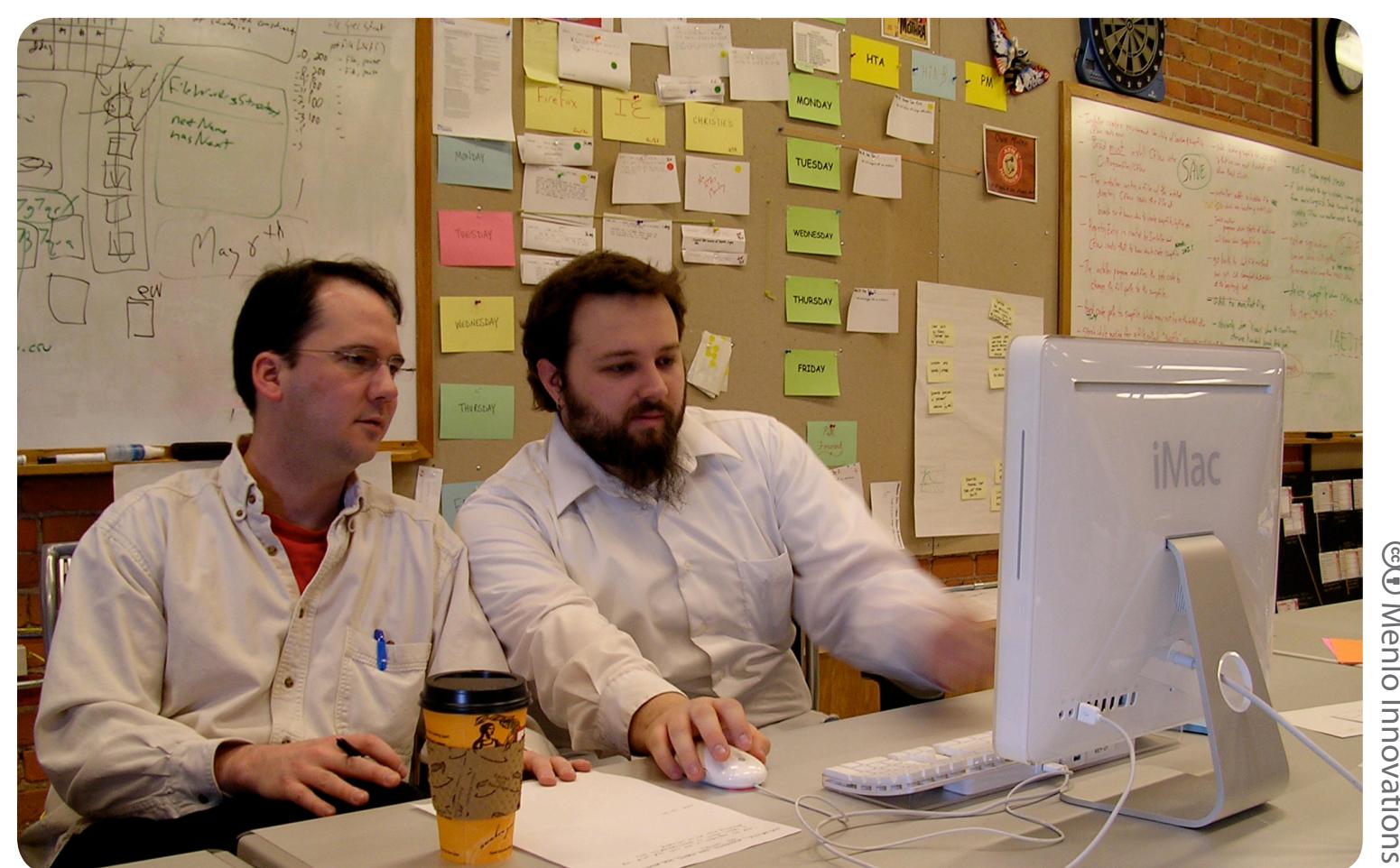


A Collaboration Based Community to Track Idea Diffusion Amongst Novice Programmers

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Professional Environment:
Collaboration

