**Undefined** **{?} Parameter**

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**Senior Capstone Project:**

**Design Document**

**Requirements Analysis**

Tools & Techniques

1. Agile vs. Traditional

The software development process that we think will work best for our product is Scrum. We are all familiar with this methodology already and our versioning, bug tracking, and project management software will facilitate this. This agile process will help us identify bugs or address user testing concerns in a timely manner while still allowing for normal implementation workflow to continue.

1. Versioning and Bug Tracking

For our versioning and tracking we will be using Github. Github provides a great interface for git versioning, as well as a task management system. At the end of a sprint, we will branch the code, and use that for testing, this allows us to continue implementation while other members may still be testing their specific projects. By sourcing all these important aspects of development from a single entity, we can track progress and maintain team cooperation in a more organized and complete fashion. This will make it easy to allow our team to work in tandem without conflicting with other team mates.

1. Testing

We will be doing testing in two different ways. First, we will use unit tests to test the back end of the software. By creating unit tests as we go, it will provide a way for us to regression test. Second, we will beta test our software through user interactions. To encourage users to test we will create sample quizzes targeted at specific classes. Already a math teacher has agreed to offer her students benefits for trying out the system. We will also create a series of quizzes for our operating systems class. We will encourage students in our class to utilize, add to, and improve these quizzes in preparation for finals. To allow for easy feedback, we will provide a link on the website that a user can report bugs.

1. Documentation

There will be multiple levels of documentation involved with our website. Github will be responsible for tracking our progress and documenting statistics. In addition, documentation of our code, team member performance, and Quizzing tutorials will be written by the team. Any documents that will be read by users will be subject to a heavy review and testing process to ensure that they are clear, understandable, and informative.

1. Team Communication and Meetings

Due to the nature of Scrum, meetings will be scheduled for every other day to check team progress and encourage a steady work pace. In-person meetings will be held at least twice a week and during the beginning and end of sprints. For other meetings, we will do as many meetings as is possible in person, and if we are not able to meet in person, we will do so over Google Hangouts. The importance of sprint planning and review will be emphasized, as that will dictate the flow of development and influence our end product.