Guidelines for the Final Project

Scale

- I don't expect very fancy projects.
  - 20-40 hours of work should suffice, unless you are very enthusiastic.
- How much code?
  - 100 lines is too small; 10,000 is too big
- Final report
  - 2-10 pages, bigger for teams

- You are welcome to tackle more ambitious projects.
  - You should structure such a project so that you can show partial results this quarter.
  - Staged development : very often a good idea

Collaboration

- You can do the projects individually or in groups of 1-5.

- If you have a great project idea, and it looks too big for one person, feel free to recruit help.

Picking a Project

- You are encouraged to define your own project.

- If you prefer it, I will be happy to assign you a project, but I can't guarantee that you will be happy with it.

Some Project Ideas

- Compare two (or more) languages
  - Perhaps by implementing something in both

- Implement a DSL (domain specific language) in Haskell or Scala

- Implement some interesting program in an interesting language (where "interesting" means having enough Programming Languages content)

Some Project Ideas

- Implement or survey contracts
  - http://www.eecs.northwestern.edu/~robby/pubs/papers/ho-contracts-techreport.pdf

- Implement or survey information flow (for WHILE)
  - http://users.soe.ucsc.edu/~cormac/papers/plas09.pdf

- Implement some (small) language

- Implement a social network (python + django?)

- Anything with some language design or impl content
  - that you find interesting

Project Proposals

- One (or two) page document describing
    - your proposed project
    - Your team
    - time budget (how much work is it?)
    - timeline (when will you do which parts?)
        - include time for presentation and report write-up
    - risks (always consider – and mitigate - risks!)

Reports and Presentations

- Project reports are due on Ecommons by the end of exam week
    - Plus a self assessment for team projects
- We will have brief presentations in the last 4 classes
    - about 10-15 minutes each

Cheating

- Projects should be new and original
  - not a cut-and-paste of your prior work,
  - not also fulfilling the requirements of another course
  - not something you have already finished.

- But it is good if you care about the project beyond completion of this course.

- In a group project, you are expected to do your share.
  - You should notify me if others are not doing theirs.

- Peer review
  - need a buddy who will give constructive feedback on you project report and presentation
  - please acknowledge your buddy
- Hard time bound !
  - A great late report is worth .... ?
- Timeline
  - detect/fix slippage early
- Risk management
  - do high risk part first, detect problems early
- Staged development
  - intermediate milestones