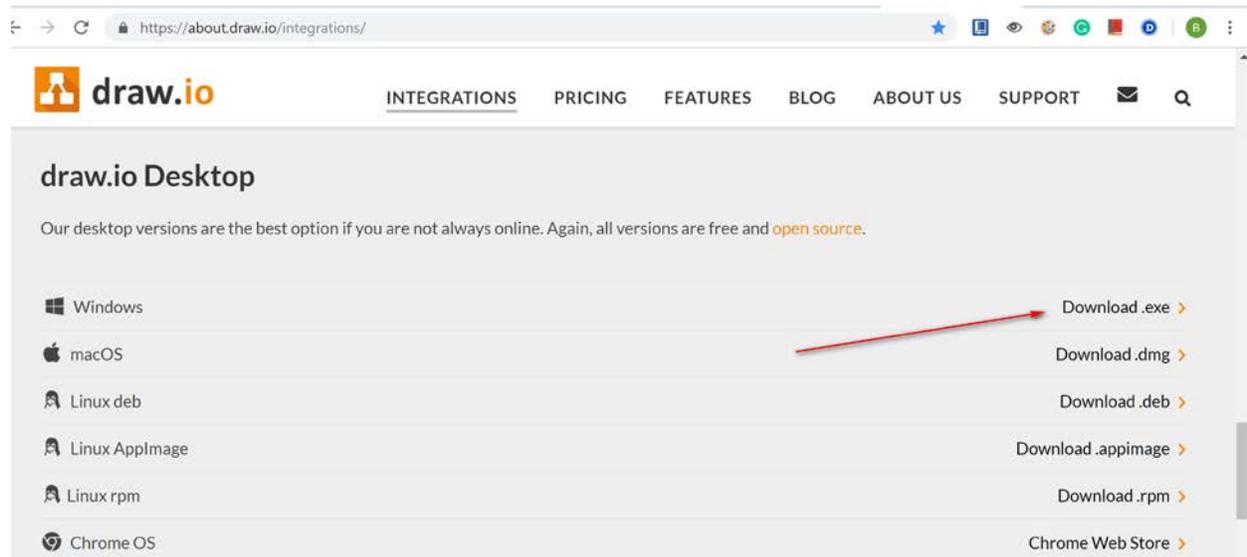


## Drawing ER Diagrams Using Draw.io

Draw.io is a drawing tool, not a Computer-Aided Software Engineering (CASE) tool.

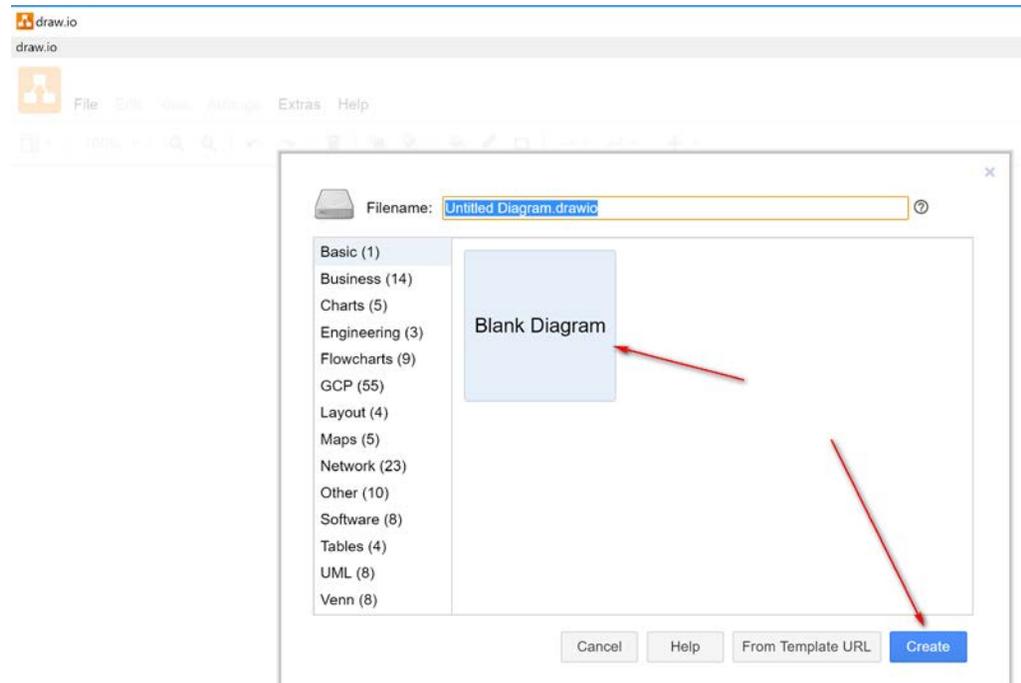
### Installation

Go to <https://about.draw.io/integrations/> and download and install the desktop version. For Windows:

