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Hoffman Forest Project Reflection

In general, the Hoffman Forest Project was a success from the student perspective. The project restrospectives submitted by the students suggested that overall they were satisfied with the project. Many students explicitly stated that they enjoyed the project because it was "not just another stupid game" and that "it was good to be working on a project that was useful for a change." Some students were thankful for the experience, while others complained about the extra work required to study, secure, and test security on a web site. The requirement that the website meet accessibility requirements (for the vision impaired) also struck a special chord with students, as one student in the class had been blind from birth. While some student groups did not wholly complete the project, or completed it to varying degrees of correctness, ALL of the projects correctly implemented the accessibility requirements. I believe this speaks to the power and importance of social responsibility to the current generation.

The students also commented on the relevance of programming a web application and studying the security implications involved in opening a program on the web. A common complaint among projects in other software engineering courses was that the project often entailed so much programming that students felt rushed and challenged just to complete the project, often at the expense of actually learning the material. During this project, the TAs took extra steps to prevent overworking the students by providing them with skeleton code and support classes that sheltered the students from much of the tedious work. For the Hoffman project, students did complain about the amount of work, but far less so than in previous semesters. I believe that this project helped me achieve my personal teaching goals of reaching out to students with a socially-minded project to engage their interest in the discipline, giving them experience with technologies that will help them practically in their careers, and helping them to focus on the broader implications of what they are learning rather than being overwhelmed by minutia.

The quest for realism in a software engineering project is often difficult. Almost any project with real world use will be complex to the point where a group of students working for six weeks could scarcely implement the task to perfection. Such a goal is more easily attainable in a semester-long or year-long project. The challenge to deliver working software in a six week timeframe is compounded when an actual outside customer has invested time in creating the project with the intention of using the project upon completion. Therefore, the teaching staff during the Hoffman forest project chose to implement some of the functionality ourselves and intermittently have the students build atop it to ensure a common base for all students, to hide some of the more tedious and difficult pieces of functionality, and to prevent the students from being overwhelmed with work. I believe that the Hoffman project succeeded in these regards, and in delivering several projects to the customer, but at the expense of an invested ownership in the project on the part of the students. While the students, I believe, maintained an interest in the project for the social reasons mentioned above, they never took complete ownership to make the project "theirs." Instead, they were collaborators and adders,

providing functionality atop what the teaching staff had already built. Furthermore, because the design and architecture of the system was somewhat predefined by the code provided by the teaching staff, the students had less flexibility in how they implemented their solutions, perhaps stifling their inherent creativity. At least one group balked at the code provided by the teaching staff, instead choosing to reimplement the solution from scratch in a completely different fashion. Unfortunately, this group did not complete the project. I felt considerable personal guilt over this (though the group was in another TA's section) as I generally feel that creativity should not be penalized under any circumstance. The lack of ownership, I believe, also led the students to do the minimal possible to complete the work correctly and for full credit, rather than explore creative avenues seen in prior projects.

I believe that many of the problems faced when trying to balance realism, ownership, and practicality can be met simply by extending the duration of the project without expanding the required functionality (beyond shifting all responsibility to the students). Of course, this solution is not always practical. I believe that realism and getting students to personally invest in their work is paramount, therefore, in the future, I would opt to sacrifice some of the complexity of the project and having an external customer for a project that may be smaller and created for the sake of the course only but still engaging. Furthermore, providing students with code that shelters them from extremely tedious or complex interactions is still prudent in some situations, but not at the expense of their creativity.