

## 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.**