

# CS370 – Final Project

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**Final Project** – Below I list three possible project directions. If you have another project direction that interests you, please propose your idea to me by **Friday, 17 Apr.**

1. Design and implement your own language. Your language should be a “domain-specific” language to keep the scope manageable. Existing examples include SQL and RobotScript. You could design a scripting language for hardware such as mobile phones, iPods, or coffee makers. It could be a scripting language to automate the strategy of players in a game (such as monopoly or battle ship), so multiplayer games can be played single player (or zero player). You could also design a language to improve testing automation.

**Final deliverables** are the source code, language documentation, ~~and a 5-minute video presentation.~~

2. Enhance an existing language with a major feature that you’ve learned about in another language. Examples include: “Dynamic C++” – that is, a light C++ interpreter that behaves similarly to Pharos and Squeak; a profiling tool for some language; Cross-language development tools that allow programmers in one language to use libraries developed in another language (maybe translate COBOL to C#?).

**Final deliverables** are the source code, tool/feature documentation, ~~and a 5-minute video presentation.~~

3. Research a new language, using principles discussed in class. Example languages include: MetaML, Lua, StreamQL, and PADS/ML. The language should be one proposed in scholarly literature, and not a “popular” language. Good sources for such research are conferences such as POPL (<https://popl20.sigplan.org/>), OOPSLA (<https://2019.splashcon.org/>), and LCTES (<https://conf.researchr.org/home/LCTES-2019>).

**Final deliverables** are the research paper, a small sample application (your proposal) ~~and a 5-minute video presentation.~~

## Project deliverables

1. 17 Apr. – short paragraph describing your project.
2. 27 Apr. – one-page paper that describes project status, current struggles, and next steps.
3. 15 May – **Final deliverables** for your project (see above)