

Assignment: Relationships in Databases

One-to-One (1:1) Relationship

Each person has one unique passport. Example tables:

Person Table:

PersonID	Name
1	Ali Mohamed

Passport Table:

PassportID	PersonID	PassportNumber
101	1	P1234567

Diagram:

PassportPerson **1 To 1**

Connection:

Each person has one unique passport.
Person.PersonID is connected to Passport.PersonID.

One-to-Many (1

: N

) Relationship

A customer can have many orders. Example tables:

Customer Table:

CustomerID	Name
1	Ahmed Yusuf

Orders Table:

OrderID	CustomerID	OrderDate
201	1	2024-01-10
202	1	2024-02-15

Diagram:

Order 1 One to Many

Order 2Customer

Connection: A customer can make many orders, but each order belongs to one customer. Customer.CustomerID is connected to Orders.CustomerID.

3. Many-to-Many (M: N) Relationship

Students can enroll in many courses, and courses can have many students. Example tables:

Student Table:

StudentID	Name
1	Layla Ali
2	Omar Hassan

Course Table:

CourseID	CourseName
301	Math
302	Science

StudentCourse Table:

StudentID	CourseID
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1	301
1	302
2	301

Diagram CourseStudent courseStudent M To M

Connection:

A student can enroll in many courses, and each course can have many students.
Student.StudentID and Course.CourseID are both connected to Student Course.