



Primary Keys are indicated in [], and Foreign keys are indicated in {}

Steps:

1. Mapping of Regular Entity types

Customer[Customer ID], Employee[Employee ID], Vehicle[Plate Number], Member Card[Card Number], Promotion[Promotion Code], Shop[Shop ID], Payment[Payment Confirm Number], Member Card[Card Number], Promotion[Promotion Code]

2. Mapping of Weak Entity types

Meal Pass: {[Premium Member ID] from Premium Member}

Order: [Order ID], {[Employee ID] from Deliverer}, {[Plate Number] from Vehicle}, {[Shop ID] from Shop}

Product: [Product ID], {[Shop ID] from Shop}

3. & 4. Mapping of binary 1:1 & 1:N Relationship types

Member Card[Card ID]: {[Employee ID] from Employee}

Promotion[Promotion Code]: {Customer ID from Customer, Shop ID from Shop}

Payment[Payment Confirm Number]: {Customer ID from Customer, Order ID from Order}

Vehicle[Plate Number]: {Employee ID from Deliverer}

5. Mapping of binary M:N Relationship types

Comment: {[Customer ID] from Customer}, {[Shop ID] from Shop}

Belong to: {[Shop ID] from Shop}, {[Order ID] from Order}, {[Employee ID] from Employee}, {[Plate Number] from Vehicle}

Sell: {[Shop ID] from Shop}, {[Product ID] from Product}

6. Mapping of Multivalued Attributes

Delivery Address[Delivery Address]{[Customer ID] from Customer}

Phone number[Phone Number], {[Employee ID] from Employee}

Opening time[Opening Time], {[Shop ID] from Shop}

Closing time[Closing Time], {[Shop ID] from Shop}

7. Mapping of N-ary Relationship Types

8. Options for Mapping Specialization or Generalization

Restaurant{[Shop ID] from Shop} and Supermarket{[Shop ID] from Shop} are specializations of Shop[Shop ID]

Staff{[Employee ID] from Employee}, Deliverer{[Employee ID] from Employee}, and Area Manager{[Employee ID] from Employee} {Supervisor ID from Area Manager} are specializations of Employee[Employee ID]

Ordinary Member{[Customer ID] from Customer}, Silver Member{[Customer ID] from Customer} are specializations of Customer[Customer ID]

9. Mapping of Union Types (Categories)

Premium Member is the union of Ordinary Member{Premium Member ID from Premium Member} and Employee{Premium Member ID from Premium Member}