Database Systems — CSci 4380
Midterm Exam #1 Data Model
October 4, 2021

Data Model to be used in Exam# 1

Suppose you are given the following database for a company that rents out trucks (like UHaul). The database contains different stores that people rent trucks from, each store have locations.

The company owns many trucks. For trucks we store the state that they are registered in, manufacture year, current mileage and size. Each truck has some features (like `'low deck'` or `'load ramp'`).

We store information about renters such as their username and real name.

Trucks don't stay in a specific location, but move from store to store based on rentals. Each rental is a by a user and for a truck, between specific start and end dates. For each rental, we also store which store the truck is picked up from (starting location of the truck on the start date) and which store it is dropped off at (ending location of the truck at the end date). The rentals can be in the future, happening now or in the past. For past rentals, you can assume that the truck was dropped off at the drop off store. For current or future rentals, it is simply the expected drop off location.

You can compare dates using the usual inequality for before and after relations, e.g. `'startdate <= now()` or `startdate >= date '9/30/2021'`. You can also find the number of days in between two dates with subtraction, e.g. `enddate - startdate >= 3`. You can assume the end date of a rental is always greater than or equal to the start date.

List of tables in the database:

`stores(storeid, street, state, city, zip)`

`trucks(license, state, year, mileage, size)`

`truck_feature(license, feature)`

`renters(username, password, fname, lname)`

`rentals(rentalid, license, pickup_storeid, dropoff_storeid, username, startdate, enddate, price)`