Abstract

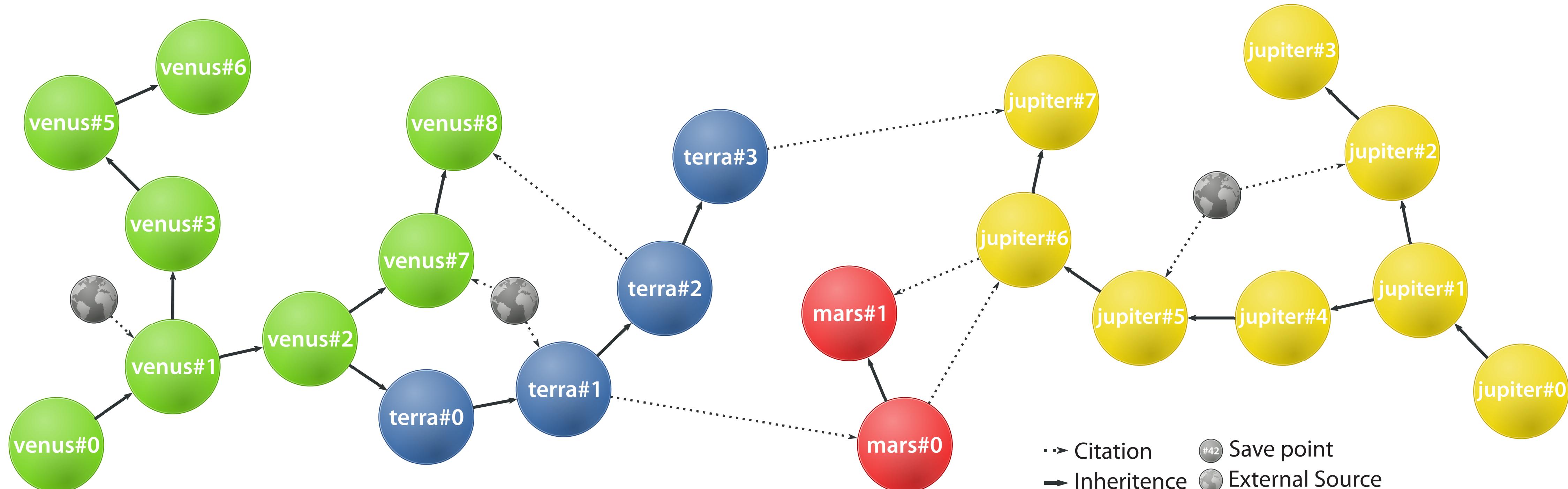
Effective collaboration while learning how to program is instrumental to a student's success.

We designed and prototyped a software environment for cooperative learning that maps the spread of ideas in the classroom.



