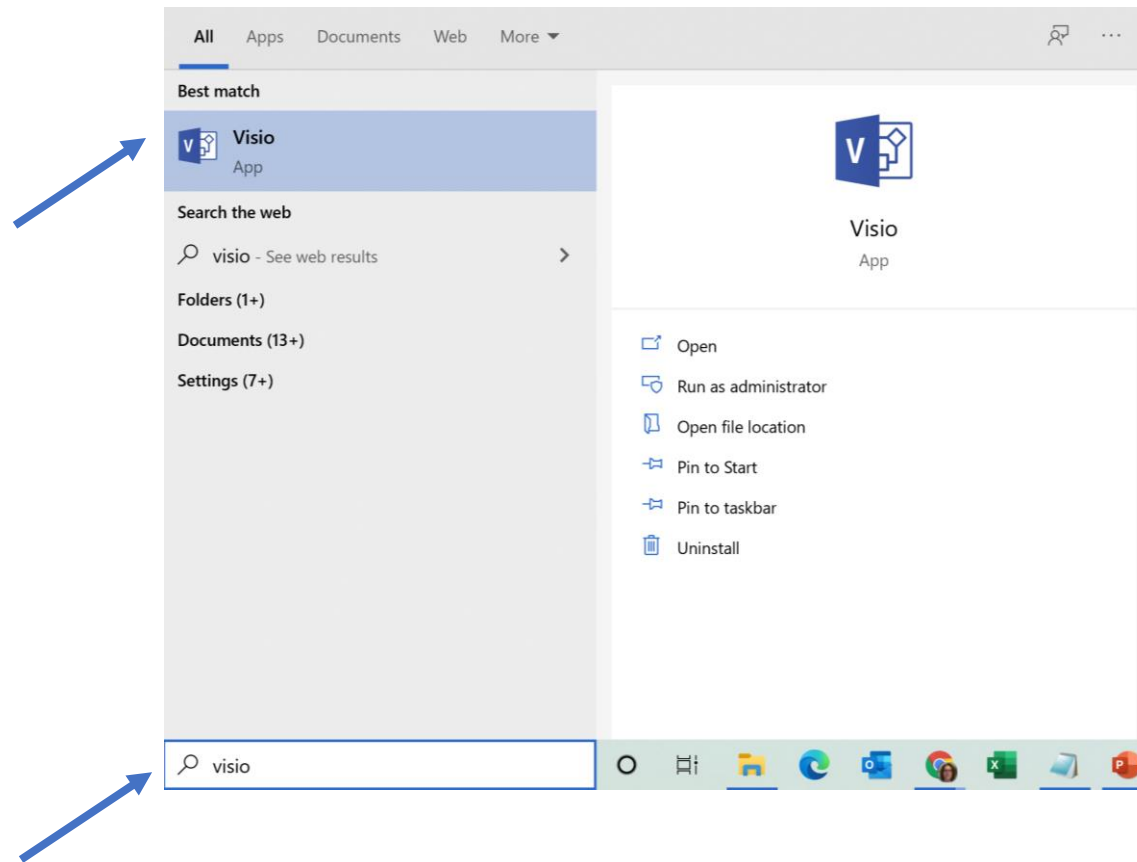


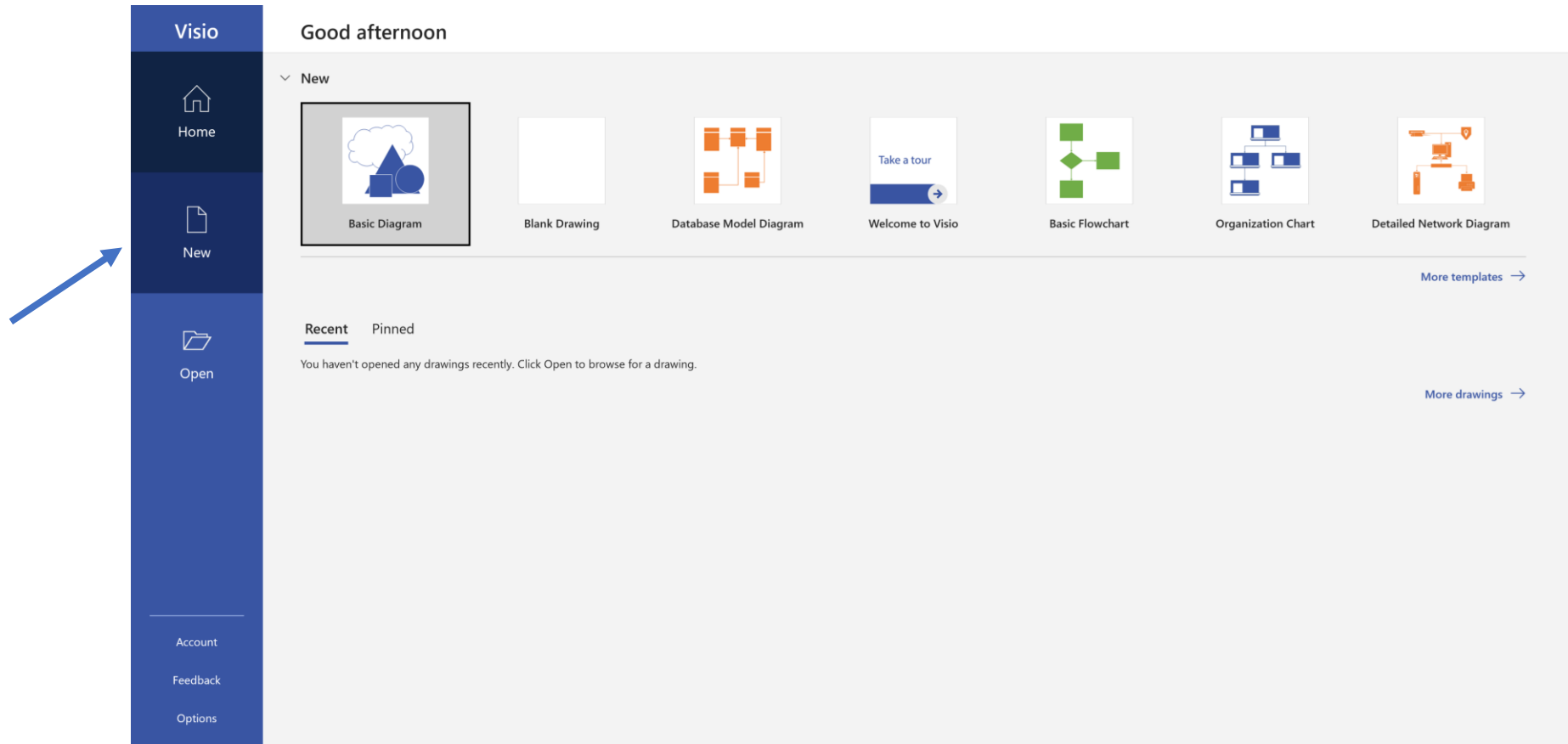
Creating an ER Diagram in Microsoft Visio 2019



