

Relations

Spreadsheet

	A	B	C
4	MAD001	BT1010	78
5	MAD002	EE1001	30
6	MAD005	EE1001	68
7	MAD009	AM1100	62
8	MAD012	AM1100	77
9	MAD007	BT1010	41
10	MAD001	MA1020	56

	A	B
1	CourseID	Name
2	EE1001	Introduction to Electrical Engineering
3	AM1100	Engineering Mechanics
4	MA1020	Functions of Several Variables
5	ME1100	Thermodynamics
6	BT1010	Life Sciences

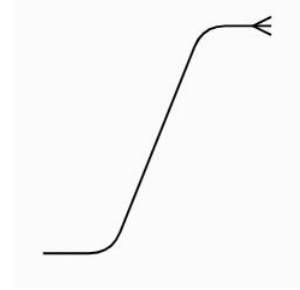
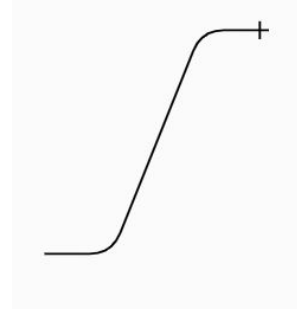
	A	B
1	Name	IDNumber
2	Sunil Shashi	MAD001
3	Chetana Anantha	MAD002
4	Madhur Prakash	MAD003
5	Nihal Surya	MAD004
6	Shweta Lalita	MAD005
7	Raghu Balwinder	MAD006
8	Gulshan Kuldeep	MAD007
9	Kishan Shrivatsa	MAD008
10	Purnima Sunil	MAD009
11	Nikitha Madhavi	MAD010
12	Lilavati Prabhakar	MAD011
13	Rama Yamuna	MAD012

Relationship types

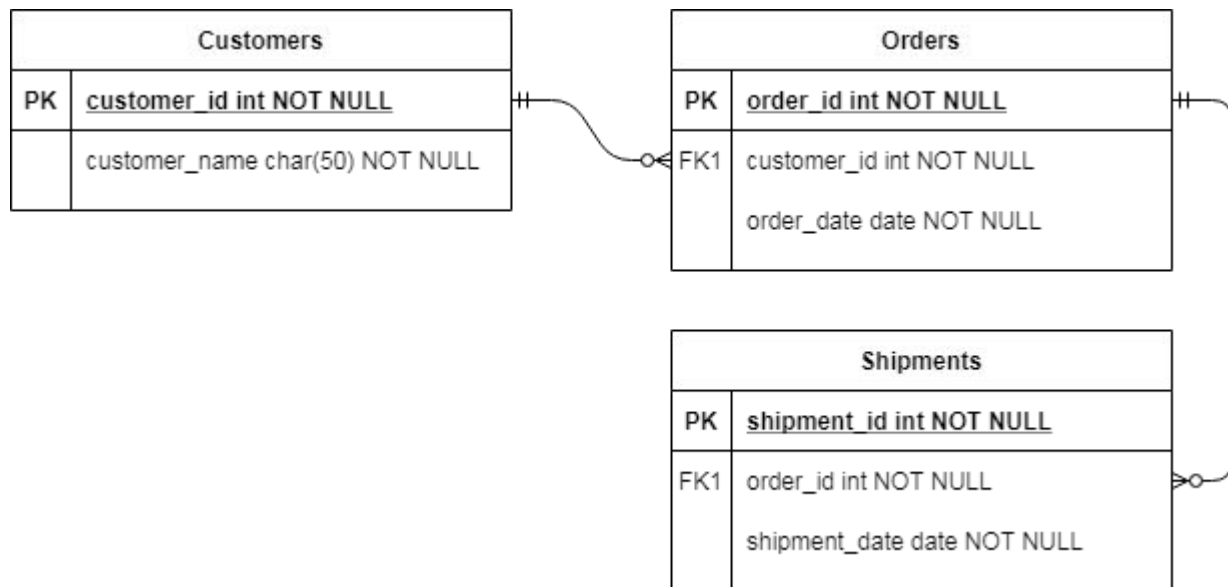
- **One-to-one:**
 - One student has one roll number
 - One roll number uniquely identifies one student
 - Example: assign unique message-ID to each email in Inbox
- **One-to-many (many-to-one):**
 - one student stays in only one hostel
 - one hostel has many students
 - Example: save emails in folders - one email is in only one folder
- **Many-to-many:**
 - one student can register for many courses
 - one course can have many students
 - Example: assign labels to emails - one email can have many labels and vice versa

