

Tutorial 2: Logical Database Design

Case Study: Mapping an Entity-Relationship Diagram to the Relational Model

Jin, Ziyang	Kim, Joon Hyung
# 34893140	# 35183128
f4a0b	11m8

January 2018

Here are the tables determined so far:

1. Customer (dlicense, phone, name, addr)
Primary key: dlicense
Alternate key: (phone, name)
2. ClubMember (dlicense, points, fees)
Primary key: dlicense
Foreign key: dlicense references Customer
3. Branch (location, city)
Primary key: location, city
4. VehicleType (vtname, features, wrate, drate, hrate, krate, wirate, dirate, hirate)
Primary key: vtname
5. Vehicle (vlicense, initprice, make, model, year, color, odometer, status, forRentFlag, location, city, vtname)
Primary key: vlicense
Foreign key(s): (location, city) references Branch, vtname references VehicleType
6. Reservation (confNo, **fromDate**, **fromTime**, **toDate**, **toTime**, dlicense, vtname, location, city)
Primary key: confNo
Foreign key(s): dlicense references Customer, vtname references VehicleType, (location, city) references Branch, (fromDate, fromTime, toDate, toTime) references TimePeriod
7. RentalAgreement (rentId, cardNo, expDate, odometer, rentedfromDate, rentedfromTime, rentedtoDate, rentedtoTime, vlicense, dlicense, confNo, returnCost, returnTime, returnDate, returnFulltank, returnOdometer)

Primary key: rentId

Foreign key(s): vlicense references VehicleForRent, dlicense references Customer, (rentedfromDate, rentedfromTime, rentedtoDate, rentedtoTime) references TimePeriod, confNo references Reservation

8. TimePeriod (fromDate, fromTime, toDate, toTime)
Primary key : (fromDate, fromTime, toDate, toTime)

Lastly, list any additional tables, their primary key(s), and their foreign key(s):

1. VehicleForSale (vlicense, saleDate, price, agent)
Primary Key: vlicense
Foreign key: vlicense references Vehicle