

**Databases I, Winter term 2016-2017**  
**Milestone 3**

*Submission: 21/11/2016 (11:59 pm)*

In this milestone, you need to check the guidelines and the user stories listed below, and the uploaded document called Milestone 3 Conventions. You should also take into consideration the original project description that was posted for milestone 1.

You are required to submit a zip file, named after your team number e.g. Team 100, having the following documents:

- a) SQL files containing the script of both the data and the schema of the database. However **no wizards** will be used to perform any of the tasks.

The files will include the following:

- SQL file containing the script for tables creation and the relations between them including all needed keys, constraints and formulas.
  - SQL file containing the script for inserting consistent and **real data inside the tables that covers all the possible scenarios of the user stories.**
  - SQL file containing the script for creating all the stored procedures and functions that will be used to implement all functionalities mentioned in the User Stories. You must include a comment above each procedure or function containing the user story number and description corresponding to it. In other words, you should document your SQL file.
  - SQL file containing the script for executing all stored procedures and functions in your database.
- b) A PDF file containing the modified database schema of your application (submit the old schema if you haven't modified anything).
- c) A PDF file containing :
- Team members' names.
  - Team members' tutorial groups.
  - Team members' application numbers.

**Submission guidelines:**

- a) The deadline of submission for this milestone is Monday the 21st of November 2016 at 11:59 pm.
- b) Only one copy of the documents will be submitted via ONE team member.
- c) Submission will be via the submission link available on the course website.

**Please note that:**

- Creations of the tables have to be in order, as the script will be run only once and the database should be created with all the tables at once with no errors.

- Stored procedures and functions have to be ordered according to the order of the user stories listed below.
  - The stored procedures and functions should have descriptive names.
  - The names of your tables, stored procedures and functions have to be according to the mentioned conventions in **Milestone 3 Conventions**.
  - **No late** submissions will be accepted.
  - It is your responsibility to make sure that the files were uploaded successfully on the website.
- 

## User Stories

### “As a system administrator, I should be able to ...”

- 1 Create a school with its information: school name, address, phone number, email, general information, vision, mission, main language, type(national, international) and fees.
- 2 Add courses to the system with all of its information: course code, course name, course level (elementary, middle, high), grade, description and prerequisite course(s).
- 3 Add admins to the system with their information: first name, middle name, last name, birthdate, address, email, username, password, and gender. Given the school name, I should assign admins to work in this school. Note that the salary of the admin depends on the type of the school. The salary of an admin working in a national school is 3000 EGP, and that working in an international school is 5000 EGP.
- 4 Delete a school from the database with all of its corresponding information. Students and employees of this school should not be deleted from the system, but should not have a username and password on the system until they are assigned to a new school again.

#### Note that:

The system administrator is a person who is responsible for managing the main parts of the system as described above. There is only one system admin for the schools' network website and you **do not need to keep track of his information in the database**.

### “As a system user (registered, or not registered), I should be able to ...”

- 1 Search for any school by its name, address or its type (national/international).
- 2 View a list of all available schools on the system categorized by their level.
- 3 View the information of a certain school along with the reviews written about it and teachers teaching in this school.

### “As an administrator, I should be able to ...”

- 1 View and verify teachers who signed up as employees of the school I am responsible of, and assign to them a unique username and password. The salary of a teacher is calculated as follows: years of experience \* 500 EGP.
- 2 View and verify students who enrolled to the school I am responsible of, and assign to them a unique username and password.
- 3 Add other admins to the school I am working in. An admin has first name, middle name, last name, birthdate, address, email, username, password, and gender. Note that the salary of the admin depends on the type of the school.

4 Delete employees and students from the system.

5 Edit the information of the school I am working in.

6 Post announcements with the following information: date, title, description and type (events, news, trips ...etc).

7 Create activities and assign every activity to a certain teacher. An activity has its own date, location in school, type, equipment(if any), and description.

8 Change the teacher assigned to an activity.

9 Assign teachers to courses that are taught in my school based on the levels it offers.

10 Assign teachers to be supervisors to other teachers.

11 Accept or reject the application submitted by parents to their children.

**“As a teacher, I should be able to ...”**

1 Sign up by providing my first name, middle name, last name, birthdate, address, email, and gender.

2 View a list of courses' names I teach categorized by level and grade.

3 Post assignments for the course(s) I teach. Every assignment has a posting date, due date and content.

4 View the students' solutions for the assignments I posted ordered by students' ids.

5 Grade the students' solutions for the assignments I posted.


6 Delete assignments.

7 Write monthly reports about every student I teach. A report is issued on a specific date to a specific student and contains my comment.

8 View the questions asked by the students for each course I teach.

9 Answer the questions asked by the students for each course I teach.

10 View a list of students that i teach categorized by the grade and ordered by their name (first name and last name).

11 View a list of students that did not join any activity. 

12 Display the name of the high school student who is currently a member of the greatest number of clubs.

**“As a parent, I should be able to ...”**

1 Sign up by providing my name (first name and last name), contact email, mobile number(s), address, home phone number, a unique username and password.

2 Apply for my children in any school. For each child I should provide his/her social security number (SSN), name, birthdate, and gender.

3 View a list of schools that accepted my children categorized by child.

4 Choose one of the schools that accepted my child to enroll him/her. The child remains unverified (no username and password, refer to user story 2 for the administrator) until the admin verifies him.

5 View reports written about my children by their teachers.

6 Reply to reports written about my children by their teachers.

- 7 View a list of all schools of all my children ordered by its name.
- 8 View the announcements posted within the past 10 days about a school if one of my children is enrolled in it.
- 9 Rate any teacher that teaches my children.
- 10 Write reviews about my children's school(s).
- 11 Delete a review that i have written.
- 12 View the overall rating of a teacher, where the overall rating is calculated as the average of ratings provided by parents to that teacher.
- 13 View the top 10 schools with the highest number of reviews or highest number of enrolled students. This should exclude schools that my children are enrolled in.
- 14 Find the international school which has a reputation higher than all national schools, i.e. has the highest number of reviews.

**“As an enrolled student, I should be able to ...”**

- 1 Update my account information except for the username.
- 2 View a list of courses' names assigned to me based on my grade ordered by name.
- 3 Post questions I have about a certain course.
- 4 View all questions asked by other students on a certain course along with their answers.
- 5 View the assignments posted for the courses I take.
- 6 Solve assignments posted for courses I take.
- 7 View the grade of the assignments I solved per course.
- 8 View the announcements posted within the past 10 days about the school I am enrolled in.
- 9 View all the information about activities offered by my school, as well as the teacher responsible for it.
- 10 Apply for activities in my school on the condition that I can not join two activities of the same type on the same date.
- 11 Join clubs offered by my school, if I am a highschool student.
- 12 Search in a list of courses that i take by its name or code.