

sp_generate_exam

Description: This stored procedure generates an exam for a given course by randomly selecting a specified number of Multiple Choice Questions (MCQ) and True/False (T/F) questions. It then creates a new exam entry in the exam table, assigns a name based on the course and the number of existing exams for that course, and links the selected questions to the new exam in the exam_question table.

Parameters:

- @course_id INT: The ID of the course for which the exam is to be generated.
- @mcq_questions INT: The number of MCQ questions to include in the exam.
- @tf_questions INT: The number of True/False questions to include in the exam.

sp_generate_exam_v2

Description: This is an alternative version of sp_generate_exam that serves the same purpose. It generates an exam for a given course by randomly selecting a specified number of Multiple Choice Questions (MCQ) and True/False (T/F) questions. It uses a table variable (@SelectedQuestions) instead of a temporary table (#SelectedQuestions) to store the selected question IDs. It then creates a new exam entry in the exam table, assigns a name, and links the selected questions to the new exam.

Parameters:

- @course_id INT: The ID of the course for which the exam is to be generated.
- @mcq_questions INT: The number of MCQ questions to include in the exam.
- @tf_questions INT: The number of True/False questions to include in the exam.

sp_get_exam

Description: This stored procedure retrieves the details of all questions and their associated choices for a specific exam. It joins the question, exam_question, and choice tables to provide a comprehensive view of the exam content.

Parameters:

- @exam_id INT: The ID of the exam for which to retrieve details.

fn_get_exam_answers

Description: This table-valued function returns the correct answers for all questions belonging to a specified exam. It joins the question and exam_question tables to filter questions by exam ID and retrieve their answers.

Parameters:

- @exam_id INT: The ID of the exam for which to retrieve answers.

dbo.sp_save_student_answers

Description: This stored procedure saves a student's answers for a given exam. It first verifies the existence of the student and the exam/course. If the student has not previously taken this specific exam for this course, it inserts a new record into student_exam_course. Then, it inserts the provided question IDs and their corresponding answers into the student_answers table. The procedure uses a transaction for atomicity and includes error handling.

Parameters:

- @exam_id INT: The ID of the exam.
- @student_full_name VARCHAR(150): The full name of the student (first name and last name concatenated).
- @qld1 to @qld10 INT: The IDs of the questions (up to 10 questions).
- @ans1 to @ans10 VARCHAR(20): The student's answers for the corresponding questions.

sp_correct_exam

Description: This stored procedure calculates and returns the correction results for a student's performance on a specific exam. It determines the number of correct answers, the total number of questions, the earned grade, the total possible grade, and the percentage score.

Parameters:

- @exam_id INT: The ID of the exam to be corrected.
- @student_full_name VARCHAR(255): The full name of the student whose exam is being corrected.

sp_get_track_courses

Description: This stored procedure retrieves a list of courses associated with a specific track. It joins the course and track_course tables to filter courses by the provided track ID.

Parameters:

- @trackId INT: The ID of the track for which to retrieve associated courses.