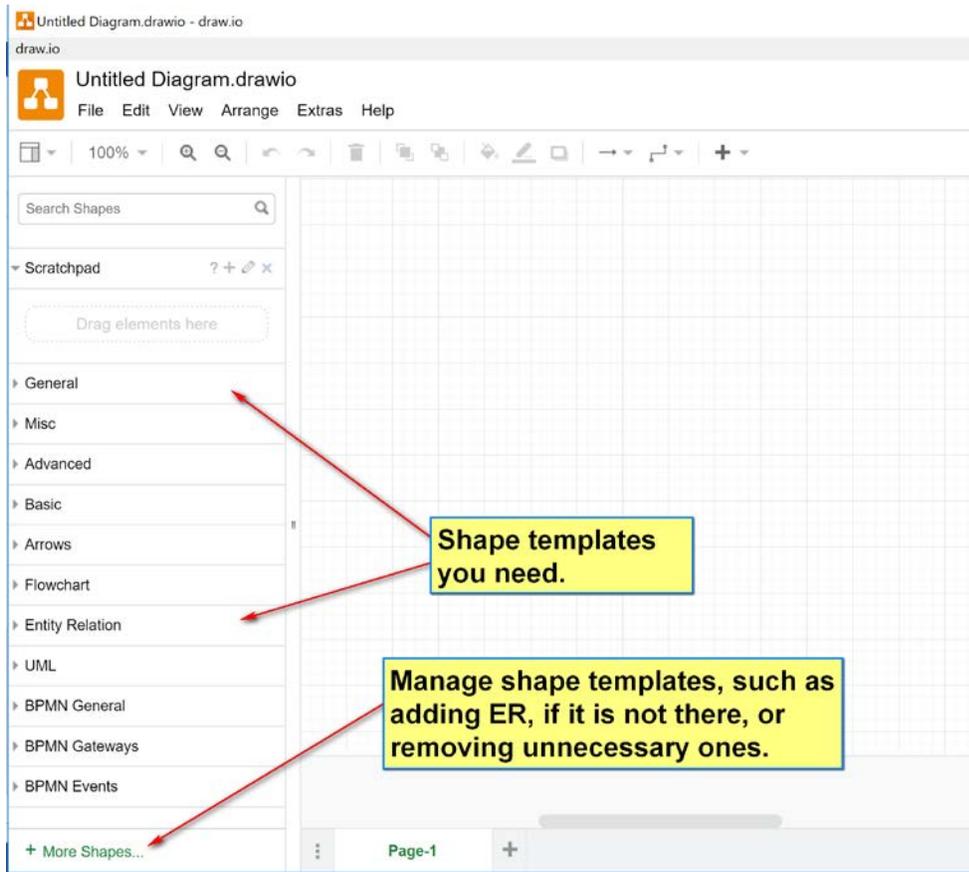


### Running and Preparation

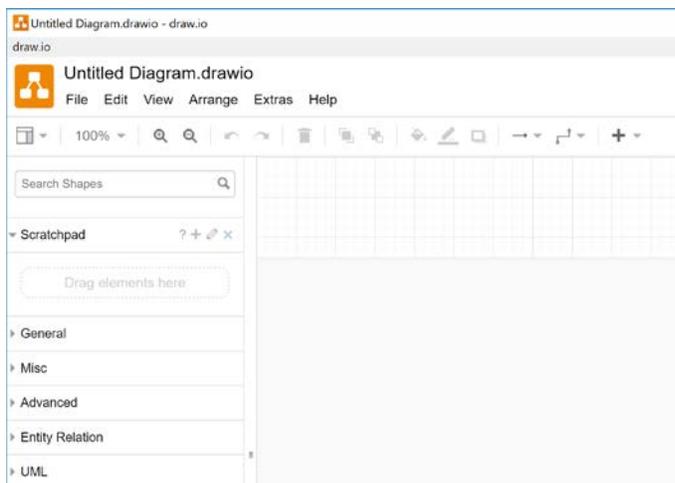
Start draw.io desktop, select to create a blank diagram.



There are many shape templates.



After tidying up:

