

Java Software Workshop

Project Proposal — Group Osaka

Benjamin Crispin
Samuel Farmer
Deedar Fatima
Rowan Stringer
Josh Wainwright

February 26, 2014

1 Project Outline

Our group are proposing an educational tool for use in the classroom which would allow a group of students to participate in a live quiz competition. A teacher would be able to input a number of questions which are all either multiple choice, or have simple numerical answers, along with the answers. The students are then in a race to answer the question presented as fast as possible; the next question will be displayed when the set time for the current question has elapsed.

This program would require the building of a user interface for answering the questions as well as a means of entering questions and their answers, a server which handles the questions, serving them, one at a time, to all the students logged in to it, and a database which holds the questions and answers, as well as details about the users that have logged in in the past.

2 System Requirements

- The system allows Students to log into a user account.
- The system allows logged in Students to compete in a many-on-many multiple choice/simple-answer quiz.
- The system gives a set number of questions per quiz (as per the Admin).
- The system will allow the Admin to add or remove questions.
- The system ensures all clients and the server are synchronised.
- The system allows users to log on with past question results.
- The system displays a leader board and some feedback about the question to the Student.
- The system displays a basic statistical information during the quiz to the Admin.
- The system displays a summary report of statistical information at the end of the quiz to the Admin.
- The system will log information about the Student's quiz session session.

3 Group Roles

Initial roles are proposed as follows (subject to change throughout duration of project):

Rowan, Deedar Database implementation, database relationship diagram and architecture. Will incorporate defining some parts of API for communication between the server and database layers, deciding on attributes and table structures and writing documentation for database.

Sam, Ben, Josh Server/client model, JDBC connectivity with database. Will incorporate client/server socket communication, defining initial push/pull structure for communication between clients and server and implementing database API via JDBC as defined above.

4 Planned Timescales

Date to Complete	Task
Week 1 (25 th February — 2 nd March)	<ul style="list-style-type: none">• Complete database implementation with a basic server/client setup that can query the database and write entries to it.• Implement basic JDBC layer for communication between server and database.• Several possible prototype diagrams for various GUI interfaces.
Week 2 (3 rd March — 9 th March)	<ul style="list-style-type: none">• Have fully working Admin and Student clients able to communicate with server and with database via the server.• Have started implementing GUI for both Admin and Student clients.
Week 3 (10 th March — 16 th March)	<ul style="list-style-type: none">• Finish all elements of GUI including functionality for Admin to add and remove questions and Students to answer questions during quiz session.• By close of week, fully working quiz system should be implemented, incorporating client, server, database and GUI's.
Week 4 (17 th March — 23 rd March)	<ul style="list-style-type: none">• Testing of system.• Final bug fixing, refinements etc.
24 th March	<ul style="list-style-type: none">• Final hand-in date for project and report.