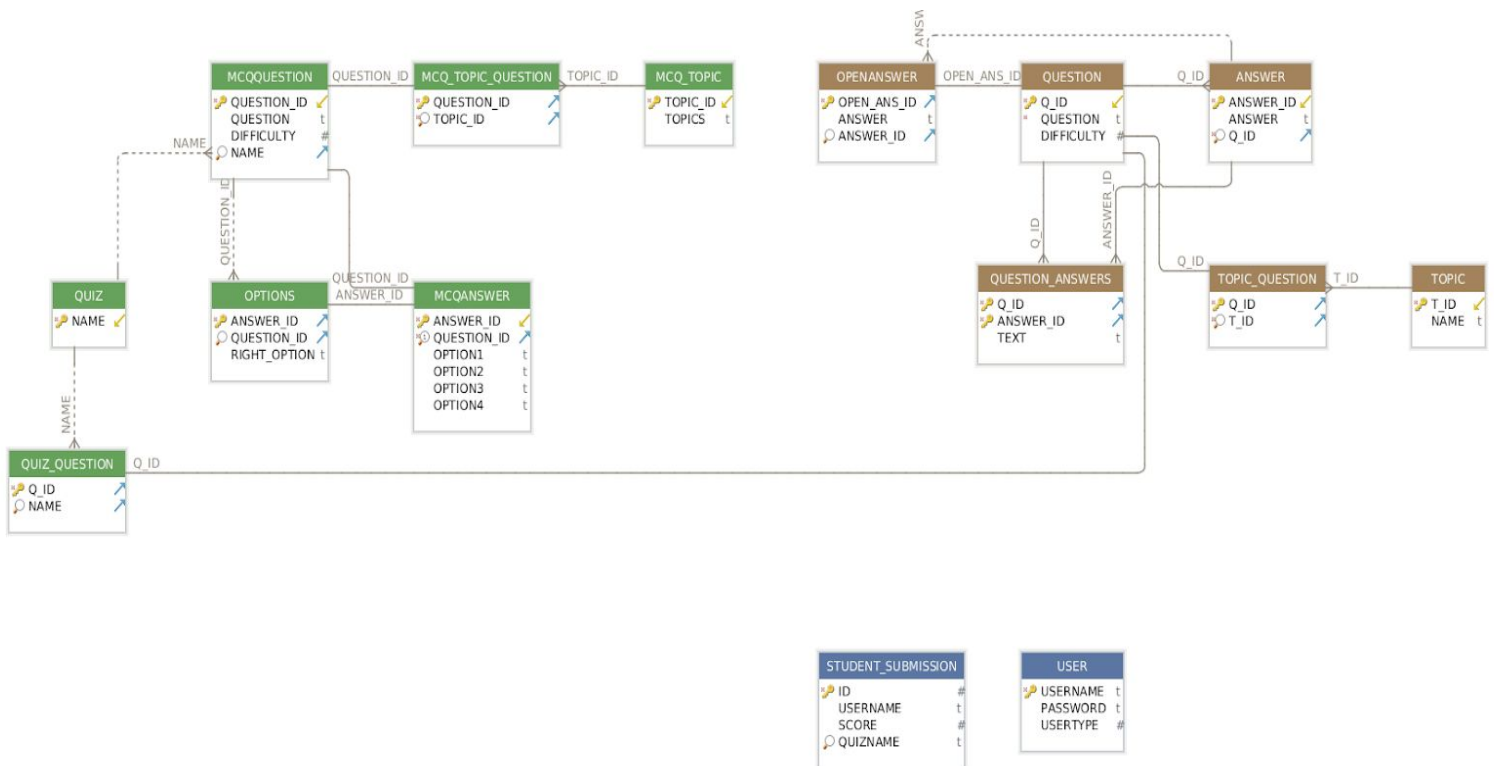


TECHNICAL SPECIFICATION

DataBase Schema



The database was designed to ensure students can take a quiz and get results with the results being stored in the database. Mcq questions table has been separated from open questions and single question answers. When a student selects a quiz by name it goes to get multiple choice questions and single choice questions from mcq and single question answers to present as a quiz. The user submission is stored in another table called the student submissions.

DAO:

Interaction of the DAO with the database methods

createQuiz() - : quiz table

createAll() - interacts with tables : QUIZ, QUESTION, QUESTION_ANSWER, ANSWER, TOPICS, TOPIC_QUESTION

addOpenQuestion - openQuestion

addMCQQuestion - quiz, mcgquestion, mcq_topic question, mcq_answer, option

update() - quiz, quiz_question, mcq question

delete() - quiz

getQuiz() - QUIZ QUESTION, QUESTION, TOPIC QUESTION, MCQQuestion

search() - quiz, question, mcqquestion

searchbyTopic() - topics, topic_question, mcq_topic_question, question

authenticate() - user

quizSession() - mcqQuestion
single AnswerQuestions() - question, quiz_question, quiz
delete() - quiz
updateStudentQuiz() - student_Submission
getStudentScores() - Student_submission

TABLES:

- QUIZ_QUESTION : Contains the ID and name of every quiz written to the database. It is dependent on table quiz as a foreign key.
- Quiz: Where the name of all the quizzes are stored here. MCQ question, Open Questions and Single Answer Questions are linked to quiz names
- OPENANSWER: Ungraded questions that stores text questions that have multiple lines of answers
- QUESTION_ANSWER: This contains the answers to every question containing columns for the question ID and answerID
- TOPIC_QUESTION: This links the topics with the question ID
- TOPIC: Contains topics available in the database with an ID
- STUDENT ANSWER: Student answers are stored here
- USER: There are two users in the system. The lecturer and the student. They have stored their usernames, password and usertype. UserType int 0 for student and 1 for lecturer
- MCQQUESTION
- OPTIONS: Contains the answer id, question id and the right option for every question
- CHOICES: contains the options of multiple choice questions
- MCQ_TOPIC_QUESTION: Links table for mcq_questions to the topics
- MCQTOPIC: Contains topics and their id