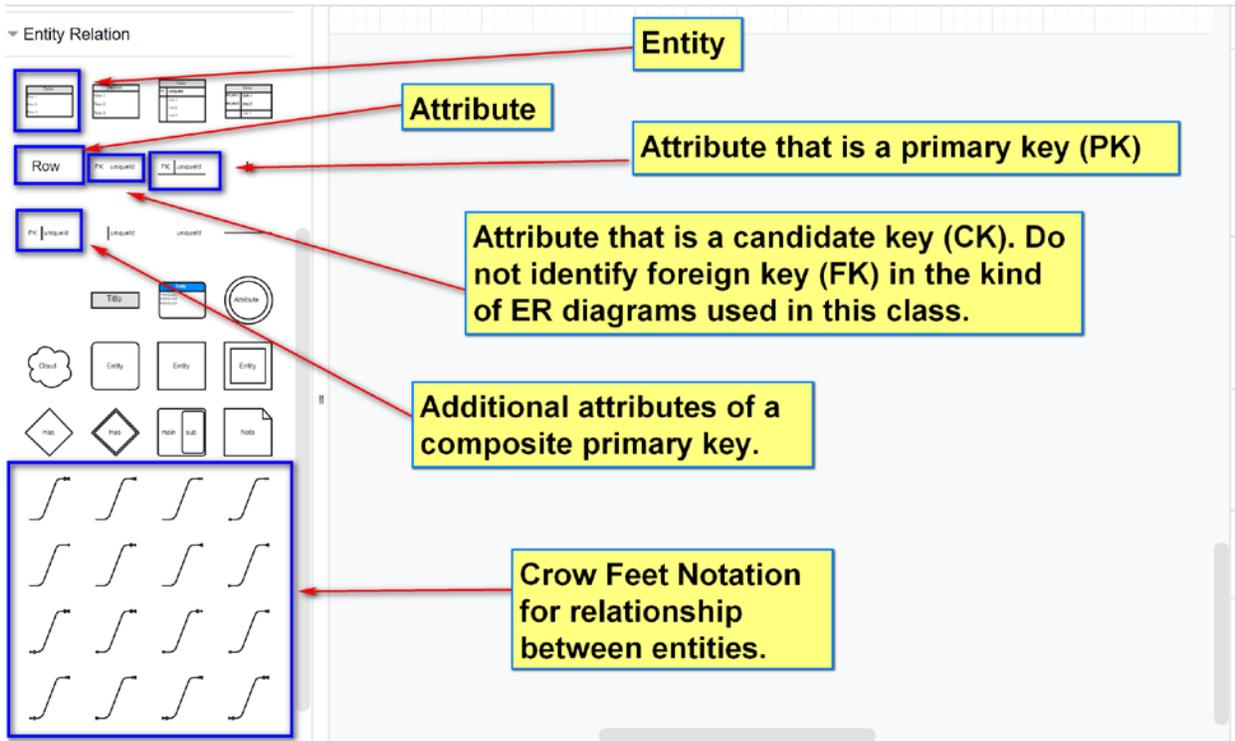


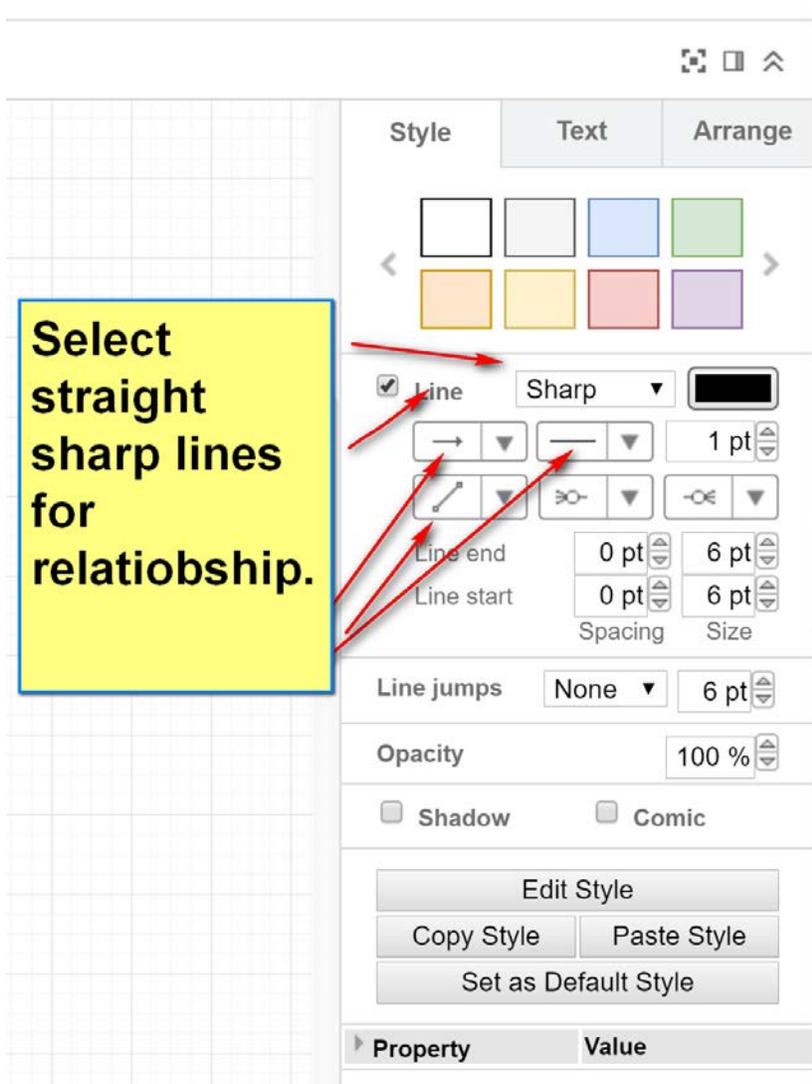
**Resources:**

- How to draw ER in draw.io: <https://about.draw.io/entity-relationship-diagrams-with-draw-io/>.