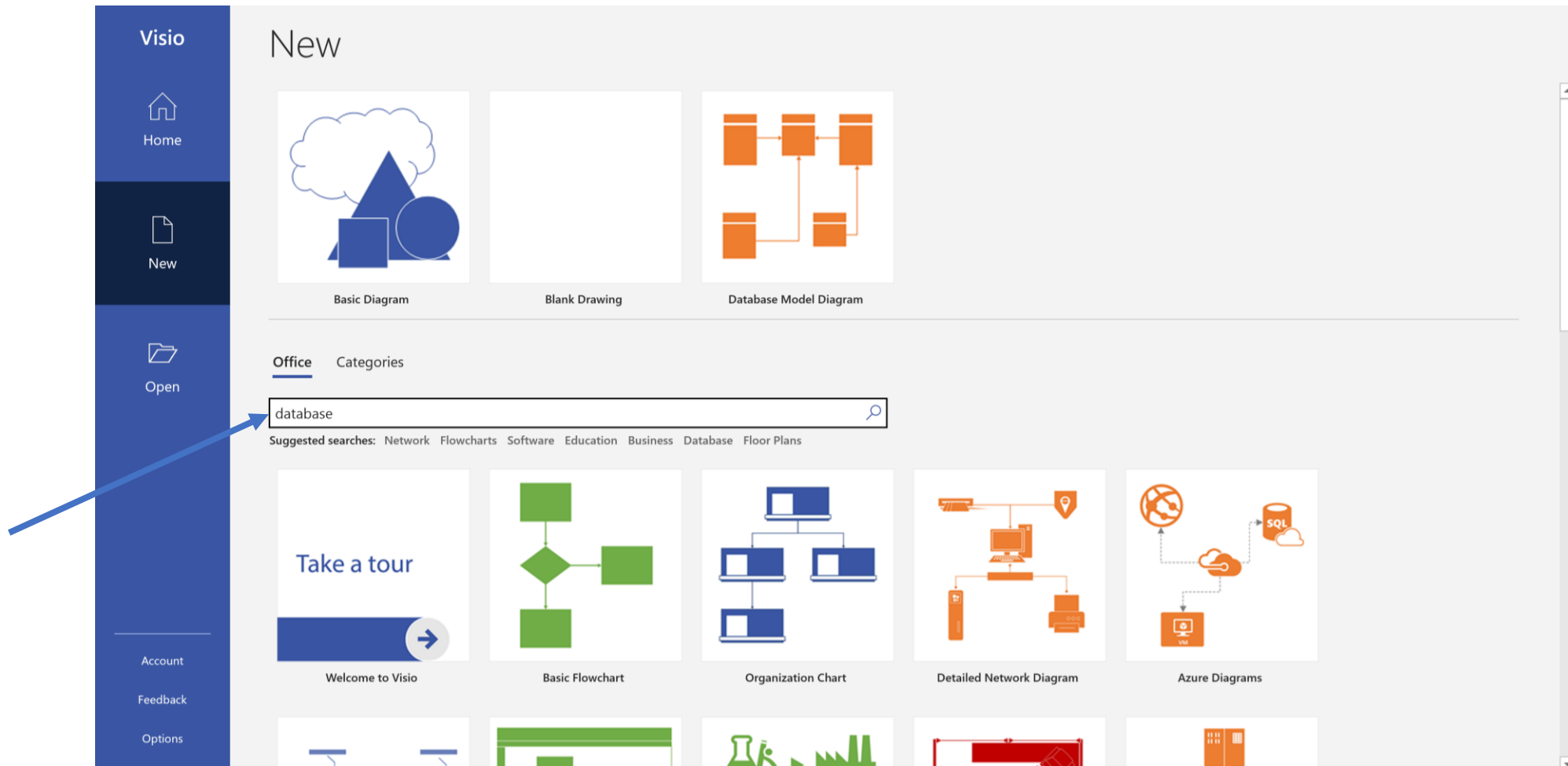
Start Visio from the Program Files or Search Menu, Depending on Version of Windows



