German University in Cairo
Media Engineering and Technology
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Databases I, Winter term 2017-2018
Milestone 2
Submission: 20/11/2017 (11:59 pm)

In this milestone, you need to check the guidelines and the user stories listed below, and the uploaded document called Milestone 2 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, with the mandatory data mentioned in Section 1.
   - 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 below (Section 2). 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 20th of November 2017 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.

<u>Please note that:</u>

- 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 2 Conventions**.
- **No late** submissions will be accepted.
- It is your responsibility to make sure that the files were uploaded successfully on the website.
- Not following any of the conventions, or having an problems with the order of tables creation would lead to losing marks.

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1 Data Insertion

Your file should contain insertions for at least the following:

1 Three companies.

2 Every company should have at least three departments.

3 Every department should have at least two HR employees and two managers.

4 Every HR employee and manager should have a specific job within his/her department.

5 Insertions in all other tables so that calling the procedures gives meaningful results.

2 User Stories

"As an registered/unregistered user, I should be able to ..."

1 Search for any company by its name or address or its type (national/international).

2 View a list of all available companies on the system along with all information of the company.

3 View the information of a certain company along with the departments in that company.

4 View the information of a certain department in a certain company along with the jobs that have vacancies in it.

5 Register to the website to be able to apply for any job later on. Any user has to register in the website with a unique username and a password, along with all the needed information.

6 Search for jobs that have vacancies on the system and their short description or title contain a string of keywords entered by the user. All information of the job should be displayed along with the company name and the department it belongs to.

7 View companies in the order of having the highest average salaries.

"As a registered user, I should be able to ..."

1 Login to the website using my username and password which checks that i am an existing user, and whether i am job seeker, HR employee, Regular employee or manager.

2 View all of my possible information.

3 Edit all of my personal information.

“As a job seeker, I should be able to ...”

1 Apply for any job as long as I have the needed years of experience for the job. Make sure that a job seeker can’t apply for a job, if he/she applied for it before and the application is still pending.

2 View the interview questions related to the job I am applying for.

3 Save the score I got while applying for a certain job.

4 View the status of all jobs I applied for before (whether it is finally accepted, rejected or still in the review process), along with the score of the interview questions.

5 Choose a job from the jobs I was accepted in, which would make me a staff member in the company and the department that offered this job. Accordingly, my salary and company email are set, and I get 30 annual leaves. In addition, I should also choose one day-off other than Friday. The number of vacancies for the assigned job has to be updated too.

6 Delete any job application I applied for as long as it is still in the review process.

“As a staff member, I should be able to ...”

1 Check-in once I arrive each day.

2 Check-out before I leave each day.

Note that: If I check-in/-off on my day off (Friday or the other day off), this record should not be regarded.

3 View all my attendance records (check-in time, check-out time, duration, missing hours) within a certain period of time.

4 Apply for requests of both types: leave requests or business trip requests, by supplying all the needed information for the request. As a staff member, I can not apply for a leave if I exceeded the number of annual leaves allowed. If I am a manager applying for a request, the request does not need to be approved, but it only needs to be kept track of. Also, I can not apply for a request when it’s applied period overlaps with another request.

5 View the status of all requests I applied for before (HR employee and manager responses).

6 Delete any request I applied for as long as it is still in the review process.

7 Send emails to staff members in my company.

8 View emails sent to me by other staff members of my company.

9 Reply to an email sent to me, while the reply would be saved in the database as a new email record.

10 View announcements related to my company within the past 20 days.

“As an HR employee, I should be able to ...”

1 Add a new job that belongs to my department, including all the information needed about the job and its interview questions along with their model answers. The title of the added job should contain at the beginning the role that will be assigned to the job seeker if he/she was accepted in this job; for example: “Manager - Junior Sales Manager”.

2 View information about a job in my department.

3 Edit the information of a job in my department.

4 View new applications for a specific job in my department. For each application, I should be able to check information about the job seeker, job, the score he/she got while applying.

5 Accept or reject applications for jobs in my department.

6 Post announcements related to my company to inform staff members about new updates.

7 View requests (business or leave) of staff members working with me in the same department that were approved by a manager only.

8 Accept or reject requests of staff members working with me in the same department that were approved by a manager. My response decides the final status of the request, therefore the annual leaves of the applying staff member should be updated in case the request was accepted. Take into consideration that if the duration of the request includes the staff member's weekly day-off and/or Friday, they should not be counted as annual leaves.

9 View the attendance records of any staff member in my department (check-in time, check-out time, duration, missing hours) within a certain period of time.

10 View the total number of hours for any staff member in my department in each month of a certain year.

11 View names of the top 3 high achievers in my department. A high achiever is a regular employee who stayed the longest hours in the company for a certain month and all tasks assigned to him/her with deadline within this month are fixed.

"As a regular employee, I should be able to ..."

1 View a list of projects assigned to me along with all of their information.

2 View a list of tasks in a certain project assigned to me along with all of their information and status.

3 After finalizing a task, I can change the status of this task to 'Fixed' as long as it did not pass the deadline.

4 Work on the task again (a task that was assigned to me before). I can change the status of this task from 'Fixed' to 'Assigned' as long as the deadline did not pass and it was not reviewed by the manager yet.

"As a manager, I should be able to ..."

1 View new requests from staff members working in my department. Note that only managers with type = 'HR' are allowed to review requests applied for by HR employees, and this manager's review is considered the final decision taken for this request, i.e. it does not pass by an HR employee afterwards.

2 Accept or reject requests from staff members working in my department before being reviewed by the HR employee. In case of disapproval, I should provide a reason to be saved.

3 View applications for a specific job in my department that were approved by an HR employee. For each application, I should be able to check information about the job seeker, job, and the score he/she got while applying.

4 Accept or reject job applications to jobs related to my department after being approved by an HR employee.

5 Create a new project in my department with all of its information.

6 Assign regular employees to work on any project in my department. Regular employees should be working in the same department. Make sure that the regular employee is not working on more than two projects at the same time.

7 Remove regular employees assigned to a project as long as they don't have tasks assigned to him/her in this project.

8 Define a task in a project in my department which will have status 'Open'.

9 Assign one regular employee (from those already assigned to the project) to work on an already defined task by me in this project.

10 Change the regular employee working on a task on the condition that its state is 'Assigned', i.e. by assigning it to another regular employee.

11 View a list of tasks in a certain project that have a certain status.

12 Review a task that I created in a certain project which has a state 'Fixed', and either accept or reject it. If I accept it, then its state would be 'Closed', otherwise it will be re-assigned to the same regular employee with state 'Assigned'. The task should have now a new deadline.