

CSE 3241 Introduction to Database Systems

Group Project

Database Design and Implementation

Project Name : Parking Reservation System

Group Members : 3 – 5 person per group

Skills Required : DB design and modeling, MySQL, PHP and HTML

Requirements:

Implement a web application using MySQL and PHP for ParkingMaster to manage garage reservations for special events such as hockey games, concerts, etc.

Each garage managed by ParkingMaster has numerous spaces available for special events. Customers can use the web application to reserve a spot to park at least a day ahead. If multiple spots are needed, they will have to be reserved one per transaction. Each garage has the following information: name, address, number of available spaces (this cannot be hardcoded because the administrator can change it anytime), and price (always assume the hours to be from 6 to 10pm but different on different dates).

For example, garage A can have 100 spots open on 2/20 with \$10 each and 80 spots open on 2/25 with \$15 each. Garage B can have 50 spots open on 2/20 with \$12 each only.

To help the customer to select the garage to reserve, the distance between garages and venues are provided. For example, garage A is 2 miles from Nationwide arena and 3 miles from the Ohio Theater.

Each reservation made should include the customer's cellphone number, price, date and garage name. A reservation can be cancelled at least 3 days in advance. Once cancelled, the spot will be returned to the available pool.

1. There is no need for customers to register. A customer can find out past or current reservations using his/her cellphone number.
2. User selects the date to reserve a parking space. All garages will be listed with the number of available spots, pricing and distance to the venue (if selected). When the user submits a request, a transaction/record must be created with information including garage, date, and fee

charged. Your application does not need to handle money transactions. Your application will update the garage availability accordingly.

3. Parking cancellation – Reservations can only be canceled 3 days in advance. You will mark the transaction 'canceled'. You will update the garage availability accordingly. If the cancellation is requested too late, your application should reject the request.

4. The administrator can query the system for the total spaces assigned, reserved in a garage on a given date.

5. The administrator can query the system for the revenue (based on the space reserved) from a garage on a given date or a month.

Deliverables:

1. Develop the web application and demo it.
2. Package the application in a way that it can be installed on another PC. You must provide an installation script that creates the schema in the MySQL database, a script to load the test data and a readme file to explain how to run those scripts. Be careful with where the PHP files are stored, use relative directory paths wherever possible.
3. (Optional) A reflection paper (no more than one page) to describe the issues encountered and how they were resolved or not resolved.

Rubrics:

This assignment is worth 20% of your grade. Since this is a group project, work should be divided among group members evenly. Members not contributing to the group project will get lower scores.

Meeting Requirements	65%
User Friendliness	10%
Creativity	10%
Installable	15%