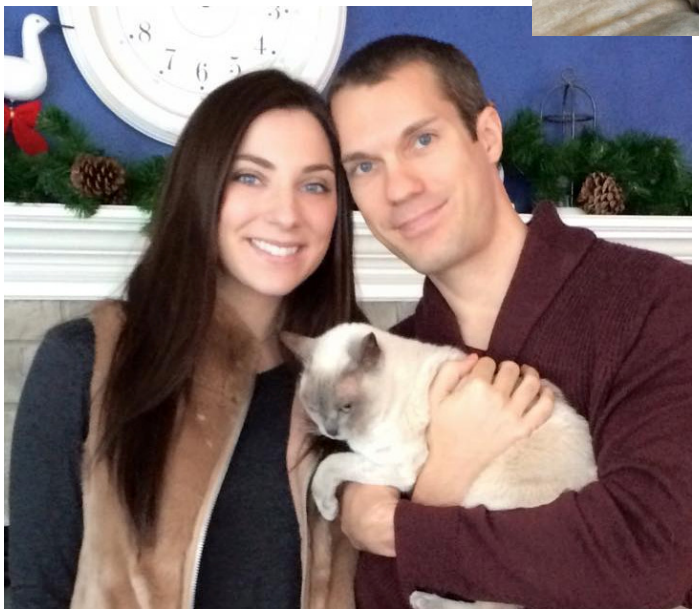
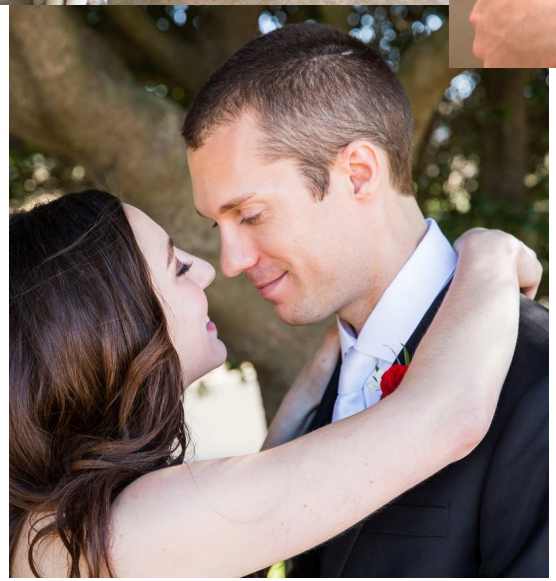
Welcome to CS 106A!

suggested reading:
Course Information handout

About me

- Marty Stepp (stepp AT cs DOT stanford.edu)

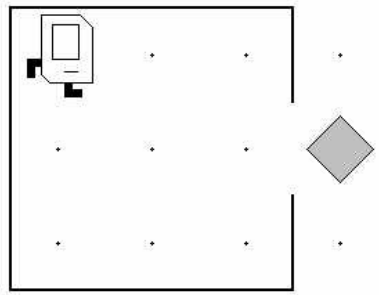





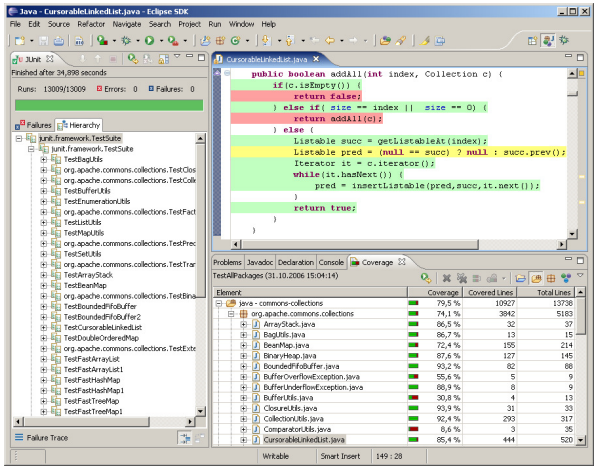

What is CS?

- **Computer Science**
  - The systematic study of algorithmic processes that create, describe, and transform information. -- Wikipedia
    - **Algorithm**: effective method for solving problem expressed as finite sequence of instructions. -- Wikipedia
  - Many subfields
    - Graphics, Computer Vision, AI, Robotics, Data Mining, Scientific Computing, Computational Linguistics, Natural Language Processing, Quantum Computing, ...

What is CS 106A?