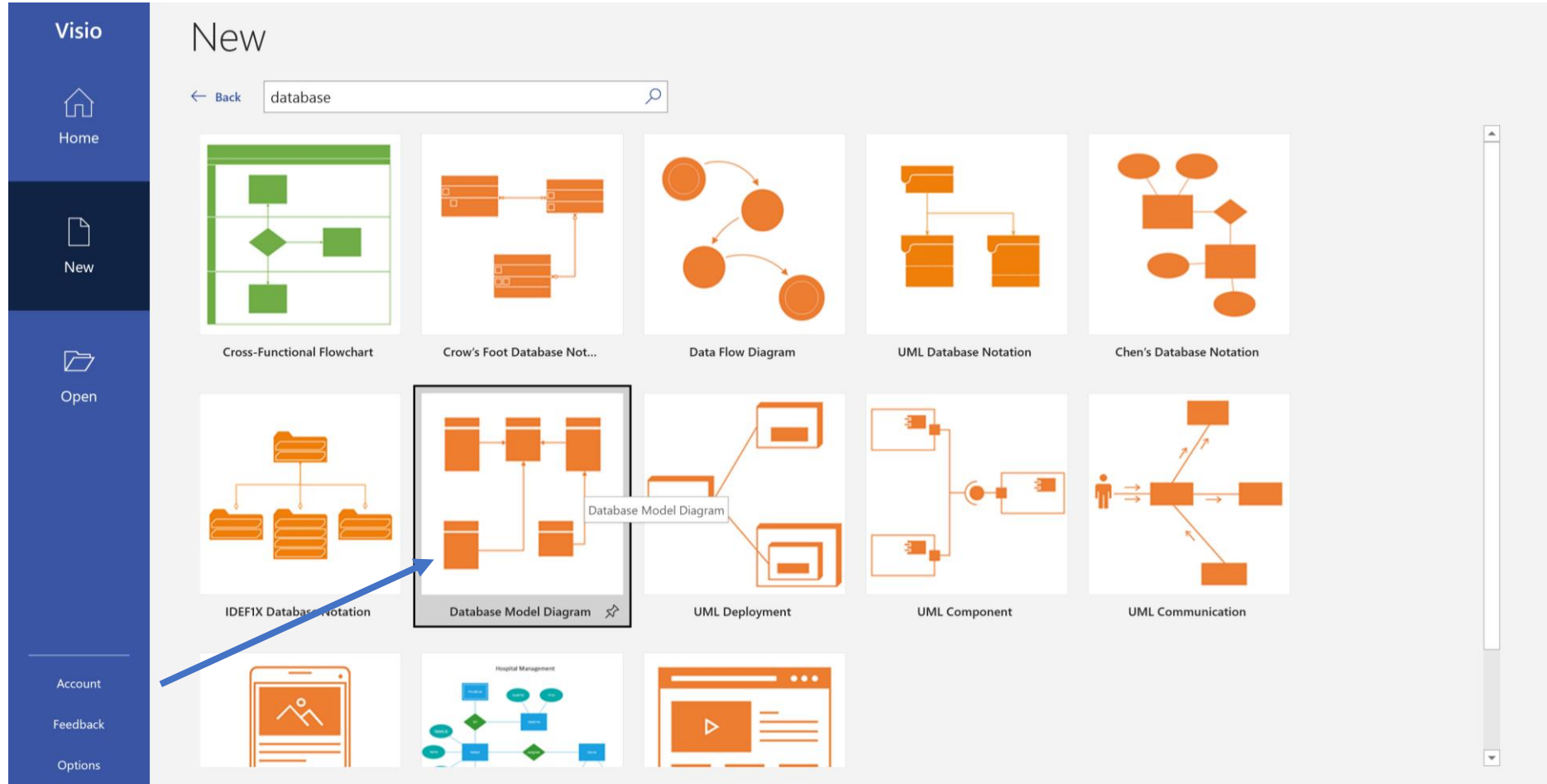
Click on “New”



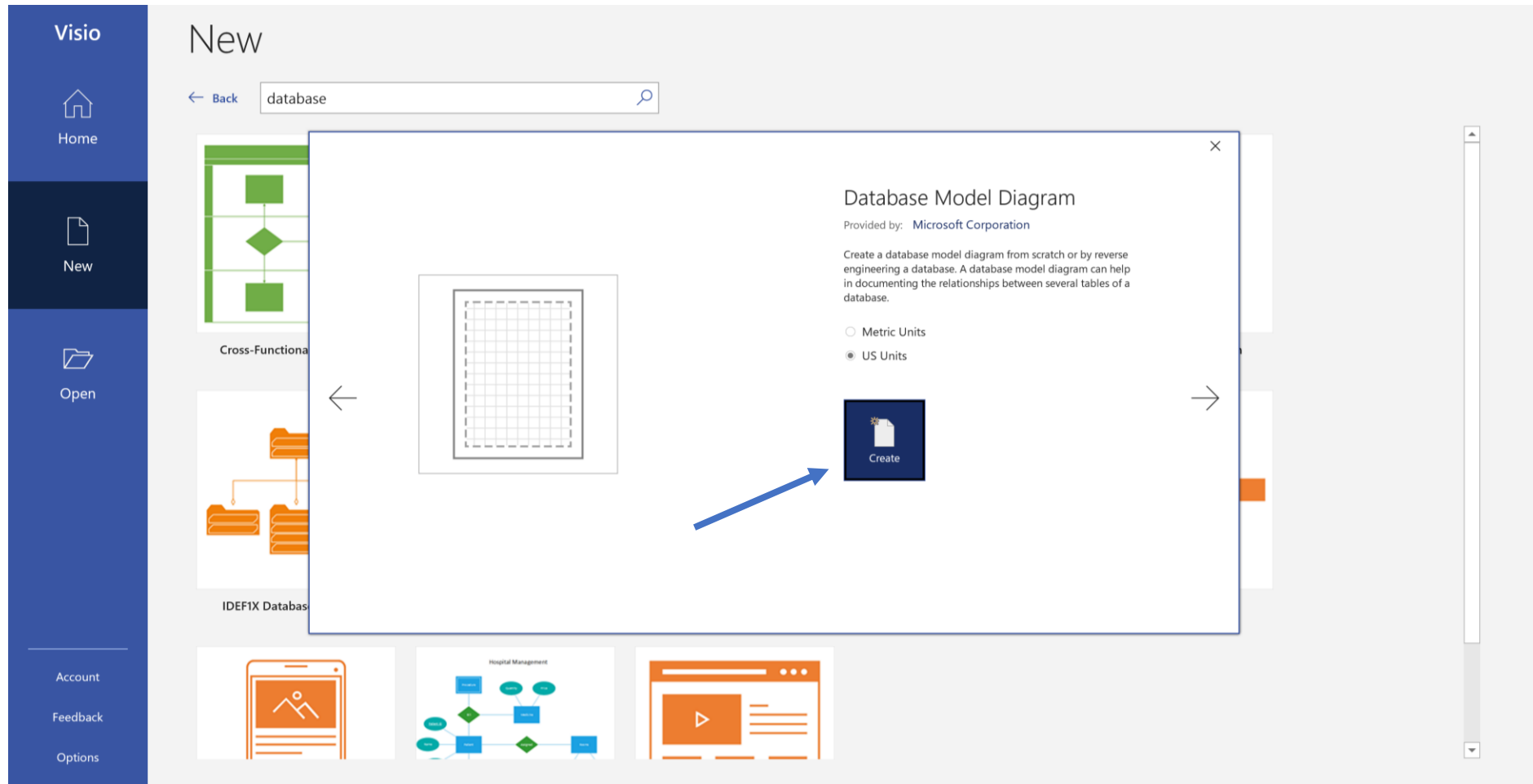
Type “database” in the