



## • **Stored Procedures:**

1. `Admin.usp_displayCourses`: This stored procedure displays all courses for a given topic name.
2. `Admin.usp_registerInCourse`: This stored procedure registers a student in a course.
3. `Admin.usp_showRegisteredCourses`: This stored procedure shows the courses that a student has registered for.
4. `Admin.usp_showExamsInCourse`: This stored procedure shows the exams in a course.
5. `Admin.usp_getExamInfo`: This stored procedure gets information about an exam.
6. `Admin.usp_answerQues`: This stored procedure allows a student to answer a question in an exam.
7. `Admin.usp_updateAnswerQues`: This stored procedure allows a student to update their answer to a question in an exam.
8. `Admin.usp_GetStudentExamAnswers`: This stored procedure gets all the answers that a student has given in an exam.
9. `Admin.usp_showExamScore`: This stored procedure shows the score of a student in an exam.
10. `Admin.usp_CalculateExamScore`: This stored procedure calculates the score of a student in an exam.
11. `Admin.usp_AddCourse`: This stored procedure adds a new course.

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### • Triggers:

1. afterRegINcourse: This trigger is created on the StudentCourses table and is fired after an insert operation. It prints a message to the user indicating that they have registered in a course, along with the course name, maximum degree, and minimum degree.

2. trg\_validateStudentAnswer: This trigger is created on the Admin.StudentAnswers table and is fired after an insert or update operation. It validates the student's answer by checking if it matches the correct answer from the Admin.QuestionPool table and updates the IsCorrect column in the Admin.StudentAnswers table accordingly.

### • Views:

1. Admin.V\_Student\_info: This view displays information about students, including their branch, track, and intake details.

2. Admin.V\_Courses\_info: This view displays information about courses, including their topic name.

3. Admin.V\_StudentCourses\_info: This view displays information about student courses.

4. Admin.V\_Exams\_info: This view displays information about exams.

5. Admin.V\_ExamQuestions\_info: This view displays information about exam questions.

6. Admin.V\_StudentAnswers\_info: This view displays information about student answers in exams.

7. Admin.V\_StudentCor\_info: This view displays information about student courses and scores.

8. Admin.V\_Cr\_Exams\_info: This view displays information about exams for a specific course.

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9. Admin.V\_Instructors\_info: This view displays information about instructors, including their branch and track details.
10. Admin.vw\_InstructorsWithCourses: This view displays instructors along with their assigned courses.
11. Admin.vw\_AverageCourseScores: This view displays the average scores of students in each course.
12. Admin.vw\_ExamsWithQuestions: This view displays exams along with their questions for a specific course.
13. Admin.vw\_SupervisorsWithInstructors: This view displays all supervisors along with their supervised instructors.
14. Admin.vw\_StudentExamScores: This view displays students along with their exams and scores.
15. Admin.vw\_CoursesWithTopics: This view displays all courses with their topics.

#### • Users:

1. Admin.LoginLog: This table logs information about user logins, including the login time, username, and user type.

2. Admin.AdminNotification: This table stores notifications for the admin.

#### • Trigger:

1. NotifyAdminOnLogin: This server-level trigger is fired after a logon event. It inserts a record into the Admin.LoginLog table and sends a notification to the admin by inserting a record into the Admin.AdminNotification table.

#### • Logins and Users:

1. Admin: This login and user has control over the database.

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2. TrainingManager: This login and user has execute permissions on several stored procedures and select permissions on several views.

3. Instructor: This login and user has execute permissions on several stored procedures.

- Permissions: The code grants execute permissions on several stored procedures to the TrainingManager and Instructor users. It also grants select permissions on several views to the TrainingManager user.

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