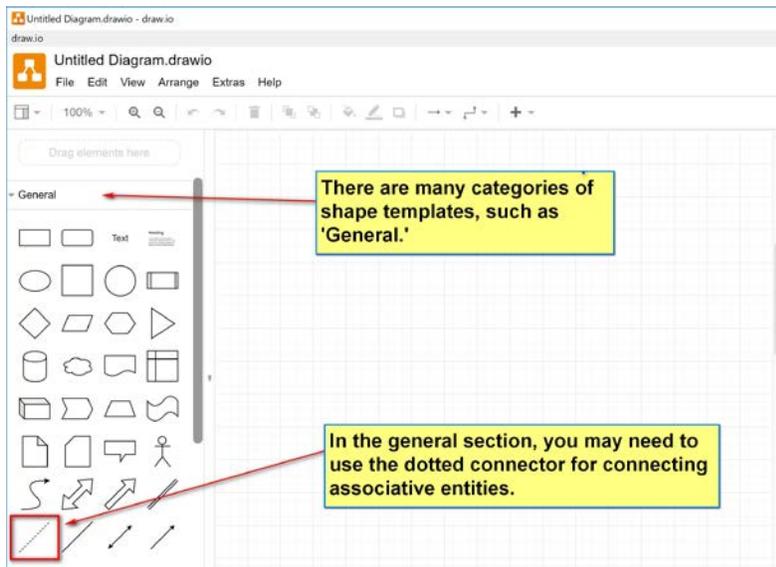
**Shapes needed in this courses**

Use these in the ER template:





In the general shape template:





## Example

A simple Employees working for projects model.

[1] The employee entity:

1. Empld: PK
2. LName
3. FName
4. Phone
5. EMail

The screenshot shows the draw.io web application interface. The title bar reads "Untitled Diagram.drawio - draw.io". Below the title bar is a menu bar with "File", "Edit", "View", "Arrange", "Extras", and "Help". A toolbar contains various icons for zooming, undo, redo, deleting, and copying. On the left side, there is a "Search Shapes" input field and a "Scratchpad" section. Below these are several category tabs: "General", "Misc", "Advanced", and "Entity Relation". The "Entity Relation" tab is active, showing a grid of database-related shapes. A red arrow points from the first shape in this grid, which is a table with a header and three rows, to a larger, semi-transparent version of the same table shape that is currently being dragged into the main workspace. The workspace is a large grid area. The table shape has a header row labeled "Table" and three data rows labeled "Row 1", "Row 2", and "Row 3". Below the table shapes in the sidebar, there are several icons representing different types of database relationships, such as primary keys, foreign keys, and unique keys.