Search Bar and Click Enter



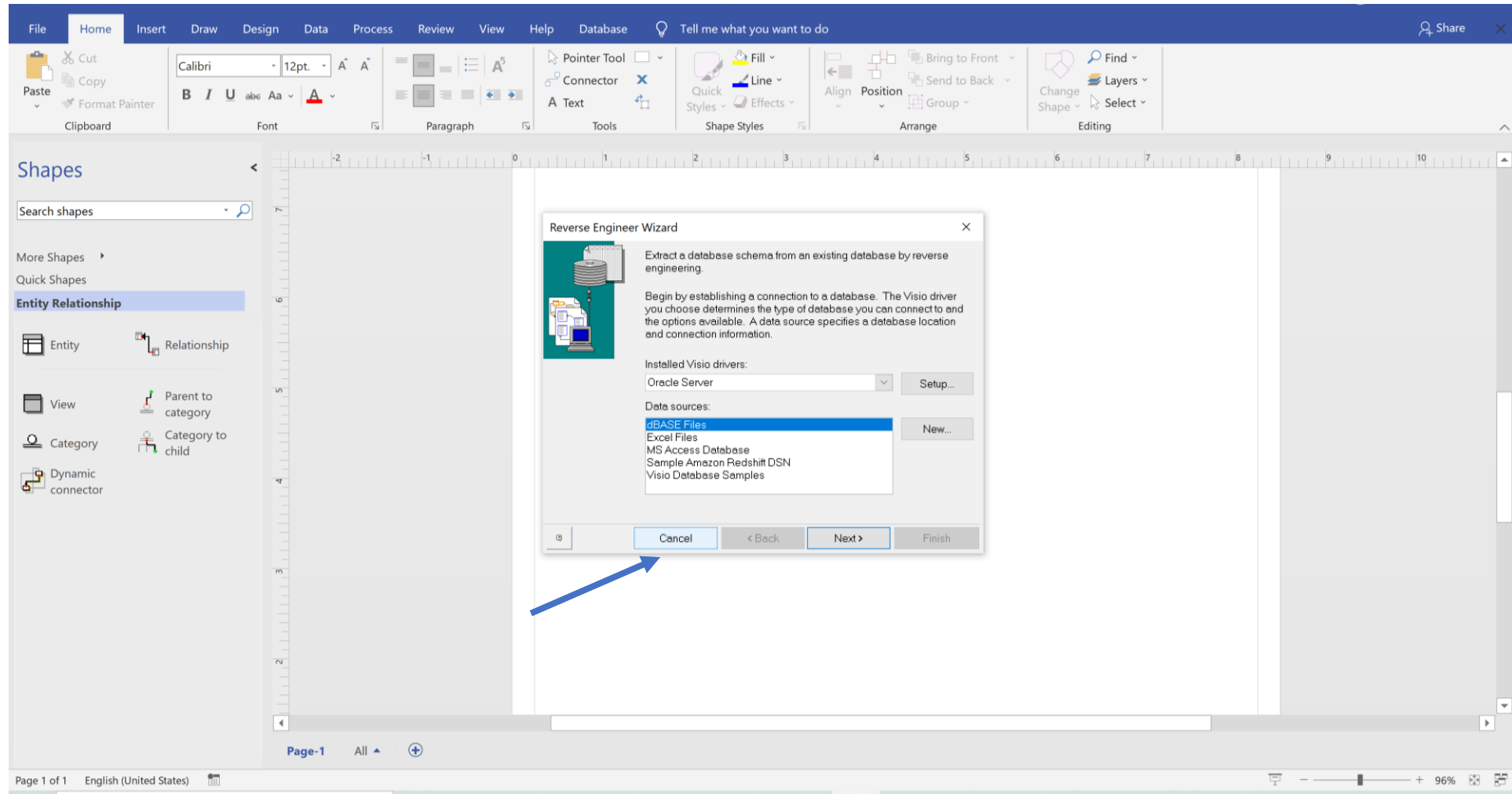
Choose “Database Model Diagram”



