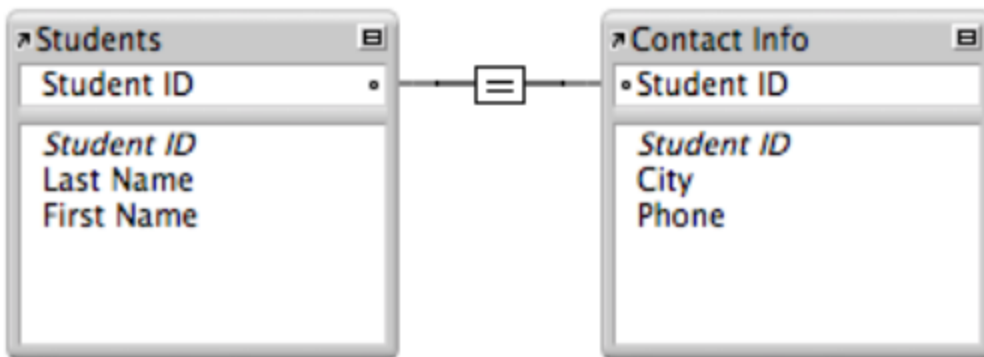(Working with related tables)
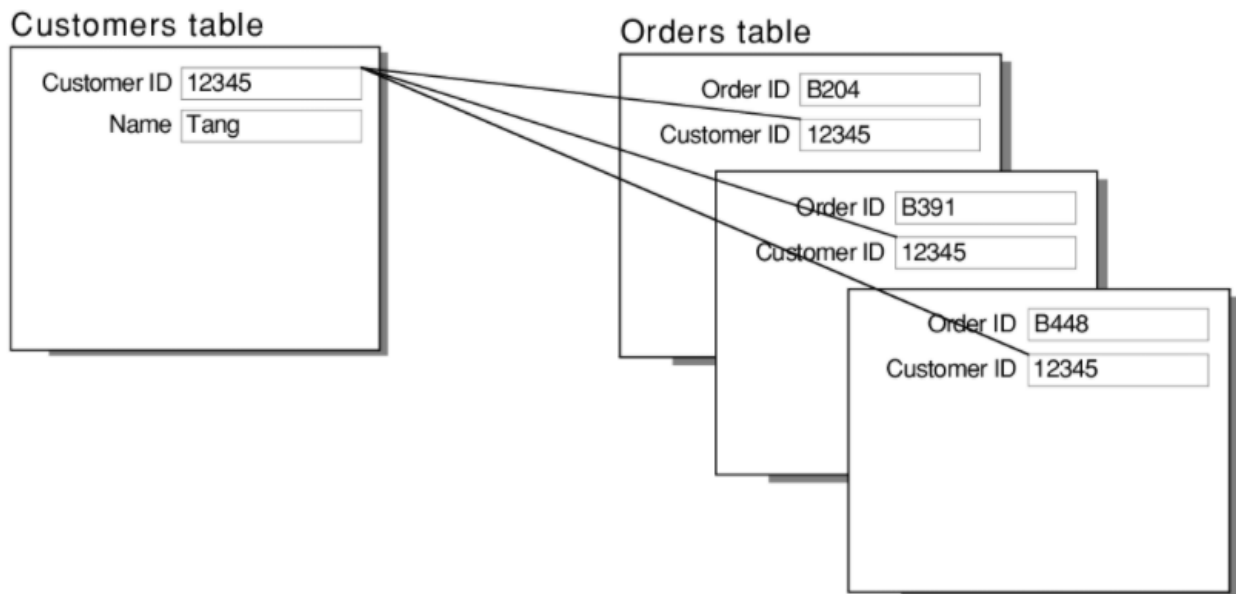
One-to-one relationships

-One record in a table is associated with one and only one record in another table.

Students   Contact Info
Student ID   Student ID

Students	Contact Info
Student ID	Student ID
Last Name	City
First Name	Phone

Students table

Student ID	12345
Last Name	Tang
First Name	Sophie

Contact Info table

Student ID	12345
City	New York
Phone	408-555-3456
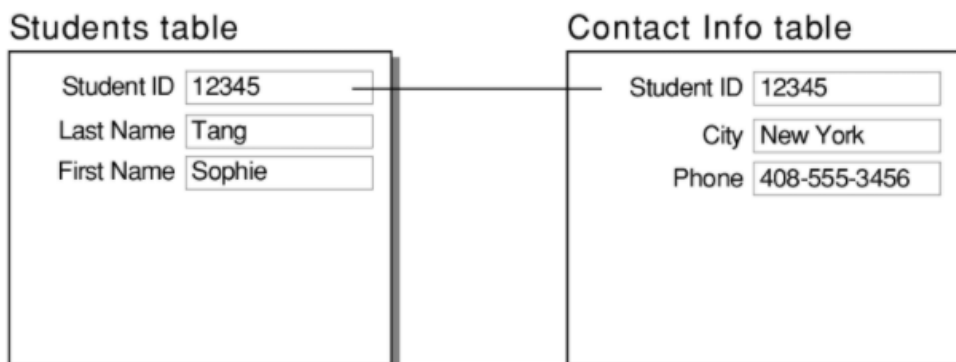
One-to-many relationships