Scratchpad ? + ✎ ✕

Drag elements here

General

Misc

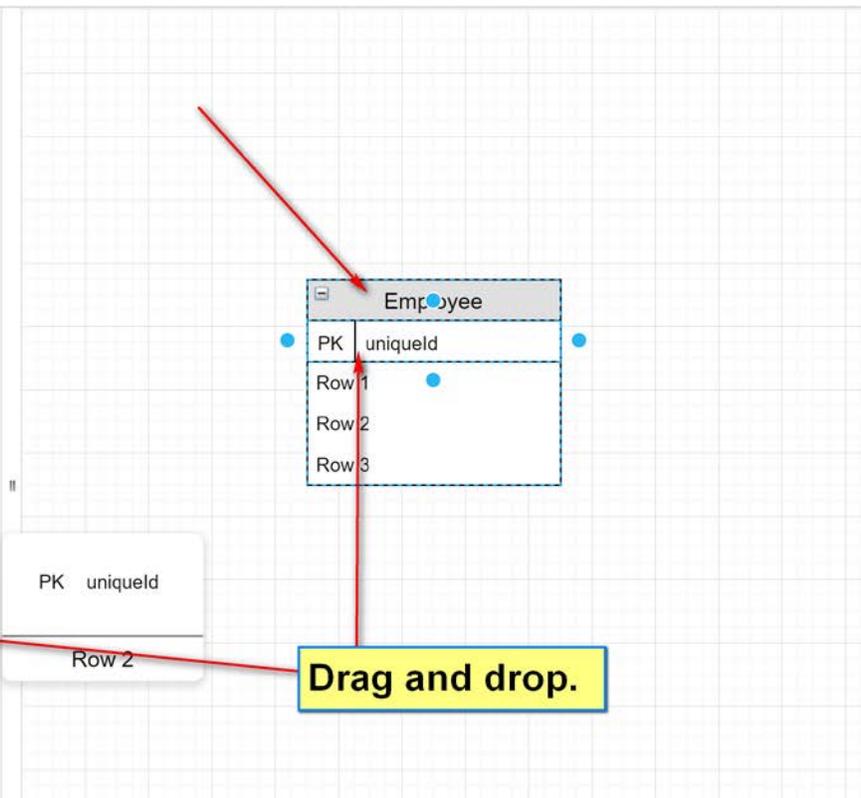
Advanced

Entity Relation



Row PK | uniqueid |

PK | uniqueid | uniqueid |



Scratchpad ? + ✎ ✕

Drag elements here

