Subject: programming language choice for super-hot project
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We plan on using Python 3 for this new project and have listed our reasons for this decision below.

Modularity:
Code can be structured modularly using both functions and classes. Packages and modules can be used for higher level separation of concerns.

Automatic Unit Testing:
The standard library contains the unittest package; however, we are planning to use the external libraries coverage and pytest, as they have better syntax and tooling for writing tests and checking test coverage.

Reading and writing JSON, S-expressions, or XML:
The standard library contains the packages for JSON and XML. For s- expressions, we can create our own tokenizer and parser.

Dealing with TCP/IP sockets:
Python's standard socket library provides an easy API to create sockets and use the client in all manners necessary.

Constructing graphical user interfaces:
The standard library provides Tkinter, which is a great API to interact with Tcl/Tk. This is well documented and relatively commonly used.

IDE:
We plan on using Vim with ctag support to jump to definition, while also using vim-ag to search within the repository for code. If this becomes cumbersome as the codebase grows, we will switch to PyCharm, an IDE developed by JetBrains. Both have support for Python 3.5's type hinting.

Deploy:
Python 3.4 is installed on the lab computers, and we have asked to update it to 3.5 so we can use the new static typing library. Virtualenv is also installed, so we will supply a makefile that creates a virtualenv, installs the external requirements, runs the python project as needed and then deletes the virtualenv.