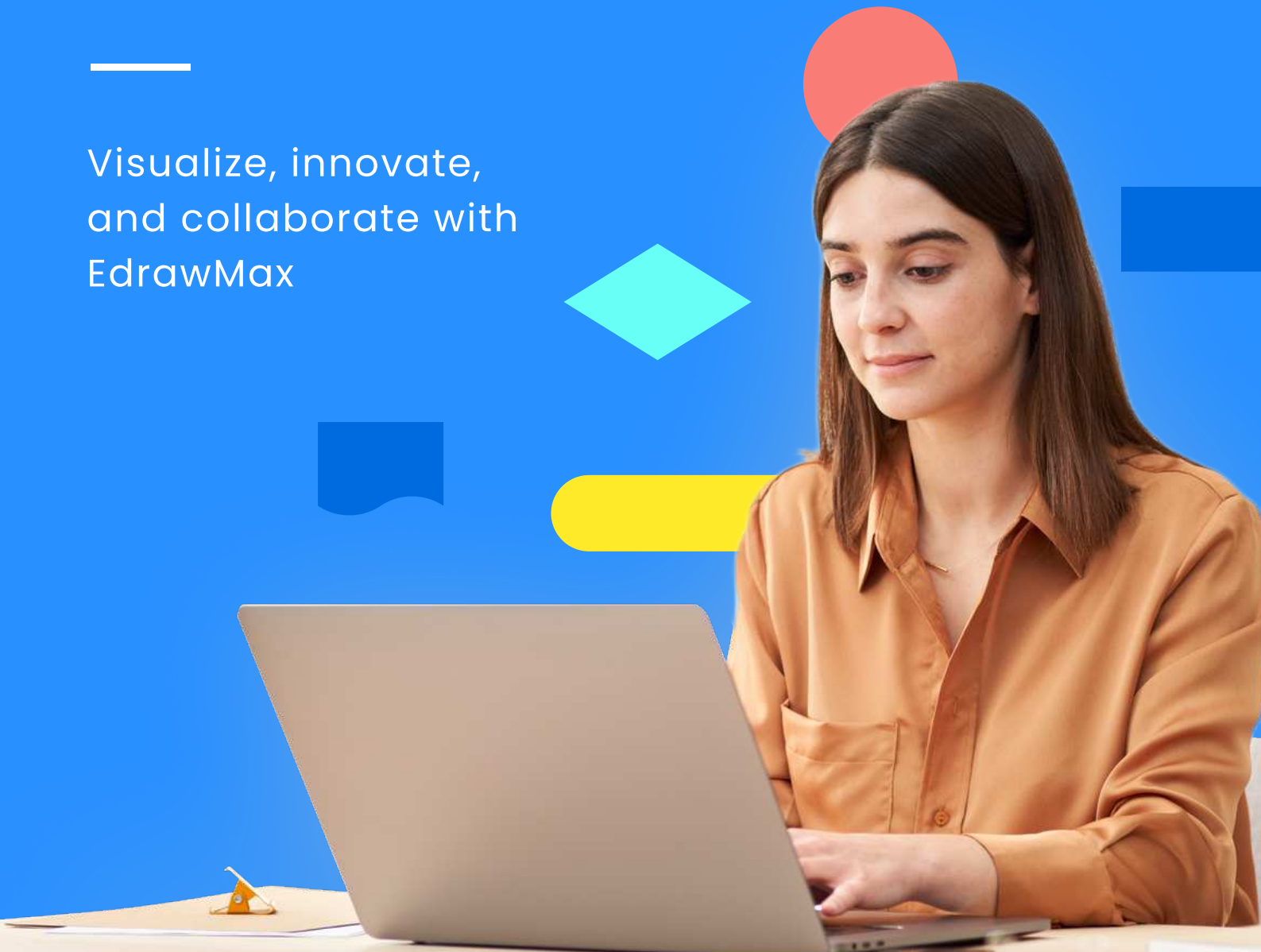


ER Diagram Symbols and Notations

Diagram For All

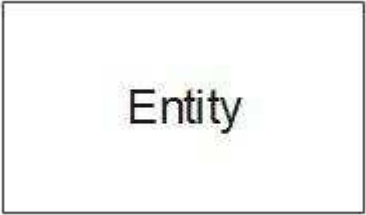
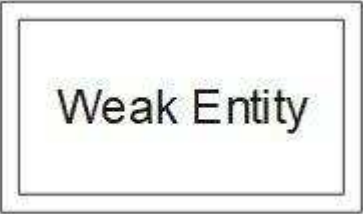
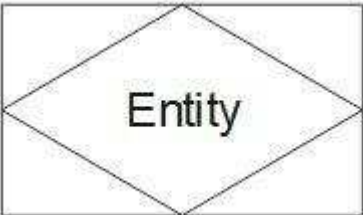
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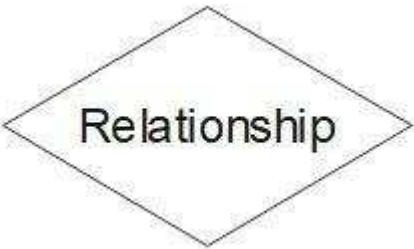
ER Diagram Symbols and Notations

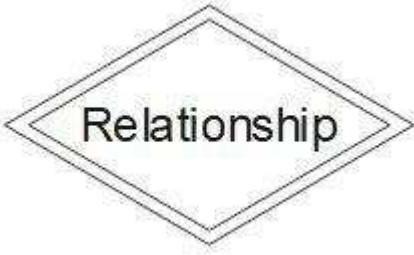
1. Common ER Diagram Symbols and Notations

ER Diagram Entity Symbols


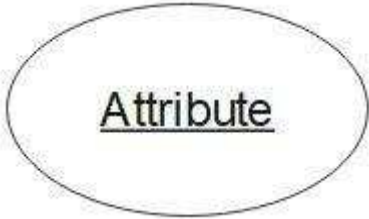
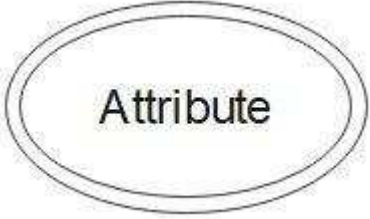

Symbol	Name	Description
	Entity	This is a basic entity that is represented by a rectangle with its name inside.
	Weak Entity	This is an entity that can't solely be identified with its attributes (due to the absence of a primary key). It inherits the identifier of its parent entity and often integrated it with a partial key.
	Associative Entity	This is a special entity that is mostly used in many-to-many relationships with all its relationships as "many".

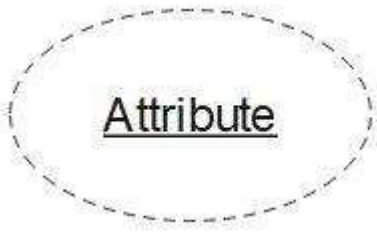
ER Diagram Relationship Symbols

Symbol	Name	Description
	Strong Relationship	A strong relationship is depicted by a single rhombus with its name inside. In this, an entity is independent – that is, its primary key for any child doesn't contain the primary key of the linked entity.


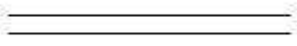
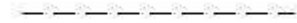
	<p>Weak or Identifying Relationship</p>	<p>A weak relationship is depicted by a double rhombus with the name inside. In this, the child is dependent on the parent entity as its primary key would contain a component of the parent's primary key.</p>
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ER Diagram Attribute Symbols

Symbol	Name	Description
	<p>Attribute</p>	<p>A basic attribute is represented by a single oval with its name written inside.</p>
	<p>Key Attribute</p>	<p>This is a special attribute that is used to uniquely identify an entity. It is represented by an oval with its name underlined.</p>
	<p>Multi-valued Attribute</p>	<p>These are the attributes that can have multiple values (like the Name attribute can have First and Last name) and are represented by a double oval.</p>
	<p>Derived Attribute</p>	<p>A derived attribute might not be physically present in the database and could be logically derived from any other attribute (represented by a dotted oval).</p>

	<p>Weak Key Attribute</p>	<p>It is an attribute that might be derived from any other attribute, but it would have unique identifiers for the entity. It is represented by a dotted oval with its name underlined.</p>
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ER Diagram Inheritance Symbols