General

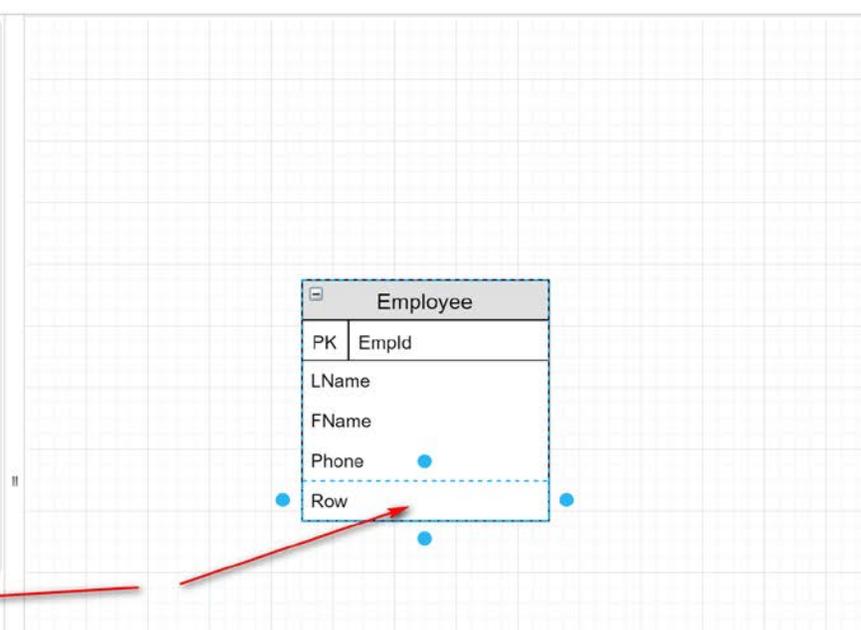
Misc

Advanced

Entity Relation



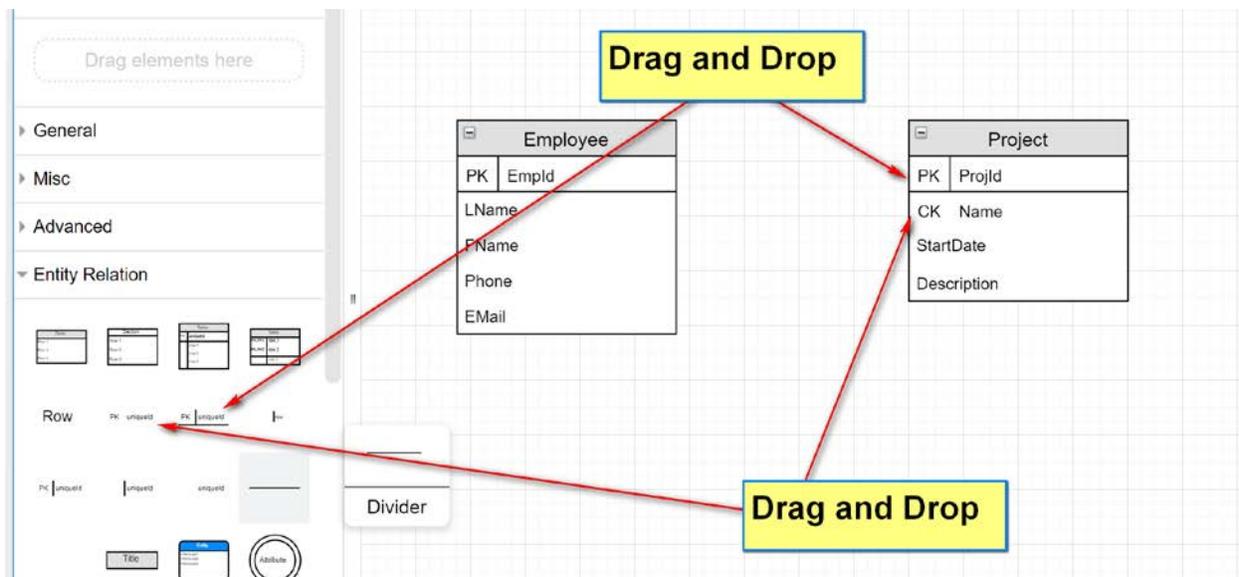
Row PK | uniqueid |





## [2] The Project Entity

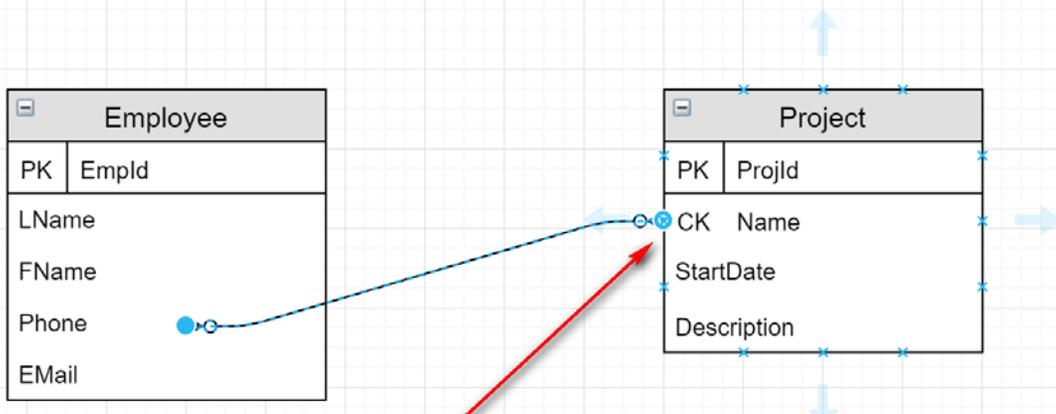