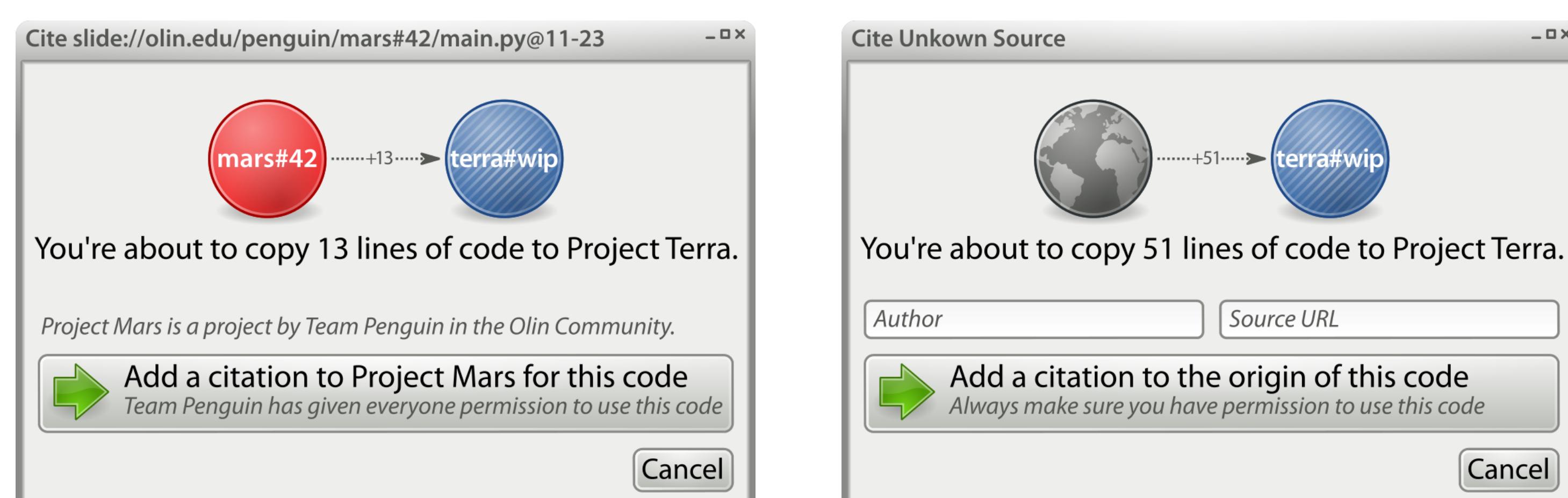
Classroom Environment:
Solitary Work

Diffusion of Ideas

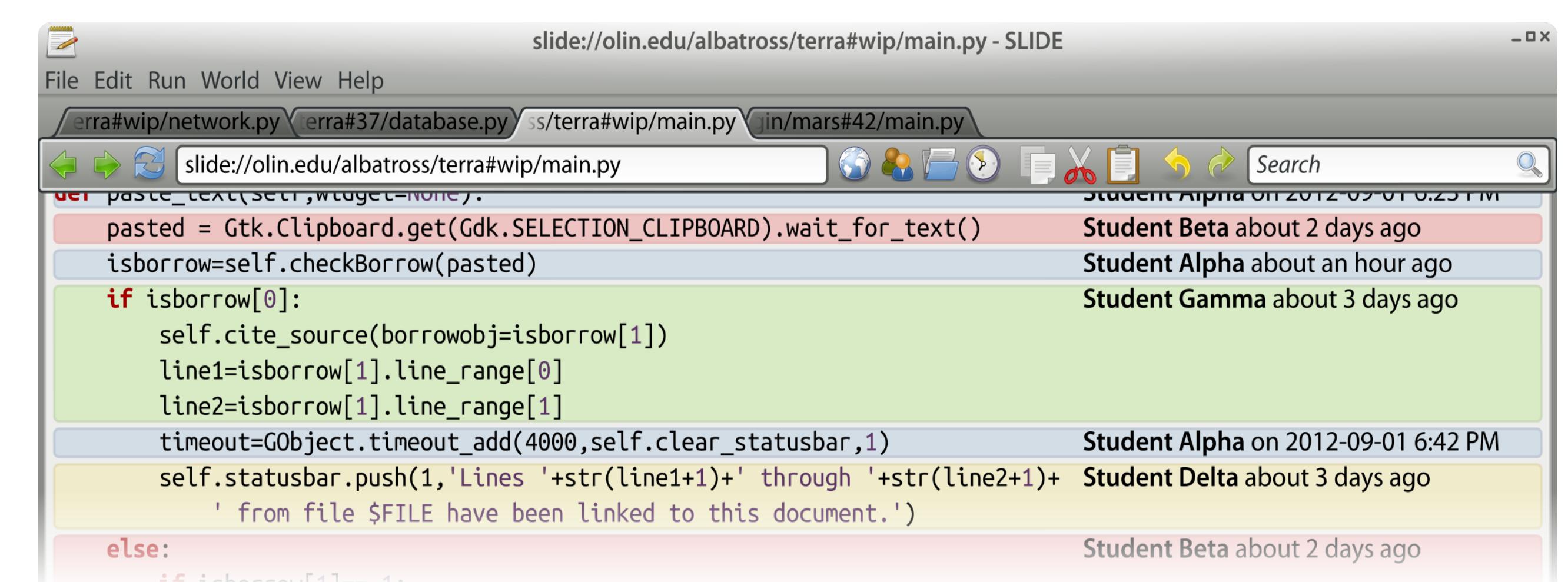


A map of revisions and citations shows teachers how ideas diffuse through the classroom.