- **CS 106A**: Programming Methodology
  - a first course in **programming**, software development
  - interacting with a user; displaying text and **graphics**
  - manipulating **data**, basic **algorithms** to process data
  - how to approach **problem solving** from a computational perspective
  - programming **style** and software development practices
  - familiarity with the **Java** programming language



- Prerequisite: None
  - All we need from you is basic computer usage skills!
    - *"Which class is right for me?"* -- See FAQ page

http://cs106a.stanford.edu/

Discussion Section, SLs

- **section leaders**: Helpful undergraduate assistants who will:
  - run your discussion section each week
  - grade your homework assignments and exams
  - help you when you have questions
  - ... and much more

- **Head TA**: Nick Troccoli

Who is here today?

- Applied Physics
- Art History
- Art Studio
- Biology
- Biomedical Informatics
- Biophysics
- Business Administration
- Civil/Environmental Engineering
- Classics
- Chemical Engineering
- Communication
- Comparative Race and Ethnicity
- Earth Systems
- Economics
- Electrical Engineering
- Engineering
- English
- French
- Genetics
- Geological Sciences
- Geophysics
- History
- Human Biology
- Immunology
- International Relations
- Italian
- Law
- Linguistics
- Management
- Materials Science
- Math and Computational Sciences
- Mathematics
- Mechanical Engineering
- Medicine
- Modern Languages
- MS&E
- Music
- Political Science
- Physics
- Psychology
- Sociology
- Science, Technology, and Society
- Slavic Languages and
- Literature
- Statistics
- Symbolic Systems
- Theater/Performing Arts
- **Undeclared**
- Urban Studies

Grades

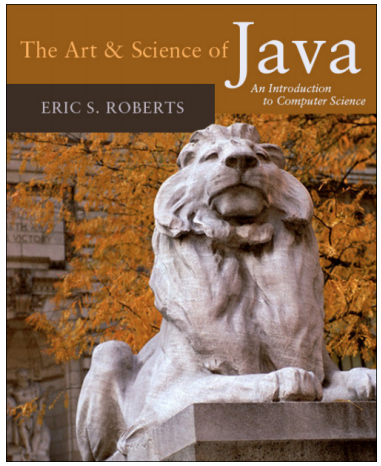
- Your grade in CS 106A is a weighted average of these categories:

******	40%	Homework
*	5%	Section Participation
******	25%	Midterm Exam
******	30%	Final Exam

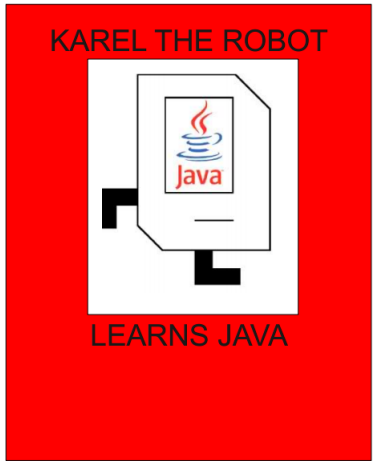
  - At the end of the quarter, we decide the grading cut-points between A+, A, A-, B+, B, B-, C+, ...
    - Guaranteed: 90% is at least an A-; 80% is at least a B-; etc.

Textbooks

- *The Art & Science of Java*, by Eric Roberts
  - written here at Stanford; tailored to this course; a valuable reference
  - usable on open-book (closed-note) exams
  - Weekly "pre-section" problems come from it
    - available on reserve at library
    - either buy a copy, or have access to one when you need it
    - (a PDF of it exists, but PDF is not usable on exams)



- *Karel the Robot Learns Java*, course reader (35 pgs)
  - used in our first 1-2 weeks as we introduce coding



Homework

- 7 programming assignments (some individual, some in **pairs**)
- graded on **functionality** (behavior) and **style** (elegance)
  - grading scale is divided into "buckets":

0, − −, −	very serious issues; does not show understanding
√−	significant problems; falls short of expectations
√	satisfactory; meets requirements, could be improved
√+	well done; solid behavior and good design *(target score)*
+, + +	amazing; exceeds expectations *(given rarely)*

  - statistically, most students receive a mark of √ or √+
  - **interactive grading** sessions every week (must make appointment)