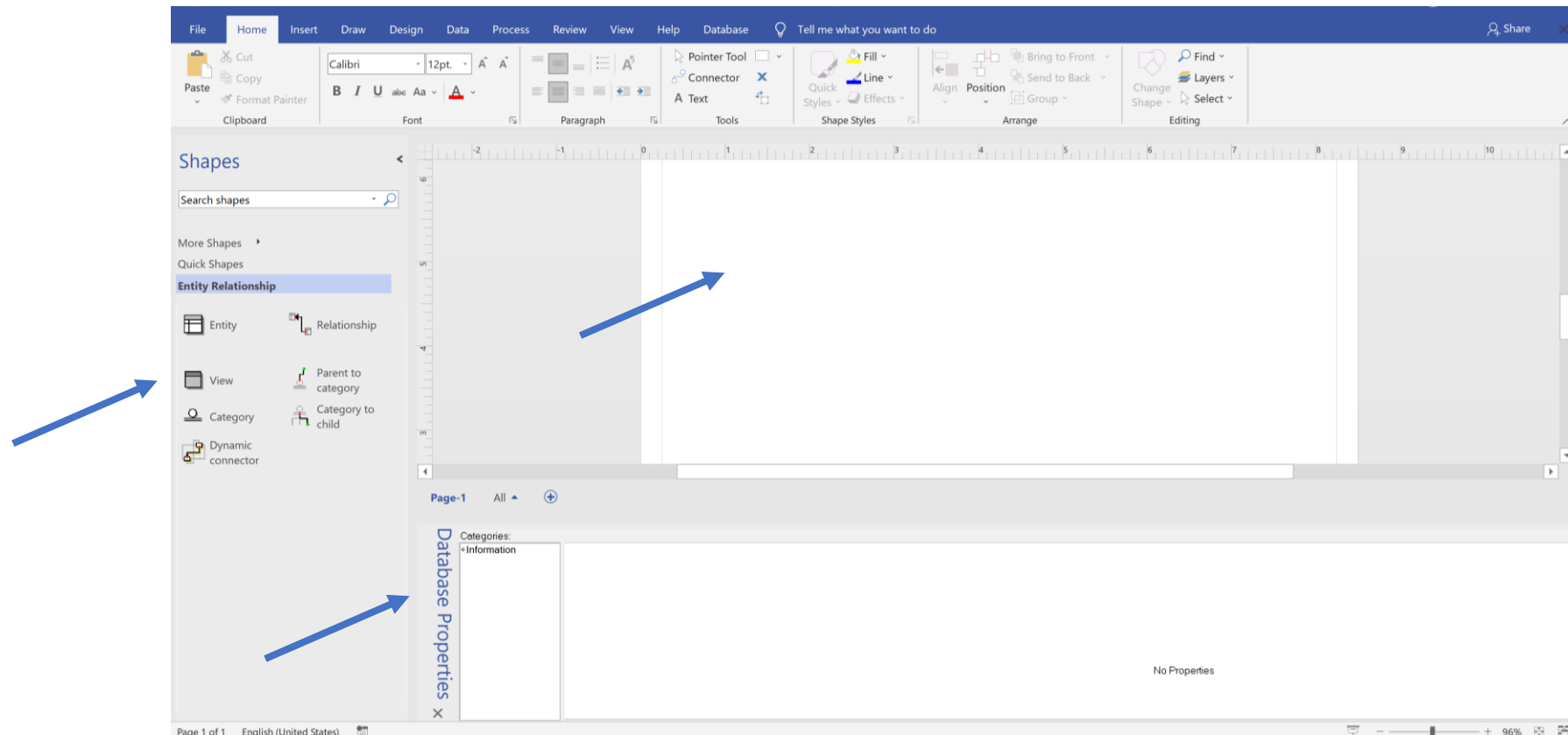
Click “Create”



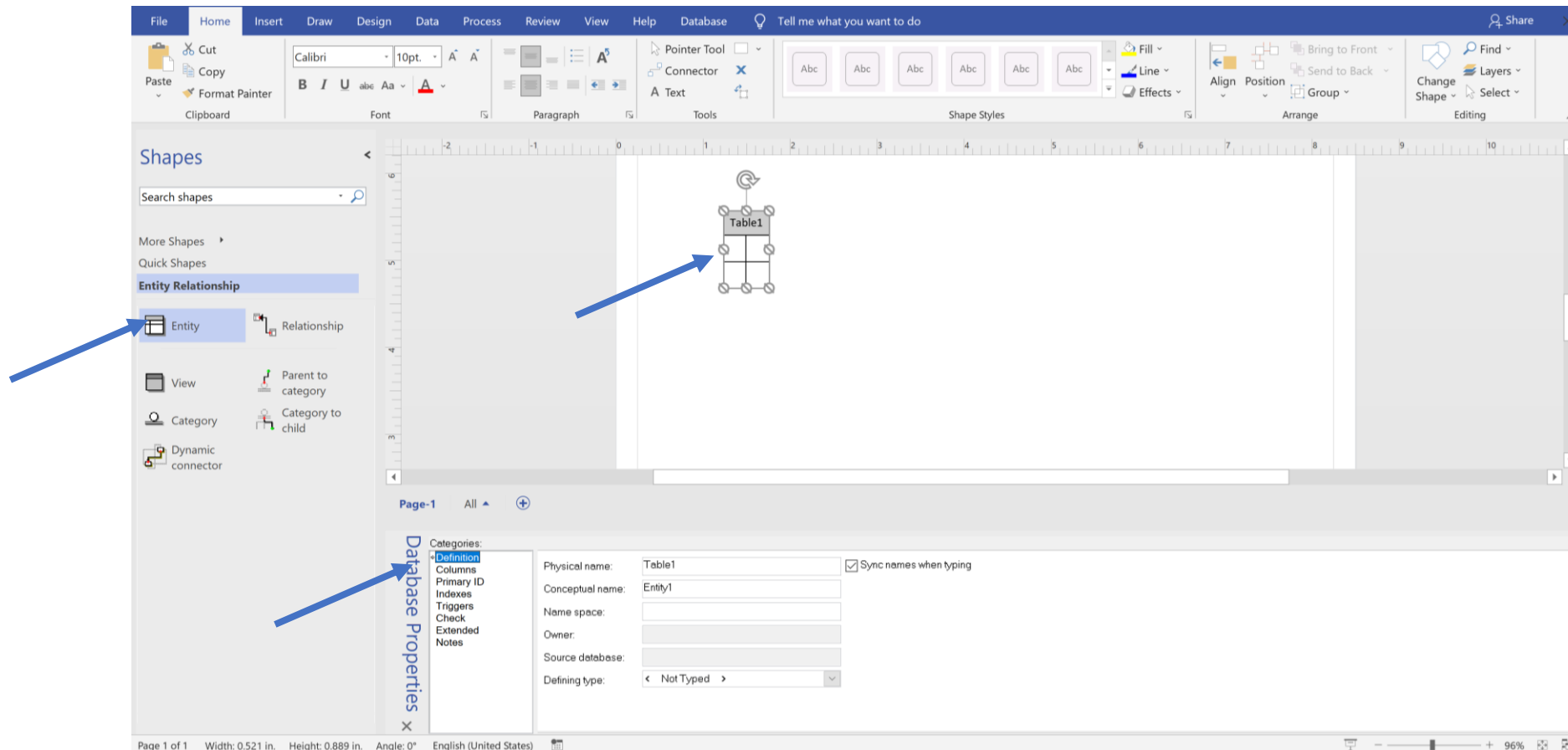
Click “Cancel” to Close the Reverse Engineering Wizard



