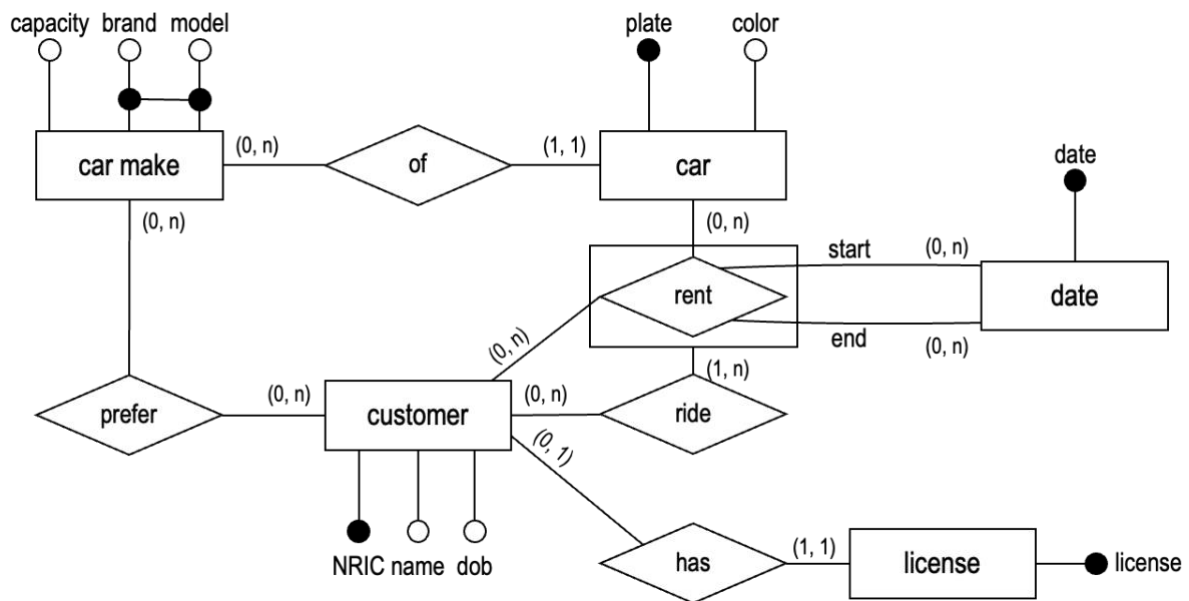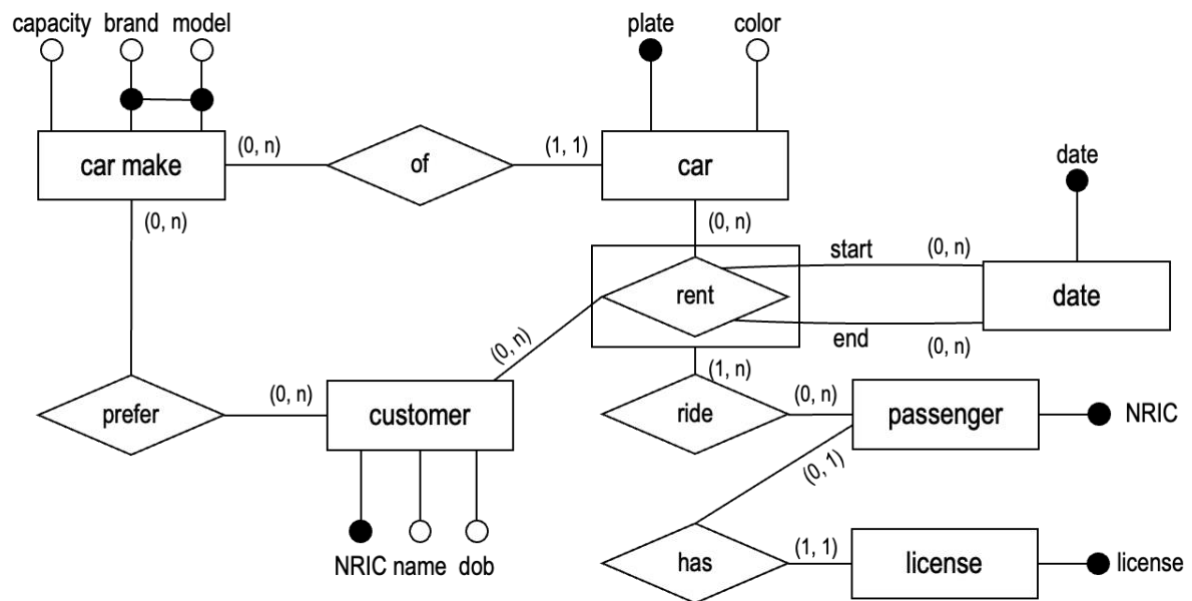# ER Diagram

Note

- We may add a "passenger" entity set connected to "ride" relationship set instead of using "customer" entity set.
- We may choose to have "license" as a nullable attribute of "customer".
- We may choose to have only start "date" as a participating entity set of "rent" relationship set with end date as an attribute of "rent" relationship set.
- We cannot have start date or end date as a "black dot" attribute (i.e., identity attribute) on the "rent" relationship set directly.
- "ride" relationship set is associating only the cars that are rented (i.e., it ignores cars that are not rented) as "customer"/"passenger" entity set should only be a passenger of a car that is being rented.
- Some cardinality constraints are not fixed (e.g., customer may have exactly 1 car preference).
- A better alternative is to have "rented car" as an aggregate between "car", "date" (start), and "date" (end).
    - This aggregate is then associated with "customer" via "rent" relationship set.
    - This design prevents the same car being rented on the same start/end date by different customers.
    - This "rent" is then also promoted to aggregate to be associated via "ride" relationship set.

Alternatives

Alternative #1: With Passenger Entity Set

Alternative #2: With Rented Car Aggregation