Symbol	Name	Description
	<p>Partial Participation</p>	<p>This depicts that not all the entities in the set are a part of the relationship and is depicted by a single line.</p>
	<p>Total Participation</p>	<p>This means that all the entities in the set are in a relationship and are depicted by a double line.</p>
	<p>Optional Participation</p>	<p>This means that the entities don't have a mandatory partition in the set and are represented by a dotted line.</p>

2. Crow's Foot Notation in ER Diagrams

One to One

This is also known as a Mandatory One relationship in which one entity of set A can be associated with a maximum of one entity of set B. For instance, one student can register for several courses, but all the courses can only have a single registered user.

One to Many

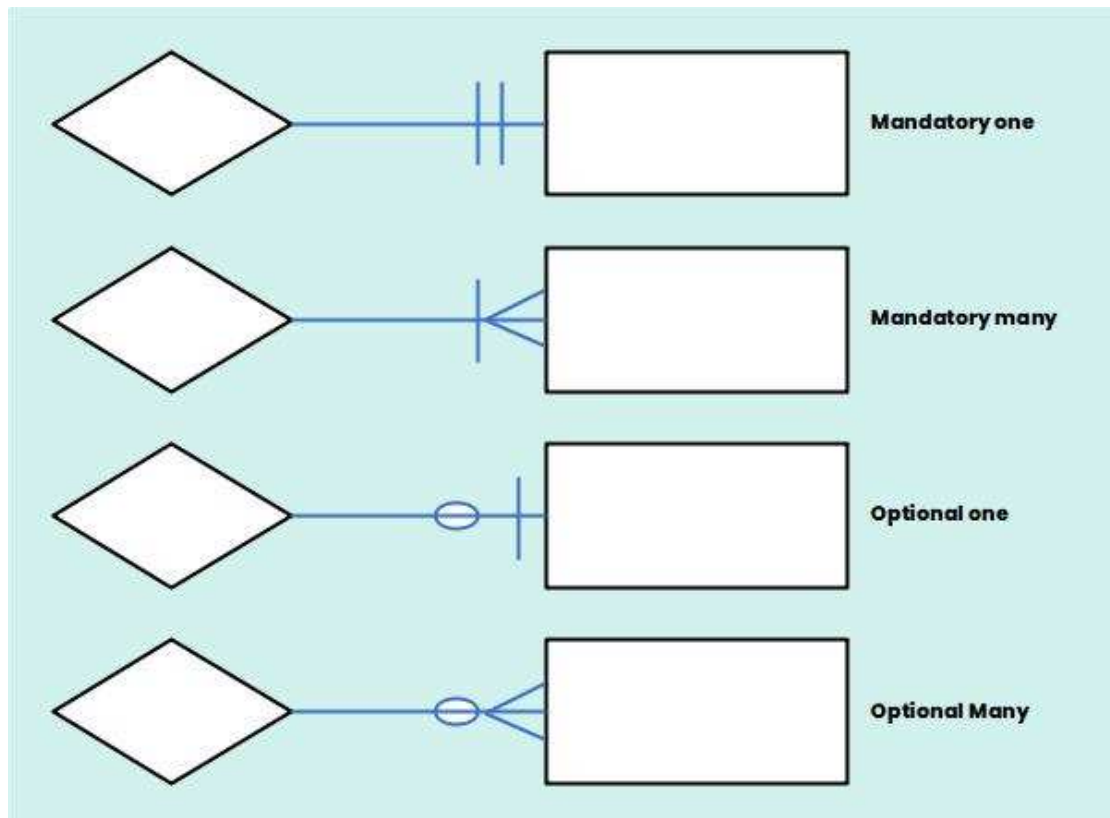
In this, one entity of set A can be associated with multiple entities of set B. If you consider a class, then one class can have multiple students enrolled. It is also known as an Optional One cardinality.

Many to One

This means that many entities of Set A can be associated with at most one entity of Set B. For example, many students can belong to the same class.

