Step 1) Mapping regular entities: EMPLOYEE, CUSTOMER, INSURANCE, BRANCH, VEHICLE, RENTAL_CONTRACT.

- Regular entity EMPLOYEE mapped as EMPLOYEE relation. All simple attributes are included. Attribute “Ssn” is chosen as a primary key.
- Regular entity CUSTOMER mapped as CUSTOMER relation. All simple attributes are included. Attribute “License” is chosen as a primary key.
- Regular entity INSURANCE mapped as INSURANCE relation. All simple attributes are included. Attribute “Policy_no” is chosen as a primary key.
- Regular entity BRANCH mapped as BRANCH relation. All simple attributes are included. Attribute “Bid” is chosen as a primary key.
- Regular entity VEHICLE mapped as VEHICLE relation. All simple attributes are included. Attribute “Vin” is chosen as a primary key.
- Regular entity RENTAL_CONTRACT mapped as RENTAL_CONTRACT relation. All simple attributes are included. Attribute “RCid” is chosen as a primary key.

Step 2) Mapping weak entities: SERVICES.

- Weak entity SERVICES mapped as SERVICES relation. All simple attributes are included. The attribute “SVin” is mapped as a foreign key attribute that is derived from the primary key corresponding to the regular entity VEHICLE.
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Step 3) Mapping of binary 1:1 relationships: MANAGES.

- 1:1 relationship type MANAGES, “ESsn” is mapped as a foreign key attribute in relation BRANCH that corresponds to “Ssn” primary key attribute in EMPLOYEE relation.

Step 4) Mapping of binary 1:N relationships: HANDLES, BELONGS_TO, and SCHEDULES.

- 1:N relationship HANDLES is mapped as a foreign key attribute “ESsn” in RENTAL_CONTRACT relation (“N” side) that corresponds to “Ssn” primary key attribute in EMPLOYEE relation (“1” side).
- 1:N relationship BELONGS_TO is mapped as a foreign key attribute “VBranch” in VEHICLE relation (“N” side) that corresponds to “Bid” primary key attribute in BRANCH relation (“1” side).
- 1:N relationship SCHEDULES is mapped as a foreign key attribute “SVin” in SERVICES relation (“N” side) that corresponds to “Vin” primary key attribute in VEHICLE relation (“1” side).

Step 5) Mapping of binary M:N relationships: WORKS_AT.

- M:N relationship WORKS_AT is mapped as WORKS_AT relation. All simple attributes are included. The primary key “Ssn” from the entity EMPLOYEE (“M” side) is mapped as foreign key attribute “ESsn” and the primary key “Bid” from the entity BRANCH (“N” side) is mapped as foreign key attribute “BBid”.

Step 6) Mapping of multivalued attributes:Damages.

- Attribute Damages is mapped as VEHICLE_DAMAGE relation. “Vdamage” is mapped as a primary key attribute. The primary key “Vin” from the entity VEHICLE is mapped as a foreign key attribute “VDVin”

Step 7) Mapping of n-ary relationships: RENTS.

- N-ary relationship type RENTS is mapped as a RENTS relation. All simple attributes are included. “CLicense” is mapped as a foreign key attribute in RENTS relation that corresponds to the primary key attribute in CUSTOMER relation. “IPolicy_no” is mapped as a foreign key attribute in RENTS relation that corresponds to the primary key attribute in INSURANCE relation. “Rent_id” is mapped as a foreign key attribute in RENTS relation that corresponds to the primary key attribute in RENTAL_CONTRACT relation. “RVin” is mapped as a foreign key attribute in RENTS relation that corresponds to the primary key attribute in VEHICLE relation.

Step 8) Mapping of specializations and generalizations:

- The subclass entity CAR mapped as a CAR relation. All simple attributes are included. The attribute “CVin” is mapped as the foreign key attribute that is derived from the primary key corresponding to the regular entity VEHICLE.
- The subclass entity TRUCK mapped as a TRUCK relation. All simple attributes are included. The attribute “TVin” is mapped as the foreign key attribute that is derived from the primary key corresponding to the regular entity VEHICLE.
- The subclass entity MOTORCYCLE mapped as MOTORCYCLE relation. All simple attributes are included. The attribute “MVin” is mapped as a foreign key attribute that is derived from the primary key corresponding to the regular entity VEHICLE.

Step 9) Mapping of union types (categories):

- N/A