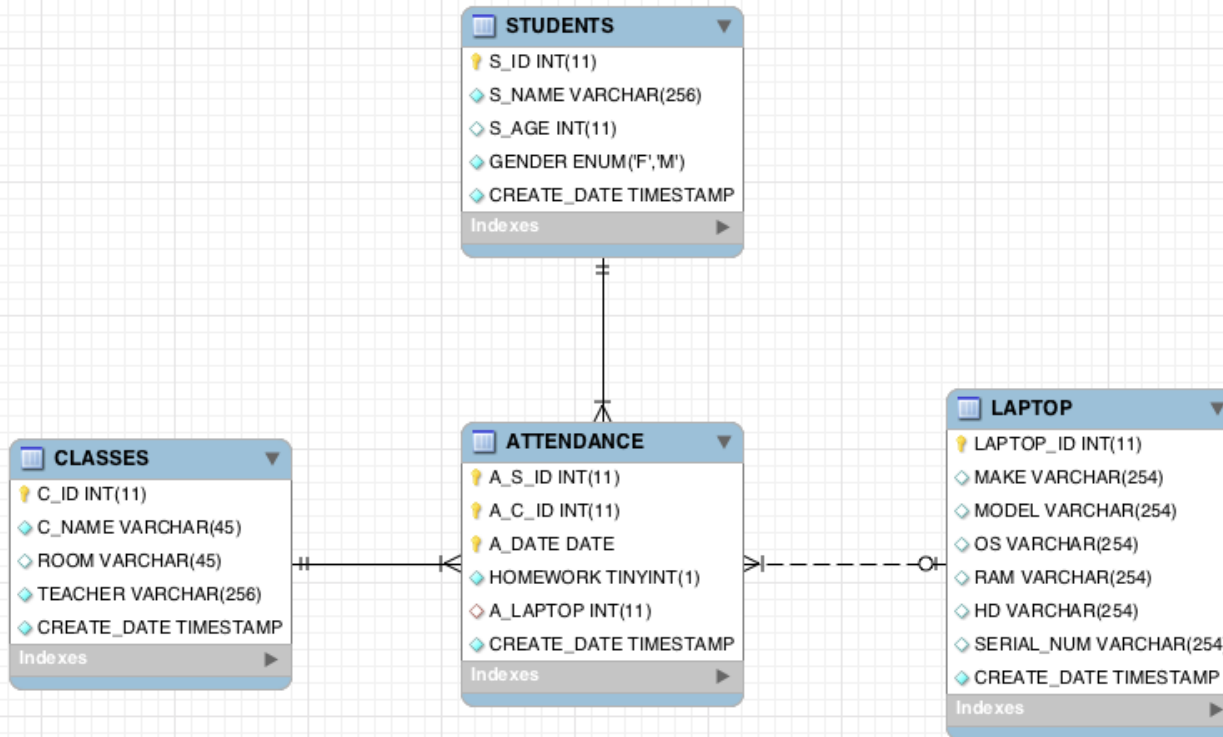# IT102

SQL Exercises

Database Model

- What is new in this schema, compared to the last week's database design?

- What is the relationship between the ATTENDANCE and LAPTOP tables?

- How would you change the schema to track student's grades?

Exercises

1) Create a new schema 'it102_8a', download and run the following script to create tables and data:

http://www.schoolnova.org/student_area/IT102/IT102_Lesson_8a.sql

2) Select and review the student records.

3) Insert yourself as a student.

4) Insert your attendance record for today and last week. You can use sub-select in the insert statement:

INSERT INTO ATTENDANCE (A_S_ID, A_C_ID, A_DATE) SELECT S_ID, (SELECT C_ID FROM CLASSES WHERE C_NAME = 'IT 102')
AS class, CURRENT_DATE FROM STUDENTS WHERE S_NAME = '<your name>';

5) Select all the attendance records for yourself, in descending order by date. Repeat the same for another student in class.

6) Select all the attendance records grouped by student. Make sure the student's name is displayed and the number of lessons s/he attended. Who attended the most lessons? Who attended the least?

7) Insert a record in LAPTOPS table that corresponds to the laptop you are using today; insert another record that corresponds to another student's laptop in class. You should have at least two records in the LAPTOPS table.

8) Update today's attendance records with laptops.

9) Add a new column to the ATTENDANCE table: GRADE INT (search the internet for "MYSQL ALTER TABLE" statement documentation).

10) Update the ATTENDANCE table to give random grades to students. You can use the MySQL RAND function for grades:

cast(rand() * 100 as unsigned)

11) Select all students and their grades in descending order by grade. Make sure the student's name, grade and class are displayed. Who has the highest grades? Who has the worst grades?

12) Group all students by grade average in descending order. Who has the best grade average? Who has the worst?

HAPPY THANKSGIVING!