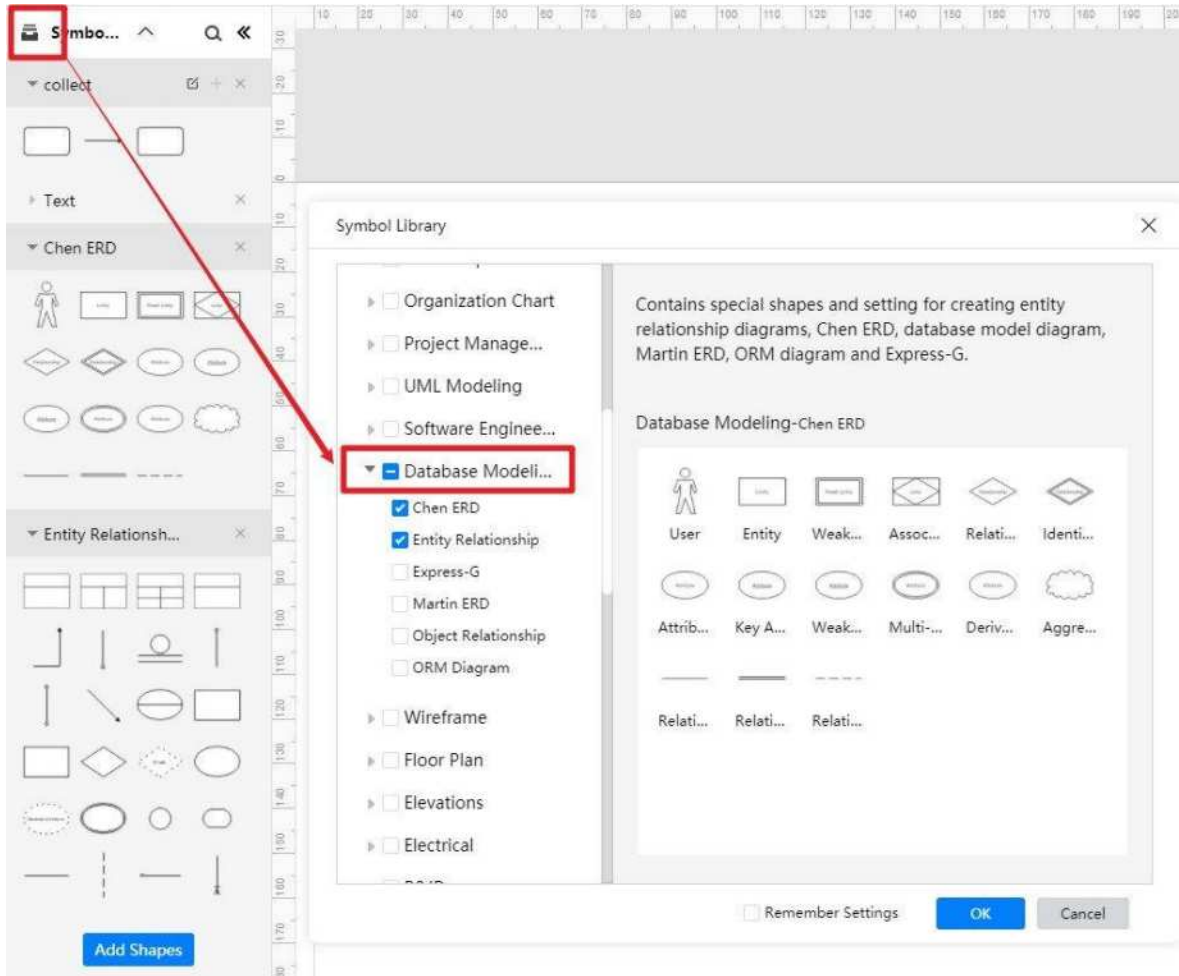
Many to Many

Lastly, in this cardinality, more than one entity of Set A can be associated with more than one entity of Set B. For instance, several students in a class can be allocated to multiple faculty members.



3. How to Use ER Diagram Symbols?

Try to use a professional ER diagram maker like EdrawMax. Here you can access EdrawMax Online directly. And from its ER Diagram Symbols Library, you can get all the needed symbols and icons for creating ER diagrams.





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