CS491A Software Design Lab
Course Overview

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Class Goals
- An individual project
- Oral communication skills
- Written communication skills

Oral Presentation
- 20-25 minutes long
- Two presentations this quarter
  - On a selected topic (5%)
  - On your project (10%)

Project Report
- 12 to 16 pages
- Two drafts this quarter
  - 1st draft (5%)
  - 2nd draft (10%)

Class Format
- Meet once a week on Friday
  - Presentations
  - Individual discussion
- Additional individual discussion during office hours or by appointment

Project
- Ideas
- Execution
- Evaluation
**Project Ideas**

- Something you enjoy doing
- Play to your strength
- Nontrivial, i.e. appropriate for 20 weeks of work
- CS related
  - Software development
  - Algorithm/theory development
- Approved by the instructor

**Where Do Ideas Come From?**

- Check out what other students have done
  - [http://sun.calstatela.edu/csns/projects.html](http://sun.calstatela.edu/csns/projects.html)
  - Personal projects
  - Things related to your hobbies
  - Things related to your future career
- Work related
  - Make sure it's an individual project

**Where Do Ideas Come From?**

- Talk to faculty
  - Know the specialties of the faculty
  - Especially good for graduate students
- Talk to other people
  - Projects from other department or organizations
- Extend an old project
  - Make sure there's enough work for this course

**Bad Project Ideas**

- Not enough work for 20 weeks
  - Bad for presentation and report as well
- IT related
  - E.g. system administration, customer service and support
- Pure learning project
  - This is not a learning course!

**Tips for Project Execution**

- Have a vision, as detailed as possible
- Make realistic plans
  - Take into account your other workload
  - Take into account your capabilities
- Leave time for evaluation and refinement

**Tips for Project Execution**

- Start implementation ASAP
  - Find crucial implementation roadblocks early
- Work at a constant pace, i.e. don't leave everything to the last two weeks
Tips for Project Execution

- Find and use the right tools
  - Libraries
  - IDEs
  - Version control systems
- Utilize other resources
  - School servers
  - Faculty knowledge
  - Discussion with fellow students

Tips for Project Execution

- Avoid pitfalls of "real-world" projects
  - Customer ignorance
  - Management constraints
  - Communication delay
- The Solutions:
  1. Don't do it (as the class project)
  2. Figure out the situation early
  3. Do a "dual project"

Project Evaluation

- Originality
- Significance
- Complexity
- Polishedness

A Successful Project

- Solve a problem or fulfill a need
- Showcases four years of your undergraduate study
- Resume builder
- Something to be proud of