

Applying ER Model Concepts

In the previous cheatsheet, we have understood the **core concepts of ER Model** — *entity types, relationships and attributes*. Now, let's build an ER model for a real-world scenario.

E-commerce Application

In a typical e-commerce application,

- *Customer* has only one *cart*. A *cart* belongs to only one *customer*
- *Customer* can add *products* to *cart*
- *Cart* contains multiple *products*
- *Customer* can save multiple *addresses* in the application for further use like selecting delivery address

Let's apply the concepts of ER Model to this e-commerce scenario.

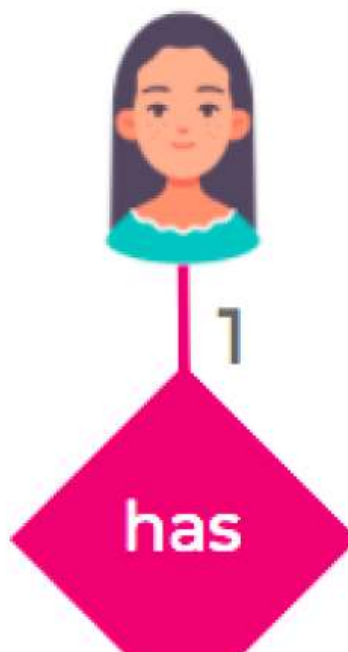
Entity types

- Customer
- Product
- Cart
- Address

Relationships

Let's understand the relationships in the e-commerce use-case.

Relation Between Cart and Customer





- A customer has **only one** cart.
- A cart is related to **only one** customer.
- Hence, the relation between customer and cart entities is **One-to-One relation**.

Relation Between Cart and Products



- A cart can have **many** products.
- A product can be in **many** carts.
- Therefore, the relation between cart and product is **Many-to-Many relation**.

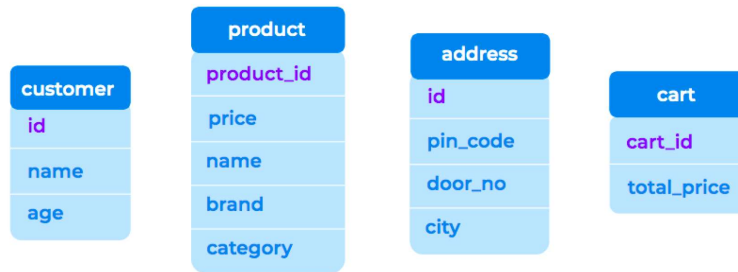
Relation Between Customer and Address



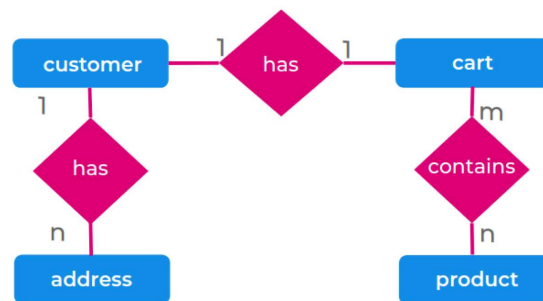
- A customer can have **multiple** addresses.
- An address is related to **only one** customer.
- Hence, the relation between customer and address is **One-to-Many relation**.

Following are the attributes for the entity types in the e-commerce scenario.

Here, attributes like id, product_id, etc., are **key attributes** as they **uniquely identify each entity** in the entity type.



ER Model of e-commerce application



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