Programming Language Concepts

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Keep in Touch

- Email
- Office hours
- Course website (http://cs.allegheny.edu/sites/jjumadinova/teaching/220)
- Sakai
- Slack channel (https://cs220s2017.slack.com/)
- Bitbucket
- Office Hours (http://cs.allegheny.edu/sites/jjumadinova/schedule)
Meetings

- **Class**: Tuesday, Thursday 11am-12:15pm
- **Lab**: Tuesday, 2:30pm-4:20pm
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- Department coffee/tea Tuesday afternoons

No Lab today! 3/8
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Read the Syllabus!

- It is an official contract between you and me.
What this course is NOT about

▶ Learning to program in [insert language here] - but this course should make it easier to learn new languages
▶ Learning tiny bits about lots of different languages - but we will use examples from many languages to examine more general principles
▶ “Religious wars” (“Which is better, Java or C++?”) - but you will learn about criteria that can be used to compare different languages
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- How are languages designed and implemented?
  - Specifying syntax and semantics, compiled vs. interpreted, etc.

- How do such choices affect ease of use, efficiency, scalability, and other criteria?
  - Example: How should recursive calls be implemented? How does "garbage collection" work?

- What are the different programming paradigms?
  - Example: Why would anyone ever use a language like Prolog or ML rather than C++ or Java?
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Choose one programming paradigm (e.g., object-oriented, logic, functional, imperative)

Based on your chosen paradigm, investigate the following (work with someone!):

1. Overview of the paradigm (key characteristics).
2. Give some historical context (how it started, when, by whom, the first language, etc.).
3. The purpose/usage (why is it there).
4. Examples of languages and their applications (could be tied to the previous question).

Prepare to present your findings during a discussion on Thursday