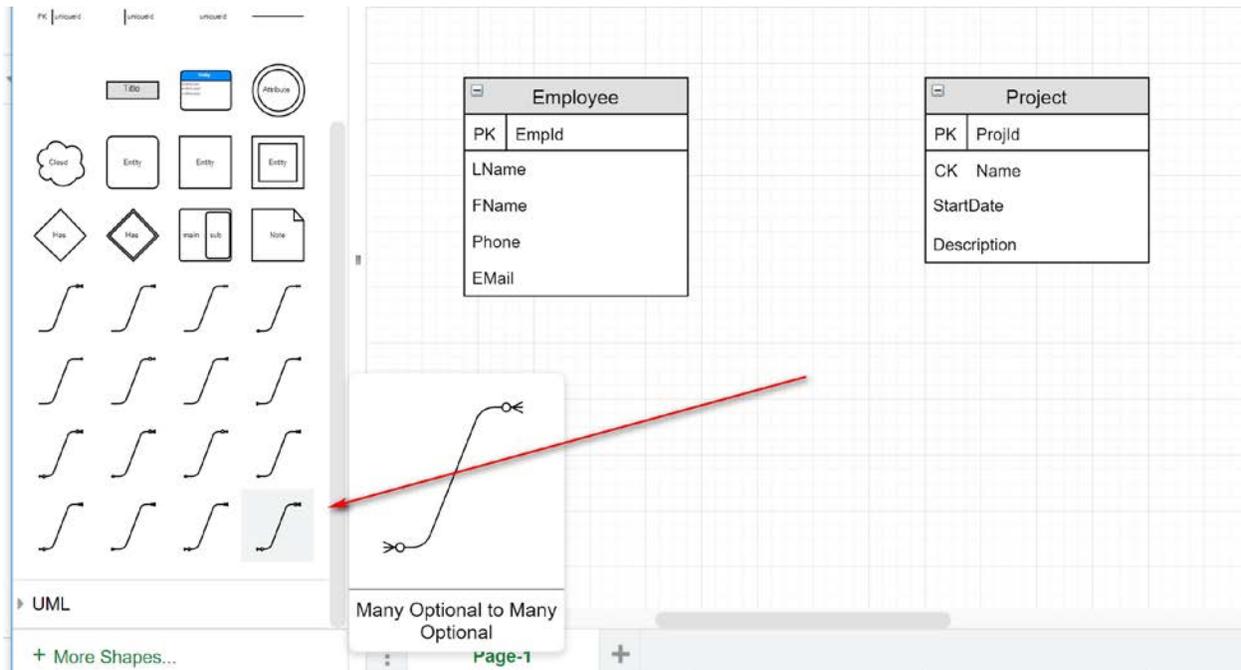
1. ProjId: PK
2. Name: CK, must be unique
3. StartDate
4. Description



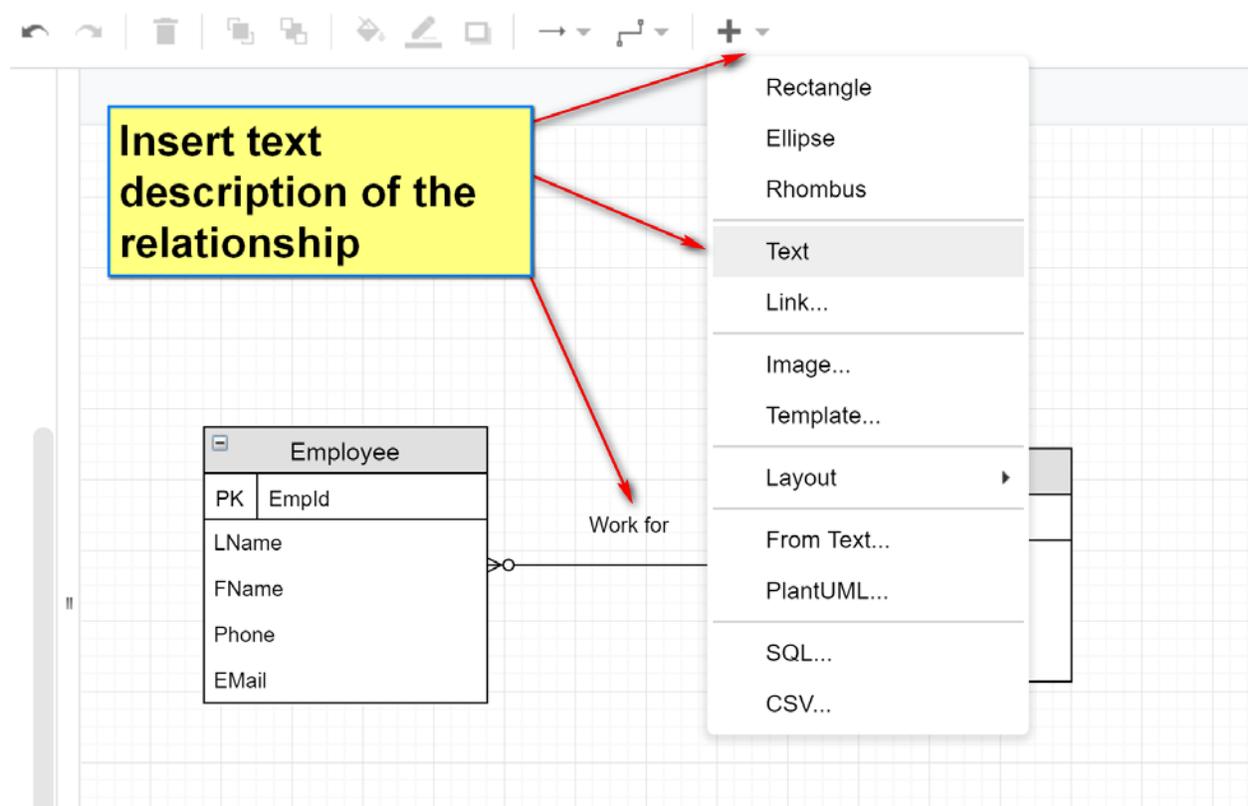
## [3] Relationship between Employee and Project:

