Programming Language Concepts

4003-450-01

Spring Quarter 20113

Poster on Assigned Language

Due

- Draft submission and final submission dropboxes, with deadlines as shown on myCourses. Team project.
- Poster and presentation in class on Wednesday, May 16, 2012.

Objective

- One of the course outcomes is that you learn the ability to learn new programming languages. So in addition to learning the languages covered by the instructor in class, you need to learn and analyze a variety of languages "on your own." This poster presentation is designed to help you meet this course outcome by enabling you to study an alternative language yourself AND look at a few other alternative languages presented by your classmates.
- To have fun.

Overview

- Do a poster presentation on a language chosen from a list determined by your instructor, and review other team's posters.
- You will work with your team on this poster project.

Tasks

Each student team must submit a softcopy of the poster and any related materials a week before the poster day, and then schedule a meeting with me to finalize the poster. This will allow me to comment on the material and any weaknesses in the poster before it is finalized.

You should plan to use a laptop during your poster presentation to demo your language.

Your poster must include the following:

- History and motivation
- Are there special design considerations in the language?
- Issues of structure (syntax), meaning (semantics), and usage (pragmatics)
- Strengths and weaknesses
- Sample programs that illustrate the language
- Give good/bad examples of the language and how it is used.
- Miscellaneous items relevant to your language
- Current status and future directions

If you were doing Scheme (but alas you are not ☹), you would highlight its functional nature, its uniform data and program representation, and clean mathematical semantics as some of its strengths, and its cryptic usage of parentheses, lack of imperative constructs, lack of standard i/o mechanisms, and lack of a well-developed set of packages as its weaknesses. Demo different Scheme programs to bring out its strengths (and weaknesses). You may want to throw in cute 1-liners as sound bites that will thrill (or not!) but teach your classmates!

Your poster does not have to be on posterboard, but can be a series of printed out sheets of paper (you can use tape to stick the sheets to the wall, but the overall effect must be that of a true rectangular poster). Please keep your poster to something that can fit in a 3'x4' area.

There are many examples of posters on the third floor of the Golisano building. Use them to guide your poster design.

Grading Criteria

Participation at the poster session is mandatory. If you are not in class during the poster session, you will not get any credit for this component. Not only should you be present your own poster, but you must also critique the posters of other people and understand more about their languages. Critique sheets will be handed out and collected. Part of your grade will be based on your constructive critiques.

This assignment will be graded out of 100 points and then the syllabus weight for the poster will be used.

Points	Activity
20	An almost complete preliminary submission (requires a great deal of work upfront); the appointment with me to discuss your presentation.
40	You fixed any problems noted when you met with me; the poster was interesting and followed the guidelines; you demonstrated confidence when presenting your language.
40	Analytical critiques of other posters by other teams. Your ability to analyze what others have done is an important part of this assignment. Your comments will be used to grade your analytical skills, your ability to understand novel programming languages, and so on.
100	**Total** (will be weighted per syllabus handout to compute final course grade)

Also, note that your peer evaluation feedback (thoughtfulness of your comments about teammates, and their evaluation of you) will be used to push your poster score up or down.

Submission

For submission, each student group will submit softcopies of the poster material. Place all your files (`.doc`, `.ppt`, `.sxi`, `.pdf`, `.txt`, programs, etc.) in a directory, and zip up the contents into a file called `poster.zip`.

Final Note

- Email or hardcopy submissions will not be accepted.

Assigned Language

Each team will be assigned ONE language from the following using some kind of lottery mechanism in class.

1. Amber Smalltalk http://amber-lang.net/
2. Clojure http://clojure.org/
3. Dart http://dartr.com/
4. F# http://research.microsoft.com/en-us/um/cambridge/projects/fsharp/
5. Factor http://factorcode.org/
6. Faust http://faust.grame.fr
7. Frink http://futureboy.us/frinkdocs/
8. Go http://golang.org/
9. Kodu http://research.microsoft.com/en-us/projects/kodu/
10. Magpie http://magpie-lang.org
11. Newspeak http://newspeaklanguage.org/
12. Opa http://opalang.org/
13. Plaid http://www.cs.cmu.edu/~aldrich/plaid/
14. Slate http://www.slatelanguage.org/
15. StreamSQL http://streambase.com/developers/docs/latest/streamsql/index.html
16. Visi http://visi.io/