Guidelines for the Final Project

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

- Perhaps explore/implement/expand some of the advanced chapters in Real World Haskell

- Implement a DSL (domain specific language) in Haskell (or Scala)
  - define operators for new domain (eg music,…) etc

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

Some More Advanced Project Ideas

- Implement some (small) language as a compiler or interpreter

- 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

Collaboration

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

- I encourage team projects
  - more fun
  - share the work

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

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 (except in Haskell); 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 some results this quarter.

Project Advice

- 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

Project Proposal Document

- 1-2 page .pdf 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!)

  - see proposal samples

Project Proposal Slide

- One slide .pdf document describing
    - your proposed project
    - your team
    - anything else you want to say
    - fun pics, … ?

Reports and Presentations

- Project reports are due on Ecommons by the end of classes

- We will have brief presentations in the last 4 classes
  - about 5-10 minutes each

Academic Integrity Issues

- 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 fine 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.