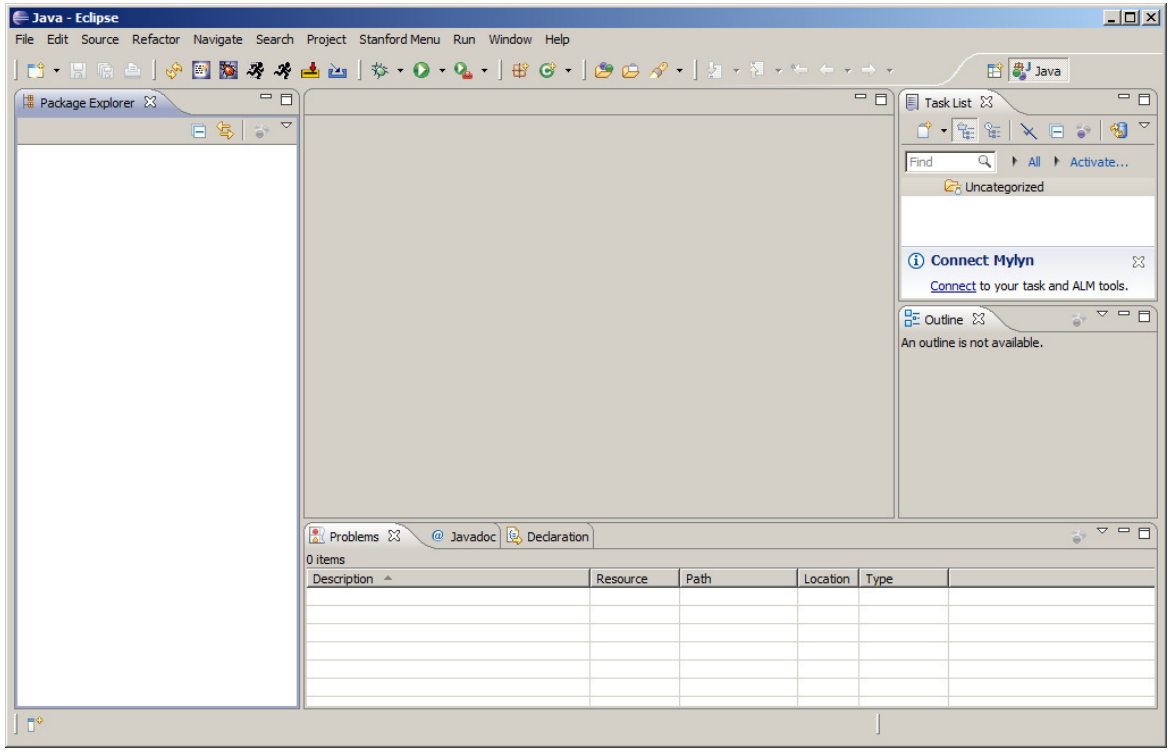
Late Days

- **late day**: allows you to submit a homework one lecture late
  - *Example:* If a HW is due Week2 Fri, then Week3 Mon is 1 "day" late, and Week3 Wed is 2 "days" late

Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat
1							
2						due	
3		1 "day" late		2 "days" late			

Eclipse

- In 106A we will use the standard Java code editor named **Eclipse**.
  - powerful, featureful, but can be intimidating
  - we will use a special Stanford version with some added features
  - installation instructions are available from the course web site



Getting Help

- Visit the SLs in the **LaIR** (1st floor of Tresidder Union)
  - open Sun-Thu, 6pm - midnight, starting next week
  - staffed with multiple section leaders to answer homework questions

- other help resources:
  - course message forum *(please do not post homework solution code)*
  - instructor office hours
  - head TA office hours
  - email SL, TA, instructor

Stanford Honor Code

- The **Honor Code** is an undertaking of the students, individually and collectively:
  - that they will not give or receive aid in examinations; that they will not give or receive unpermitted aid in class work, in the preparation of reports, or in any other work that is to be used by the instructor as the basis of grading;
  - that they will do their share and take an active part in seeing to it that others as well as themselves uphold the spirit and letter of the Honor Code.

- The faculty on its part manifests its confidence in the honor of its students by refraining from proctoring examinations and from taking unusual and unreasonable precautions to prevent the forms of dishonesty mentioned above. The faculty will also avoid, as far as practicable, academic procedures that create temptations to violate the Honor Code.

- While the faculty alone has the right and obligation to set academic requirements, the students and faculty will work together to establish optimal conditions for honorable academic work.

see also: http://honorcode.stanford.edu/

Honor Code and CS 106A

- Please help us ensure academic integrity:
  - Indicate any assistance received on HW (books, web sites, friends).
  - Do not look at other people's solution code *(outside of your pair)*.
  - Do not give your solution code to others, or post it on the web.
  - Report any inappropriate activity you see performed by others.
- Assignments are checked regularly for similarity with help of software tools.
- If you realize that you have made a mistake, you may retract your submission to any assignment at any time, no questions asked.
- If you need help, please contact us and we will help you.
  - We do not want you to feel any pressure to violate the Honor Code in order to succeed in this course.