CS489 – Applied Software Development

Lab5a

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1. The estimated time allotted for completing the tasks is about 2 hours.
2. Upon completion, to submit your work for review and grading, simply commit and push your ER design diagram and code, into a repository on your github account and then submit the url to the Assignment item on Sakai.

Data modeling, Database Design and Implementation (10 points)

Note 1: *You are expected to use a diagramming tool of your choice on your computer to create your ER diagram or alternatively you may draw by hand on pencil and paper and take/upload a photo of your diagram*.

Upon completion, to submit, simply commit and push your files/folders, into a repository on github and submit the url to the LabAssignment item on Sakai, as your submission.

TASK :

Given below, is the same Problem Statement/Description from Lab2, of a Software system required by a company named, Advantis Dental Surgeries (ADS), which is an enterprise web application for managing their Dental Surgery operations. Assume you have been hired by the company to design and develop this software solution. Your tasks for this Lab Assignment is to:

- Create an E-R model for the database needed for the system. You may draw the ER diagram using a graphical drawing tool on computer or draw by hand.

- Implement the model on a physical Relational database. Use any RDBMS of your choice e.g. MySQL.

- Populate the Database tables with dummy data
- Write SQL Queries for the following:
    - Display the list of ALL Dentists registered in the system, sorted in ascending order of their lastNames
    - Display the list of ALL Appointments for a given Dentist by their dentist_Id number. Include in the result, the Patient information.
    - Display the list of ALL Appointments that have been scheduled at a Surgery Location
    - Display the list of the Appointments booked for a given Patient on a given Date.

Problem Statement/Description:

Advantis Dental Surgeries, LLC (ADS) are a company that are in the business of managing a growing network of dental surgeries which are located across cities in the South West region. Assume you have been hired by the company, as a Lead Software Engineer and tasked to lead the effort in designing and developing a web-based software solution (i.e. a website) which the company will be using to manage their business.

The system will be used by an Office Manager to register Dentists who apply to join their network of dental surgeries. Each Dentist is given a unique ID number and their First Name, Last Name, Contact Phone Number, Email and Specialization are recorded into the system. The Office Manager also uses the system to enroll new Patients who require dental services, including the Patient's First Name, Last Name, Contact Phone Number, Email, Mailing Address and Date of Birth. A Patient can call-in to request appointments to see a dentist. A Patient can also request appointment by submitting an online form on the ADS website. Upon receiving a request for an appointment, the Office Manager can then book the appointment and the system will send a confirmation email notifying the Patient and the appointment gets recorded accordingly.

Dentists should be able to sign-in to the system and view a listing of all their Appointments, including details of the Patients who they have been scheduled to see. Each appointment is normally made for a specific date and time and the dentist is expected to see/treat the patient at one of ADS's surgery locations. The system should provide information about each Surgery, including its name, location address and telephone number. Patients should be able to sign-in to the system and view their appointments, including the information of the dentist who they have been booked to see. Patients should also be able to request to cancel or change their appointments.

A dentist cannot be given more than 5 appointments in any given week. The system should prevent a Patient from requesting a new appointment if they have an outstanding, unpaid bill for dental service they have received.

For the above tasks:

1.1 Save ALL your SQL Code in a filenamed, myADSDentalSurgeryDBScript.sql which you include in your submission.

1.2 For each of the above Queries, execute your code and take a screenshot of your computer showing your code and the output result, and save/export it to a .PNG or .JPG image file, which you include in your submission.

//-- The End --//