

CS 275: Web Programming

Programming Assignment 4

Feb. 23, 2014

Due: February 28th, 2014 before the beginning of the class period

For this assignment, we will design and implement a database, and practice with SQL queries to interface to our database.

1. Designing a database (40 pts.)

Develop and turn in a complete schema for the Restaurant DBMS that allows customers to find information regarding restaurants in the area. List all of the tables, along with a precise description of table columns that includes the column type, its role in a table (e.g., primary key), and any additional parameters. One entity in your Restaurant DBMS will be a customer; we will keep track of their first and last name, their address, their favorite cuisine types, and their reviews of restaurants and dishes. Customers shall be able to search the DBMS, as well as insert data into the DBMS. Your task is to identify the rest of the entities in your DBMS, as well as the relationships among the entities, that would allow an end-user of your database to perform the following functionality:

- Search for a restaurant given its :
 - o name or a part of its name
 - o type of cuisine (e.g., Italian, American, etc.)
 - o specific dishes served at a restaurant
 - o average visitor rating (rating scale is from 1 (worst) to 10 (best))
- Insert and/or retrieve the following information:
 - o A rating for a specific restaurant and a specific dish
 - o An average rating for a specific restaurant or a specific dish
 - o A list of reviews for a specific restaurant and a specific dish
 - o A list of restaurants that serve a specific dish or a specific type of cuisine
 - o A list of reviews for dishes and restaurants written by a specific customer
 - o A list of all dishes in a particular price range specified by the customer

2. Creating a database (10 pts.)

For this part, you will turn in a SQL file containing all the necessary commands to create the database from the schema you designed in part 1.

3. Populating a database (10 pts.)

Populate each of your tables in your DBMS with sample data. Each table should be populated with at least 5 different records. If you are having troubles coming up with the records, perhaps your data doesn't warrant the use of a database.

4. Interacting with a database (40 pts.)

Create SQL queries for each of the tasks specified in part 1. For this part, you will turn in a file containing all of the queries.

Please make sure that your database is named '**restaurants**'.

Turn In Procedures:

In addition to an electronic copy of your assignment, please turn in a printout of your source code.

You may turn in your assignment via email (bkerkez@yahoo.com) or in person on a CD, flash drive, or other computer media. Please follow the turn in procedures outlined below.

In case you would like to turn in your assignment via email, please place the following in the subject line of your email:

CS275 Assignment 4

Please make sure that I receive your assignments before the due date and time. Late programming assignments will be accepted for 24 hours after they are due and will be penalized by a 50% deduction. No assignments will be accepted after the 24 hour period expires.