Prototyped Features



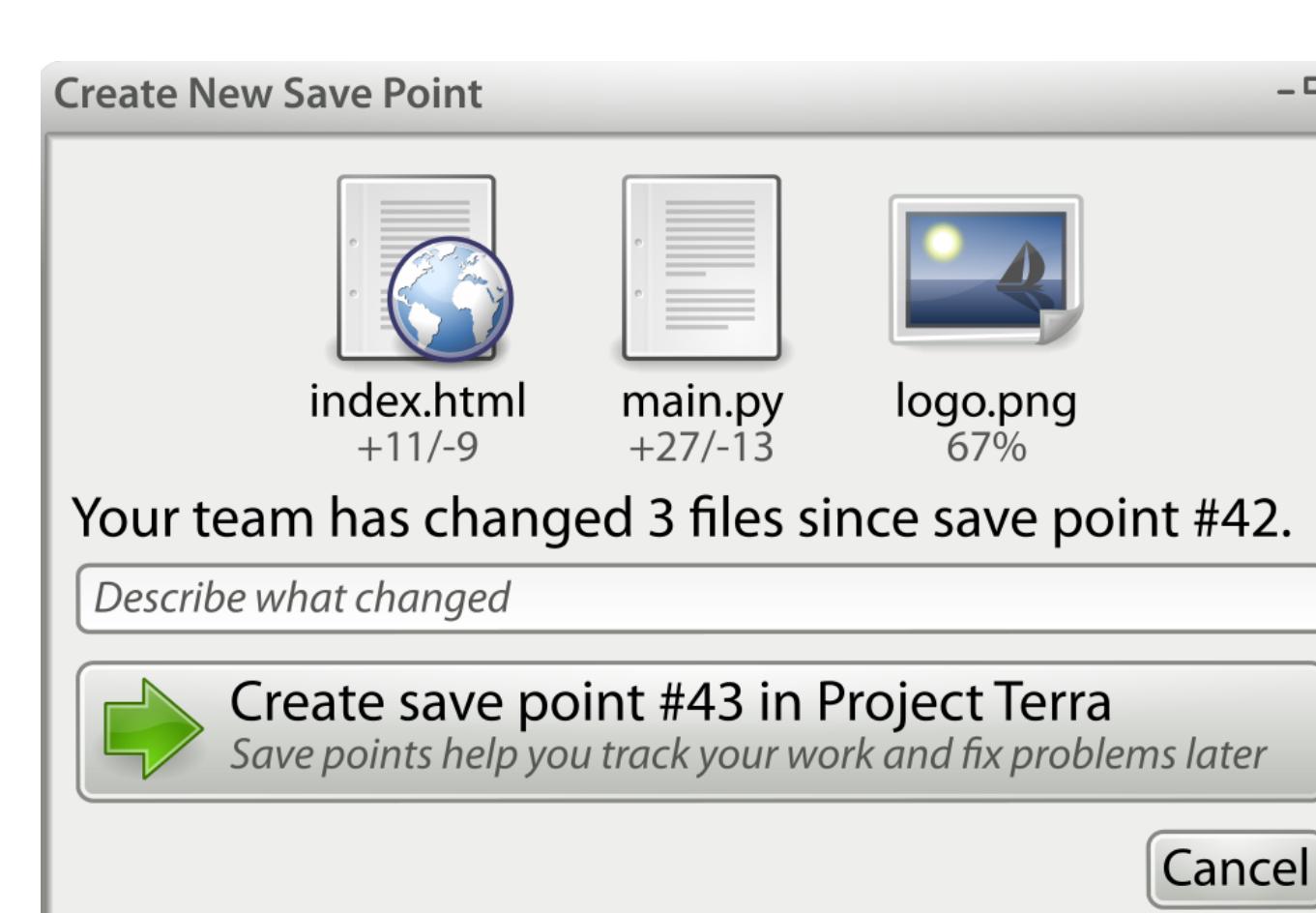
Students are prompted to create a citation when copying code into their project.



Group ownership of projects gives each student in a group equal access to the project.

```
## Citations:  
## Project: terra, Revision: 37, File: main.py  
## Date: 2012-09-08 1:37 PM EDT
```

An example of a generated inline citation.



Cloud synchronization allows teachers to track development and introduces revision control through one-click save points.

Student Accountability

When measures are taken to encourage students to cite properly rather than to prevent them from cheating, it discourages all but the most deliberate of plagiarism by making it easy to act ethically.

Every time students copy code, they learn proper citation practices rather than better ways to cheat.

Future Development

Our prototype demonstrates important principles and practices for a genuinely collaborative learning environment.

The next step is to implement this structure in the classroom.



Proper collaboration begins in the classroom.