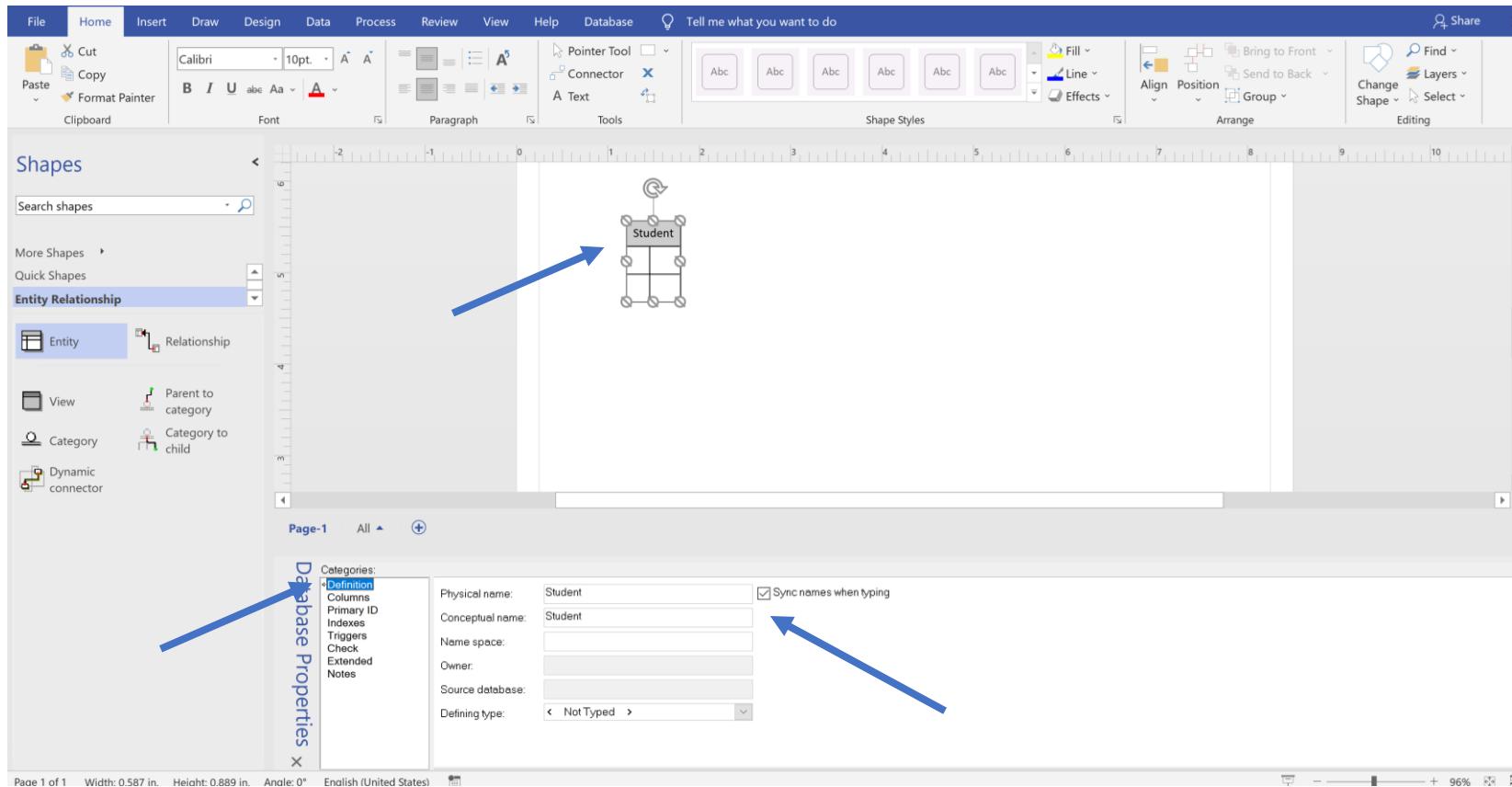
You May Now Start Creating Your ER Diagram and Editing The Properties Of