-One record in a table can be associated with one or more records in another table. For example, each customer can have many sales orders.
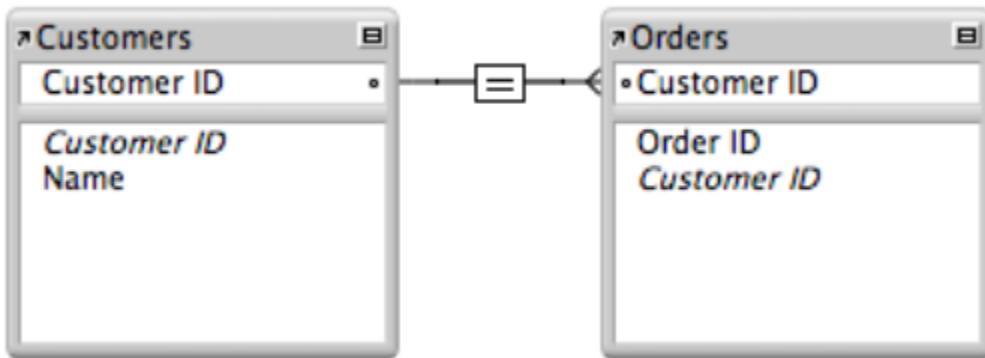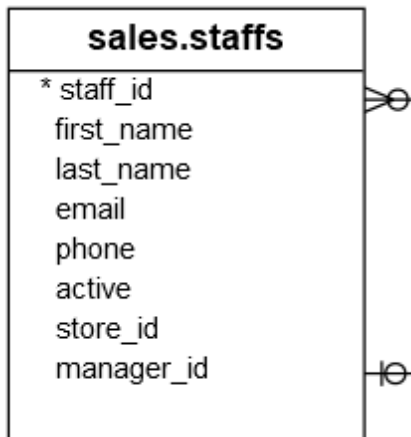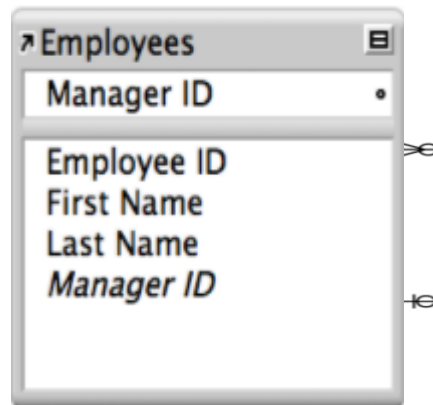

Because relationships work both ways, there are also *many-to-one relationships*.

Self-joining relationships (Unary /Recursive Relationships)

https://www.sqlservertutorial.net/sql-server-basics/sql-server-self-join/

-Both match fields are defined in the same table.

Employees

Manager ID

Employee ID
First Name
Last Name
Manager ID

sales.staffs

* staff_id
first_name
last_name
email
phone
active
store_id
manager_id

staff_id	first_name	last_name	email	phone	active	store_id	manager_id
1	Fabiola	Jackson	fabiola.jackson@bikes.shop	(831) 555-5554	1	1	NULL
2	Mireya	Copeland	mireya.copeland@bikes.shop	(831) 555-5555	1	1	1
3	Genna	Serrano	genna.serrano@bikes.shop	(831) 555-5556	1	1	2
4	Virgie	Wiggins	virgie.wiggins@bikes.shop	(831) 555-5557	1	1	2
5	Jannette	David	jannette.david@bikes.shop	(516) 379-4444	1	2	1
6	Marcelene	Boyer	marcelene.boyer@bikes.shop	(516) 379-4445	1	2	5
7	Venita	Daniel	venita.daniel@bikes.shop	(516) 379-4446	1	2	5
8	Kali	Vargas	kali.vargas@bikes.shop	(972) 530-5555	1	3	1
9	Layla	Terrell	layla.terrell@bikes.shop	(972) 530-5556	1	3	7
10	Bernardine	Houston	bernardine.houston@bikes.shop	(972) 530-5557	1	3	7

Many-to-many relationships

-A *many-to-many relationship* occurs when multiple <u>records</u> in a <u>table</u> are associated with multiple records in another table.

-Relational database systems usually don't allow you to implement a direct many-to-many relationship between two tables.

-To avoid this problem, you can break the many-to-many relationship into two <u>one-to-many relationships</u> by using a third table, called a *join / junction table*.