Diagrams

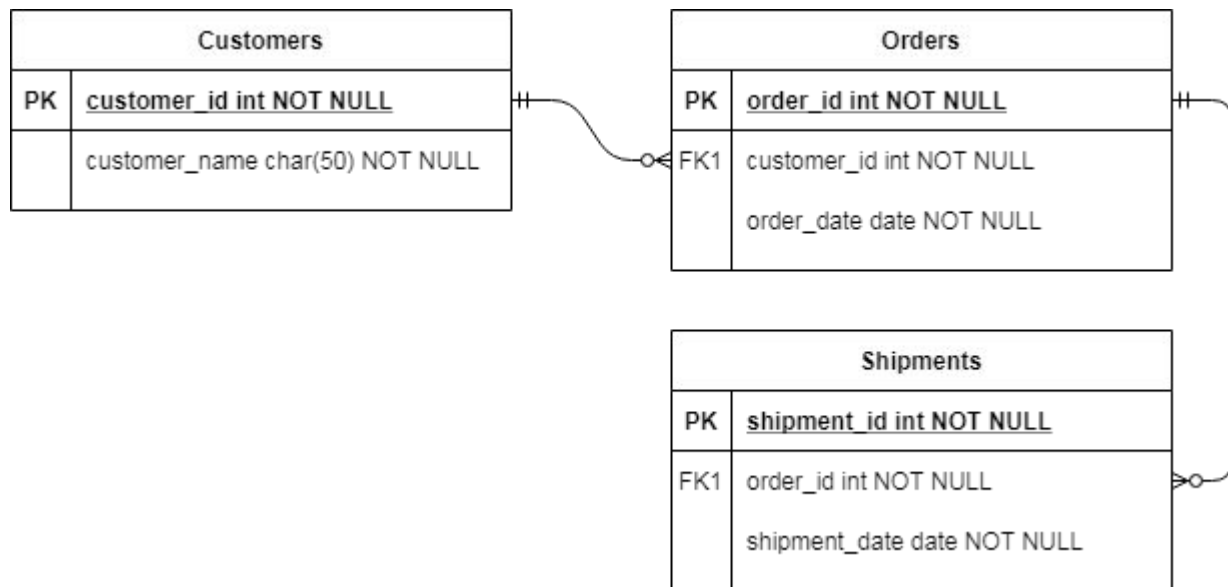
- Entity-Relationship
- UML
- Class relation
- ...



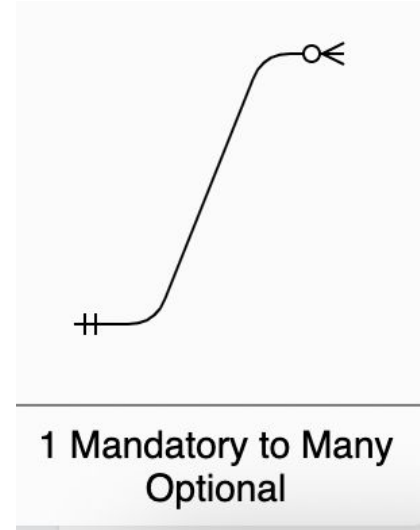
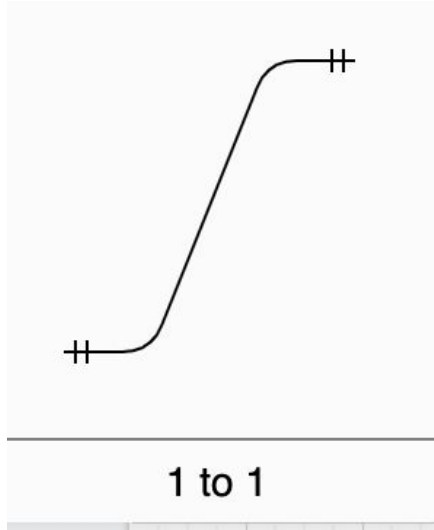
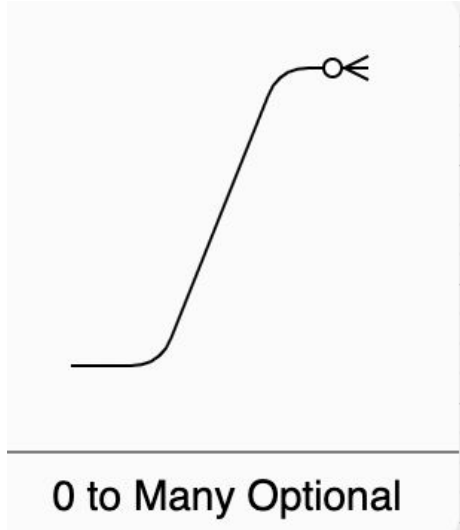
Entity-Relationship Diagram



Entity-Relationship Diagram



ER Examples



Tool: Draw.io - <https://app.diagrams.net/>