

## 03-cardinality-relationships.md

### **Cardinality of Relationships**

#### **Definition**

Cardinality defines how many instances of one entity are related to instances of another entity.

#### **Types of Cardinality**

##### **One-to-One (1:1)**

One record in table A relates to one record in table B.

Example:

- Person → Passport

##### **One-to-Many (1:N)**

One record in table A relates to many records in table B.

Example:

- Customer → Orders

##### **Many-to-Many (M:N)**

Many records in table A relate to many records in table B.

Example:

- Students ↔ Courses

Note: Requires a **junction table**.

#### **Key Point for Revision**

**Many-to-many relationships always require a new table.**