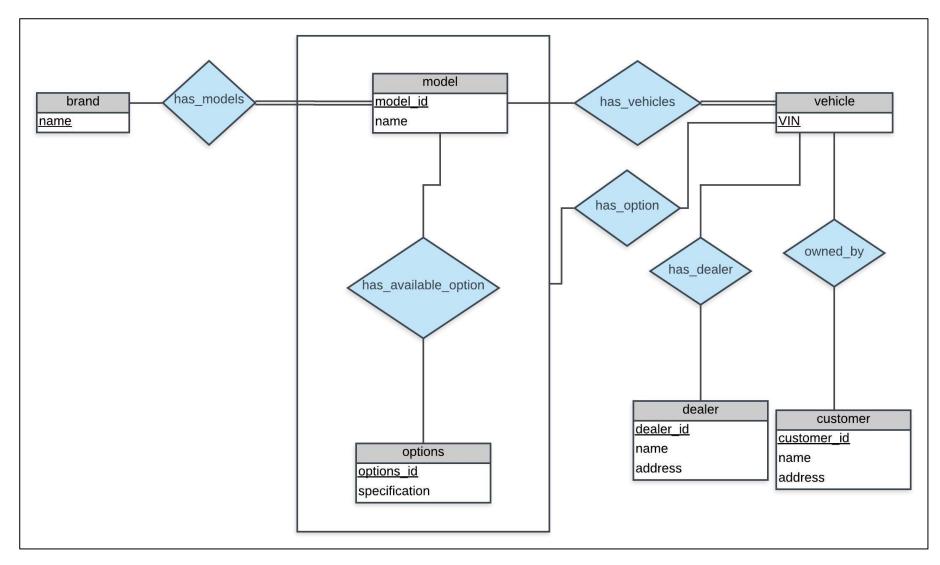
**Parts 1 & 2** 

#### **Process of Translating E-R Diagrams to Relational Schemas**

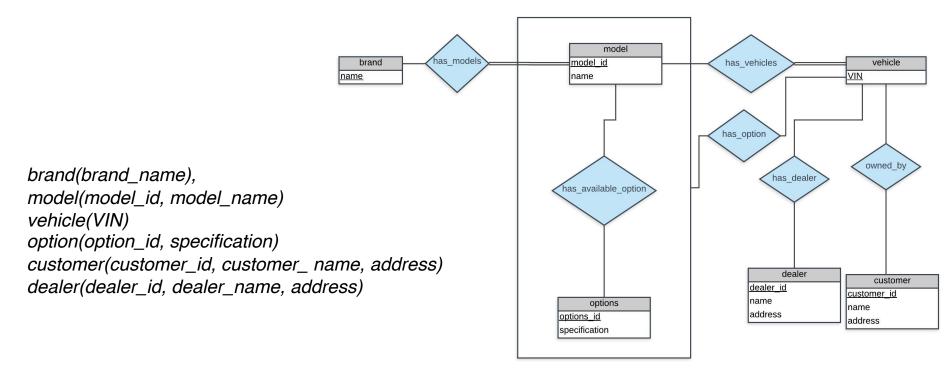
- Examine carefully the E-R diagram, identify entities, relationships, etc.
- 2. Translate entity sets
  - Create schemas
  - 2. Define primary keys
- 3. Translate relationship sets
  - 1. Create a new schema or add attributes, depending on cardinality
  - 2. Define primary and foreign keys for new schemas
- 4. Translate aggregations and specializations, if any

