Question bank and paper generator
CS 387 Course Project

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Abstract

We will be building a database application. This application will allow users to enter and fetch questions from a database. The questions will be tagged with topics, sub topics, level of difficulty and appropriateness for specific kind of exams. It will also allow data involving how well the question was received, when it was used, how often it was used, in what kind of exams and demographics of students who answered it or did not answer it. Using this information, it will allow faculty to generate question papers based on a series of parameters they supply. Finally, the user can view reports on how useful the questions in the database are based on parameters supplied by the user. We will also allow for hierarchy of topics.

Concepts to be used

- Advanced SQL

- Database connectivity

- Building Web Application

- Graph Database

Timeline

March 20th

Complete requirements and Analysis with ER diagrams, forms, use cases in detail.

April 1st

Preparing of Design Doc with Normalized schema, Indexes, DDL, Data load scripts, SQL for transactions, Detailed forms and Controller logic.

April 20th

Final report mentioning test results, load testing results and conclusions

Features

- An instructor can search for questions with filters on difficulty, tags etc.

- Instructor can view statistics of each about the frequency and relevance of the question.

- Instructor can add questions to the database along with meta data such as tags and difficulty.

- Instructor can remove questions (only the ones that they have added) to the database.

- Instructor can create an exam by picking questions manually or auto create a question paper by providing difficulty and topic wise weight-age.

Additional Features

This feature may or may not be implemented, depending upon availability of time. Students can attempt the exam by logging in and can give their feedback on the question. The application will also store what fraction of students were able to solve the question.