



Bilkent University
CS 352
Database Management Systems
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CaRent
Car Rental Data Management System
Project Proposal
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Group #15 Members

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1. PROBLEM STATEMENT

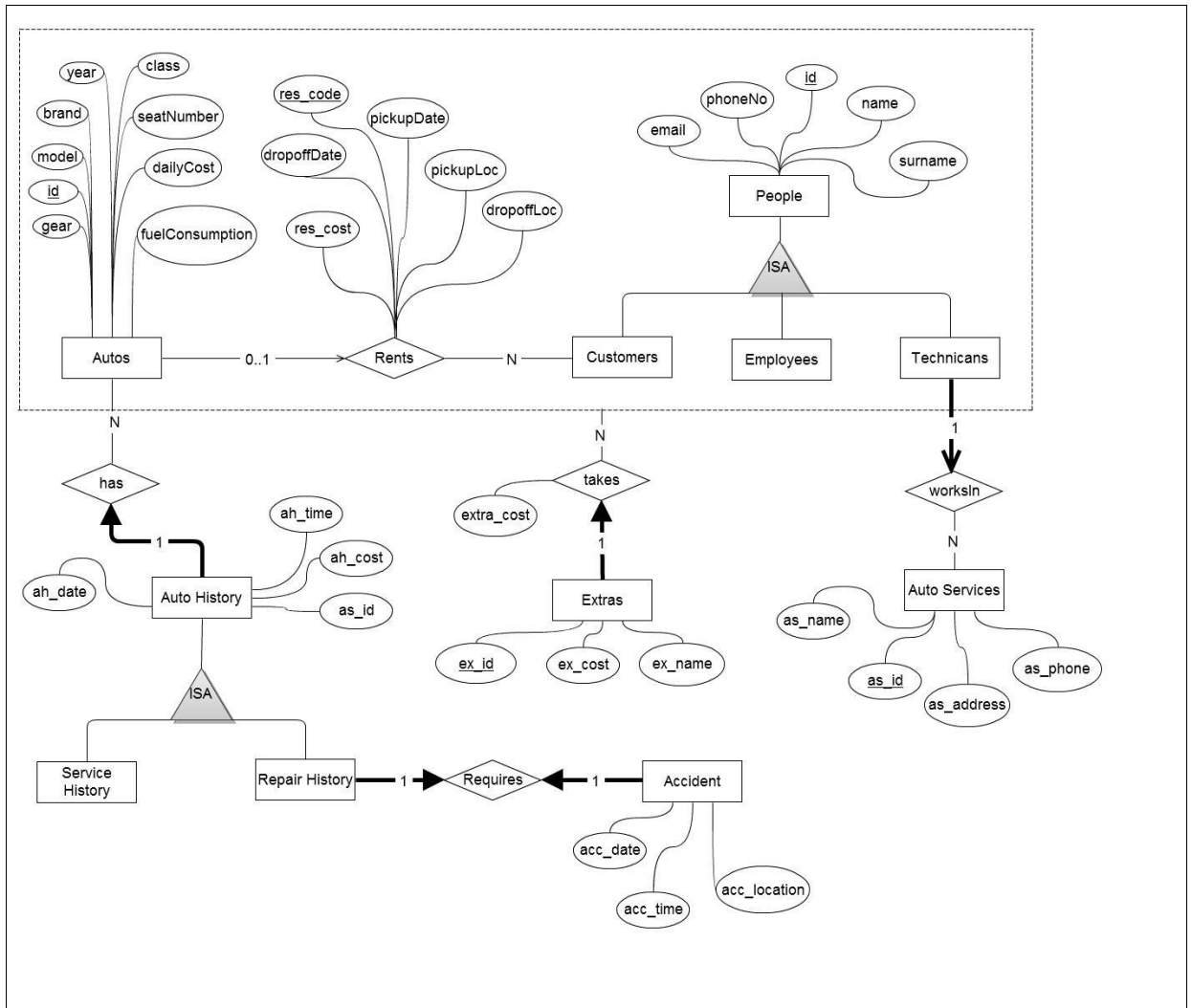
CaRent is a data management system for car rental companies. It is a web based data management system which also includes the end-user and administrative interfaces. Its purpose is to make both customers and the company employees' job easier while renting a car. System basically keeps track of Autos, People, Rental Information, Auto Services, Auto Histories, Accidents and Extras. By the help of the CaRent customers can learn detailed information about the possible rental cars in the rental company. They can check the history of the cars, this information may contain repairing and the service history. With the guarantee of the service history customers can make reservation safely. Briefly, customers can choose and rent cars according to their needs. Company employees can also benefit from the system. They can find information about their customers easily. When it is needed customers' id, name, and surname telephone number and mail address can be easily accessed.

2. REQUIREMENTS AND LIMITATIONS OF THE SYSTEM

- Each car in the system has divided into classes like economy, premium, luxury and van. The customer can easily choose his/her car according to the class of the car.
- Each car has brand, model, year, number of seats and gear information. Also, the daily cost and the fuel consumption details of the rented car is available to the customer.
- Each auto has a specific id number.
- An auto can be rented by one customer at most.
- Every auto has lots of auto history information. This information can be about a service history after a regular check or a repair history after an accident.
- Service history information includes the id of the car, date, time, cost of the regular check and the id of the auto service company. Every car is regularly controlled by an auto service.
- Repair history information is only created after an accident the car involved in. Only one repair history information is created after one accident.
- Repair history information includes the id of the car, date, time, cost of the repair and the id of the auto service company. Every car involved in an accident is repaired by an auto service.

- Accident information is stored by the database of the company. The date, time and location information of the accident is stored. This information is matched by the id of the car involved in the accident.
- Every customer's name, surname, phone number and e-mail address is taken in order to reach the customer.
- Every customer has a unique id number.
- Every customer can rent as many cars as s/he wants.
- When a car is rented by a customer, customer selects the pickup location, date and time of the car. A rented car can be taken from any branch of the company by the driver.
- When a car is rented by a customer, customer selects the drop off location, date and time of the car. The customer can drop off the car to any branch of the company.
- Every reservation can include extra staff different from a regular rental like a baby seat, a GPS or insurance options. The id, name and cost of each extra staff that a reservation includes are stored by the rental company.
- A reservation can include more than one extra staff. A customer can have two baby seats or s/he can have a baby seat and a GPS at the same time.
- An extra stuff is taken by only one customer.
- The total cost of the reservation is calculated by the sum of the rental cost and the cost of the extra staff.
- The system also stores the information about the auto services that the car rental company works with. The name, address and the phone number of the auto service company is stored in the system.
- Every auto service company has a unique id.
- Every employee's name, surname, phone number and e-mail address is taken by the car rental company.
- Every technician's name, surname, phone number and e-mail address is stored by the auto service company.
- Each technician works for only one company.
- An auto service company can have many technicians.

3. ER DIAGRAM



4. THE WEBSITE OF THE GROUP

The reports and information about the group members can be found on:

<http://cs352.wordpress.com/>