1. (0..many) to (0..many) relationship:
  - a. An employee may work for zero or more projects.
  - b. A Project may have zero or more worker member employee.
2. Relationship attributes: associative entities:
  - a. Role
  - b. StartDate

[1] Add relationship

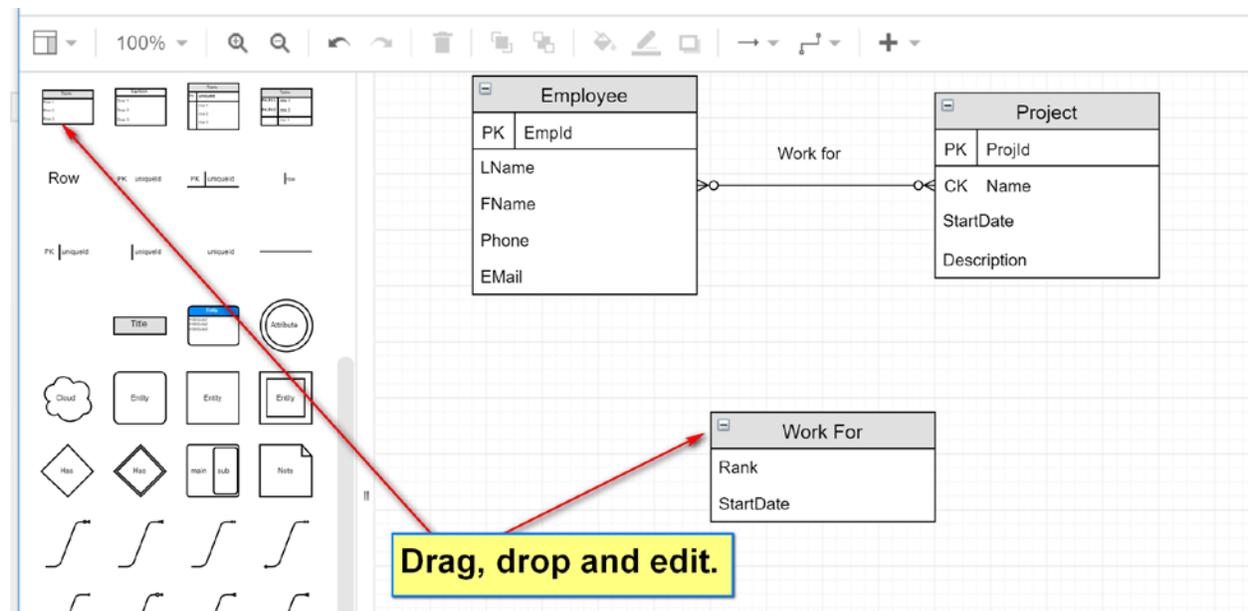


**Drag and drop the end point of the relationship to one participating entity.**

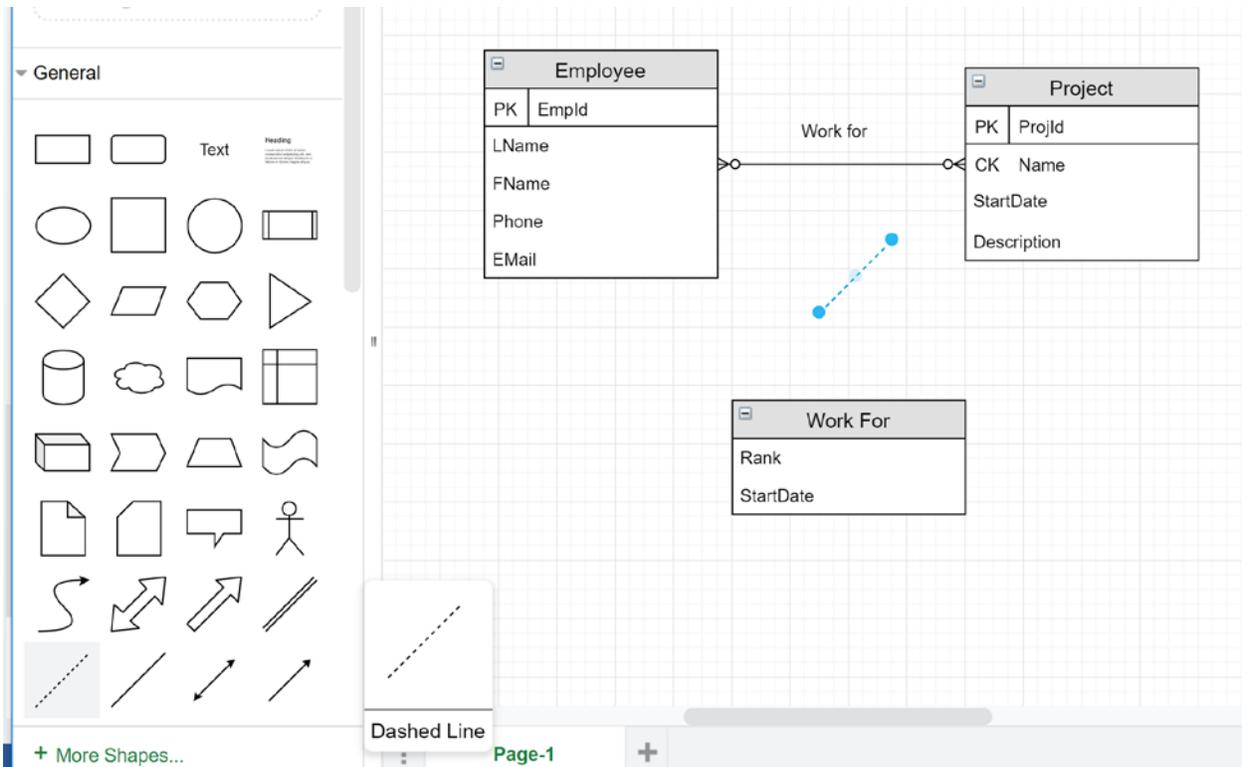


[2] Add relationship attribute (associative entity)

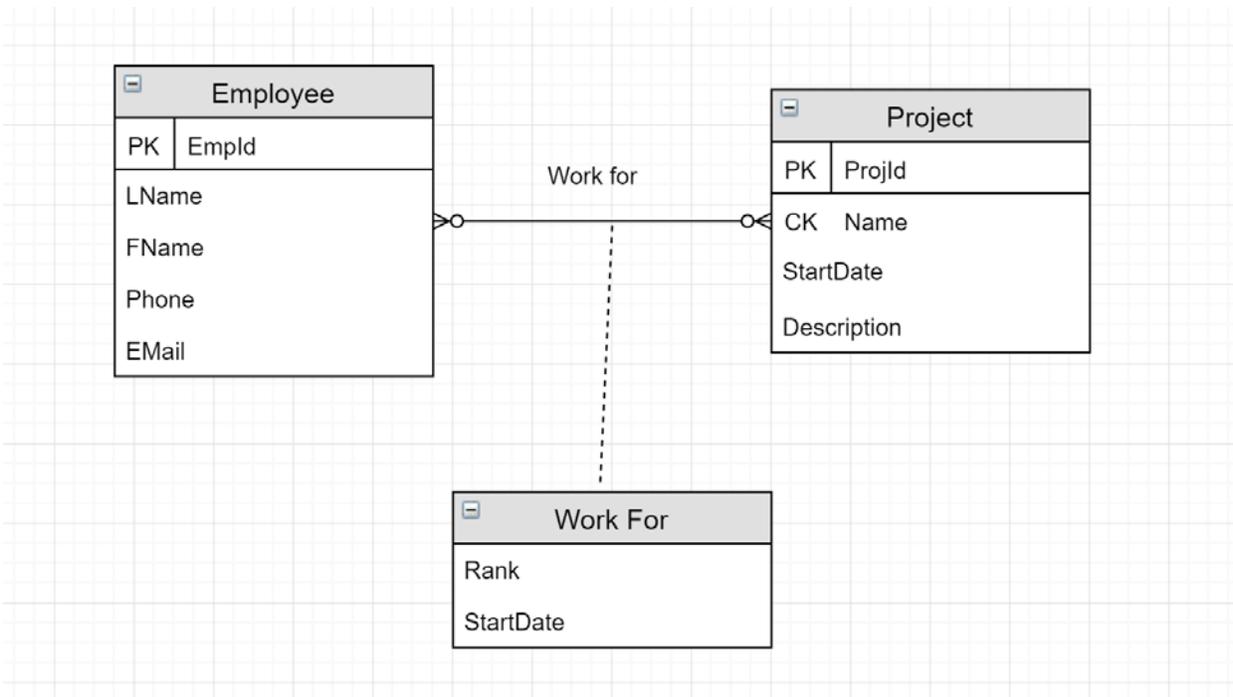
Add an associative entity:



Add a dashed line connector.



Connect the connector to the new entity and the relationship.



Do not forget to save from time to time. *Please do the example yourself to familiarize with the tool.*