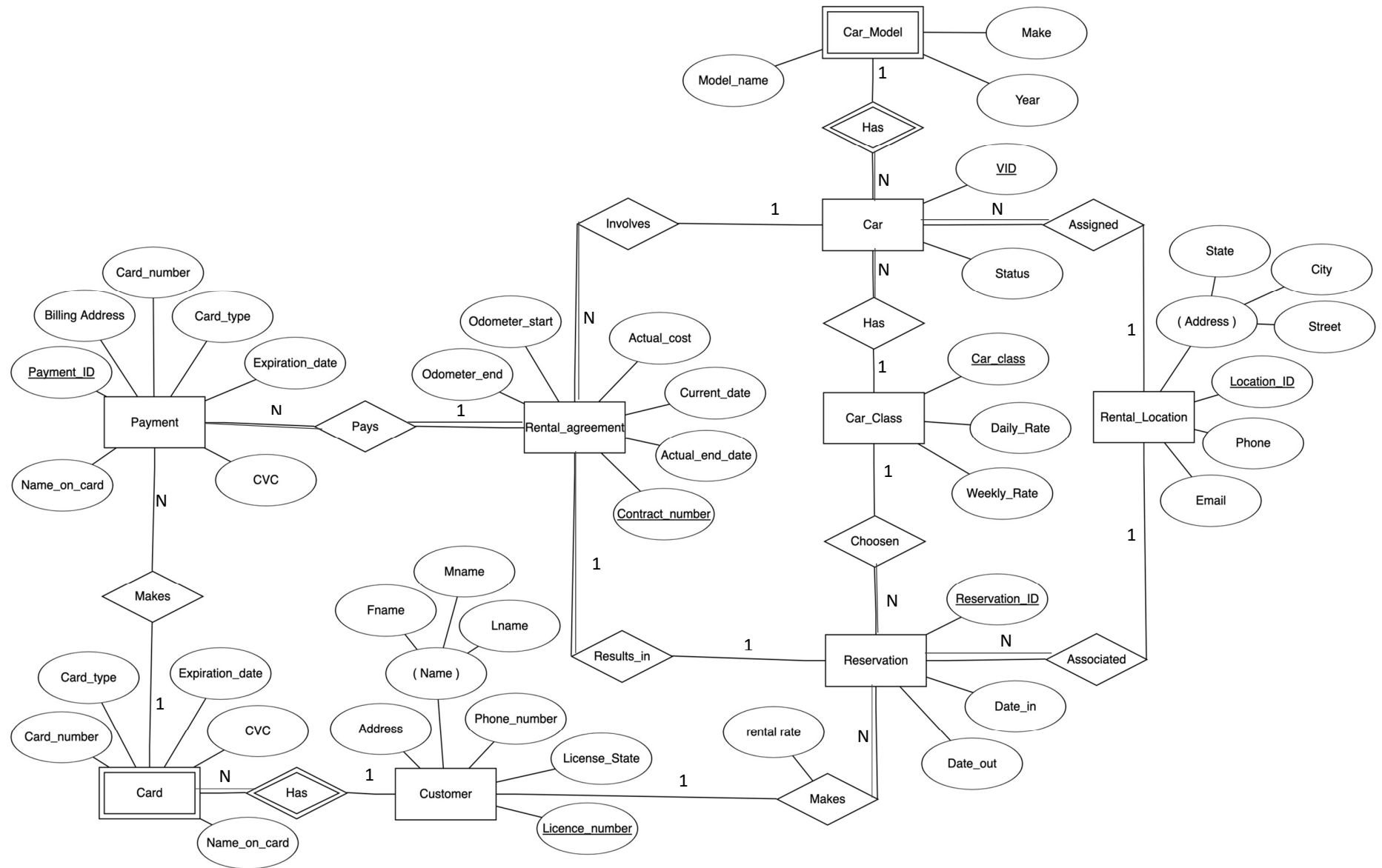
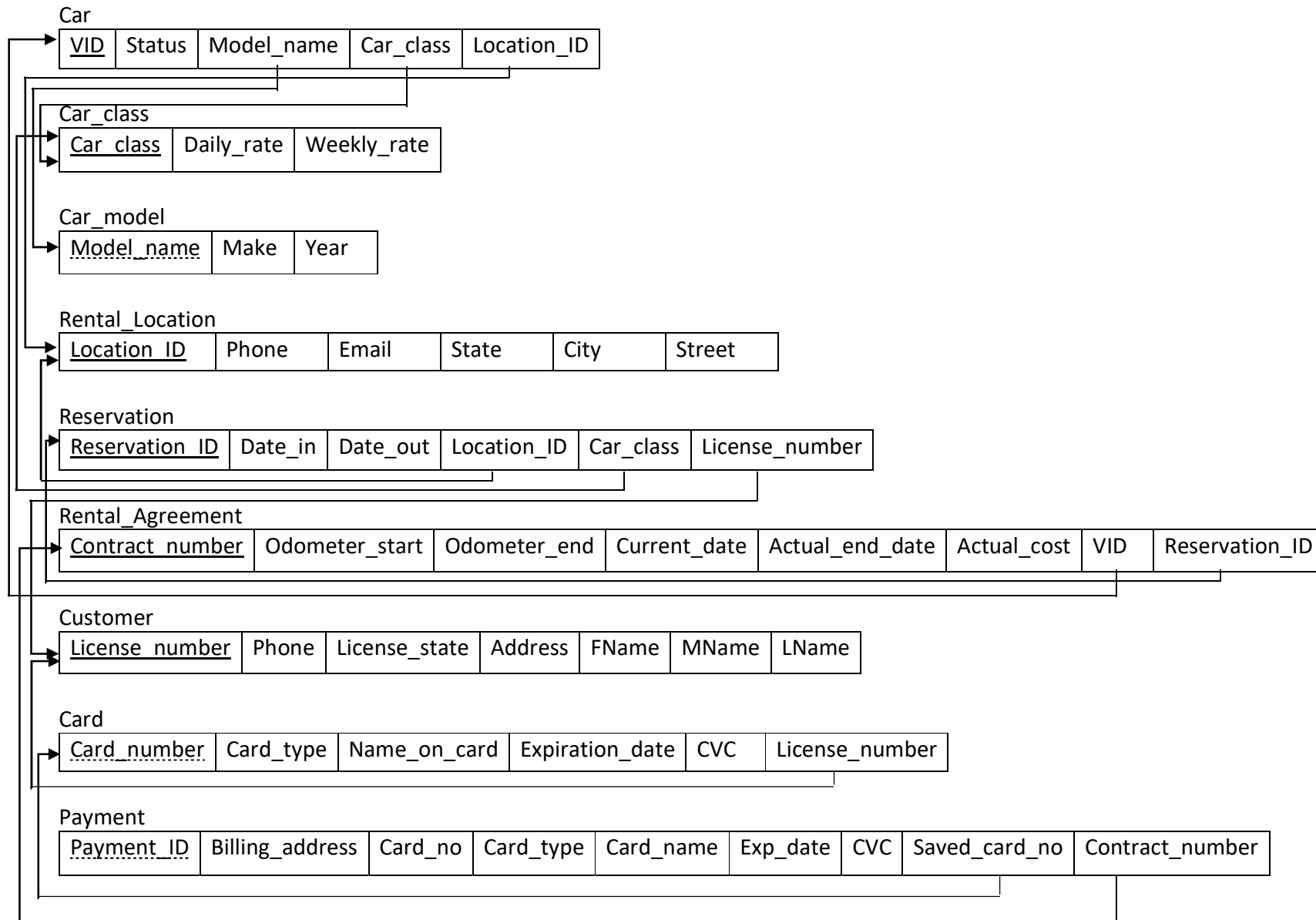


ER Diagram



Relational Schema Design



Functional Dependencies

In Rental Location, Location ID is the primary key

Location_ID \rightarrow {phone, email, state, city, street}

Car class determines daily and weekly rate of the car.

Car_class \rightarrow {daily_rate, weekly_rate}

Car model and year determine make.

{Car_model, year} \rightarrow make

A car is defined by its VID

VID \rightarrow {status}

A customer is defined by his/her driving license number

license_number \rightarrow {license_state, phone, address, Fname, Mname, Lname}

In card, card_number and license_id define the rest of attributes in entity

{card_number, license_id} \rightarrow {card_type, name_on_card, expiry_date, cvc}

Reservation_ID is the primary for Reservation relation

Reservation_ID \rightarrow {date_in, date_out, cost}

Contract_number drives all other attributes in Rental_agreement relation

Contract_number \rightarrow {odometer_start, odometer_end, current_date, actual_end_date, actual_cost}

Payment_ID is the primary key for Payment relation

Payment_ID \rightarrow {card_number, card_type, expiry_date, name_on_card, cvc, billing_address}

Note: Since our mapping was already in 3NF, we did not compose it further.