## **Translating E-R Diagrams - Part1**

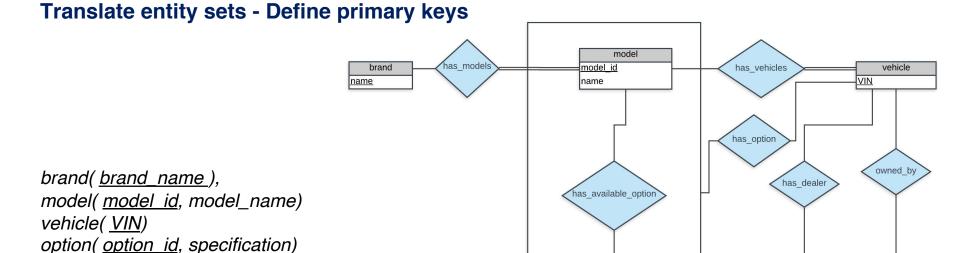


Next: Translate entity sets - Create schemas

#### **Translate entity sets - Create schemas**



Next: Translate entity sets - Define primary keys



dealer

dealer id

name

address

options

options id

specification

customer

customer id

name

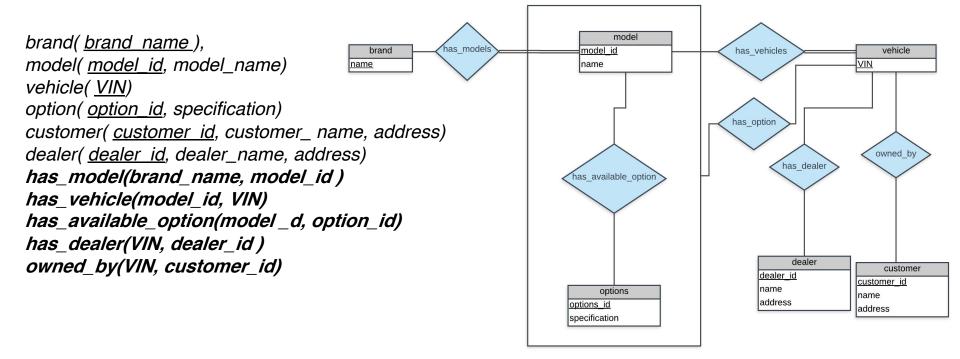
address

Next: Translate relationship sets - Create new schemas

customer( customer\_id, customer\_ name, address)

dealer (dealer id, dealer name, address)

## Translate relationship sets - Create new schemas



Next: Translate relationship sets: Define primary and foreign keys

#### Translate relationship sets: Define primary and foreign keys

brand(brand name), model( <u>model\_id</u>, model\_name) model vehicle(VIN) has models brand model id has vehicles option(option id, specification) name VIN customer( customer\_id, customer\_ name, address) dealer( <u>dealer\_id</u>, dealer\_name, address) has option has\_model( brand\_name, model\_id , foreign key brand\_name references brand, owned\_by has dealer foreign key model\_id references model) has available\_option has\_vehicle( model\_id, VIN, foreign key VIN references vehicle, foreign key model\_id references model) dealer has\_available\_option( imodel\_d, option\_id, customer dealer id customer id foreign key option\_id references\_option, options name address options id foreign key model id references model) address specification has\_dealer( VIN, dealer id , foreign key dealer\_id references dealer, foreign key VIN references vehicle) owned by (VIN, customer id,

## Next: Translate aggregations and specializations

foreign key customer\_id references customer,

foreign kev VIN references vehicle)

#### Translate aggregations and specializations

brand(brand name), model( <u>model\_id</u>, model\_name) vehicle(VIN) has models brand option(option id, specification) customer( customer\_id, customer\_ name, address) dealer( <u>dealer\_id</u>, dealer\_name, address) has\_model( brand\_name, model\_id , foreign key brand\_name references brand, foreign key model id references model) has\_vehicle( model\_id, VIN, foreign key VIN references vehicle, foreign key model\_id references model) has\_available\_option( model\_id, option\_id, foreign key option\_id references\_option, foreign key model id references model) has\_dealer( VIN, dealer id , foreign key dealer\_id references dealer, foreign key VIN references vehicle) owned by (VIN, customer id, foreign key customer\_id references customer, foreign key VIN references vehicle) has option(VIN, model id, option id, foreign key VIN references vehicle. foreign key (model id, option id) references has available option)

model model id has vehicles vehicle name VIN has option owned\_by has dealer has available\_option dealer customer dealer id customer id name options name address options id address specification

# Part 2 To Submit the schemas

