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LEARNING C++ THE FUN WAY

Learning a programming language is often difficult to accomplish, but even a difficult subject is easier to learn by changing the method of learning. When a person actually participates in the learning process, then the process is more effective and productive. C++ is a widely known language to programmers and is introduced to students in their second year. Students are often intimidated by the amount of information that they have to learn. The most effective way to learn C++ is to code a program, which is achieved by an instructor giving students various assignments to work on. Students usually do not find assignments to be interesting. By allowing students the challenge of programming their own game, students are more apt to learn. This project involves constructing the infrastructure for allowing students to code and test their game implementations. The game used for this project is called Critical Mass. The software developed allows students to play each other over the Internet, and a database of user information is used to track users' performance and assign marks.

The GUI for this game is made using Java Swing. The core of the game will be written in C++. The web site graphics are written in Java. The web browser is linked to a Linux web server, which compiles code uploaded by students. Since the GUI of the game is written in Java and the core of the game is written in C++, a linking between the two is required.

The web interface allows students to upload code and challenge other students' code. The game interface is pre-written GUI. The students' code can play each other, and the site tracks results of games and produces rankings of who has the best code. A MySQL database is used for storing student info, code and results.