Each Entity, Attribute, and Relationship Easily Within the Properties Pane



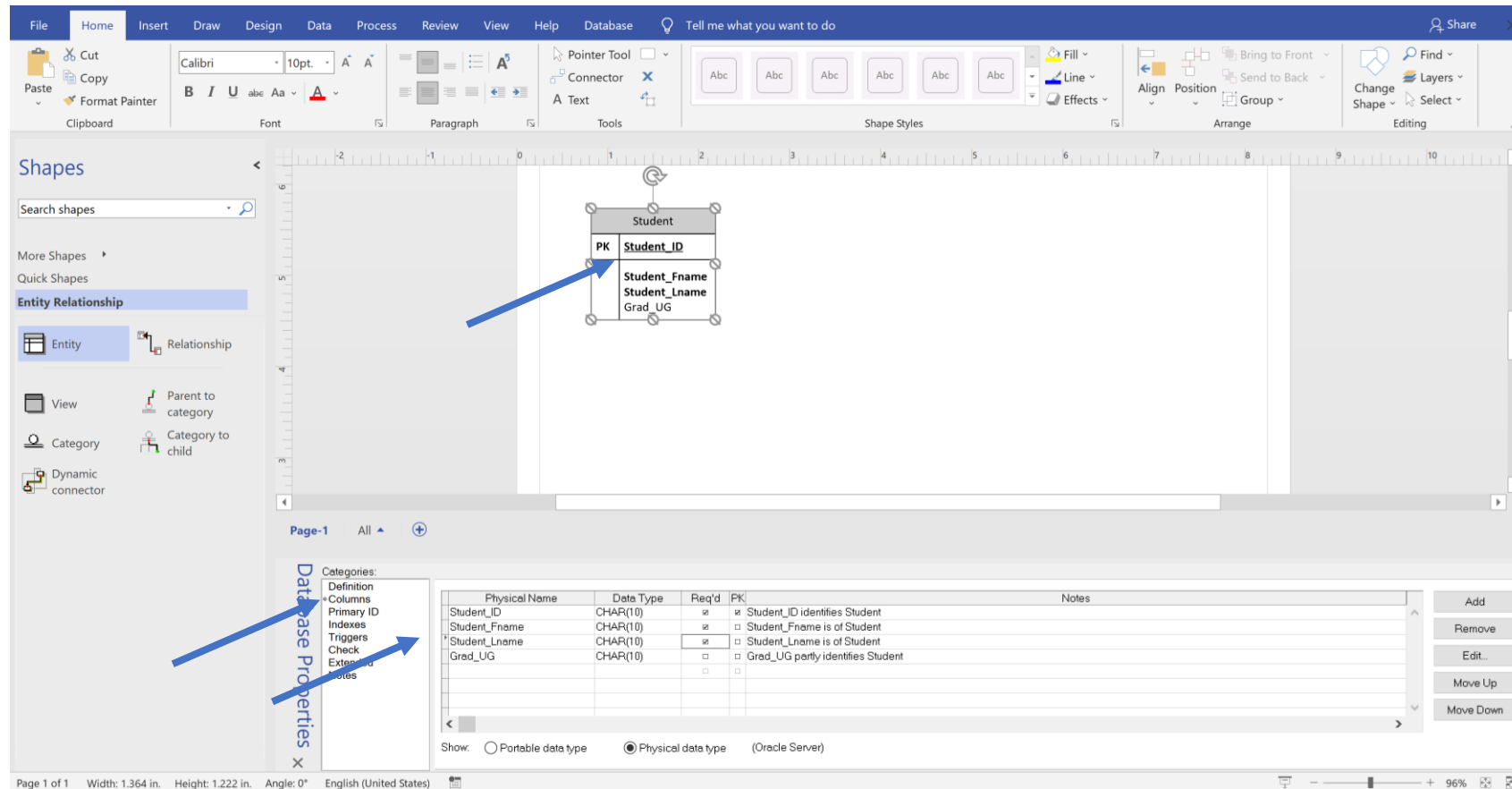
You can Create an Entity by Dragging and Dropping an Entity into the Diagram, and Edit its Properties in the Database Properties Pane.



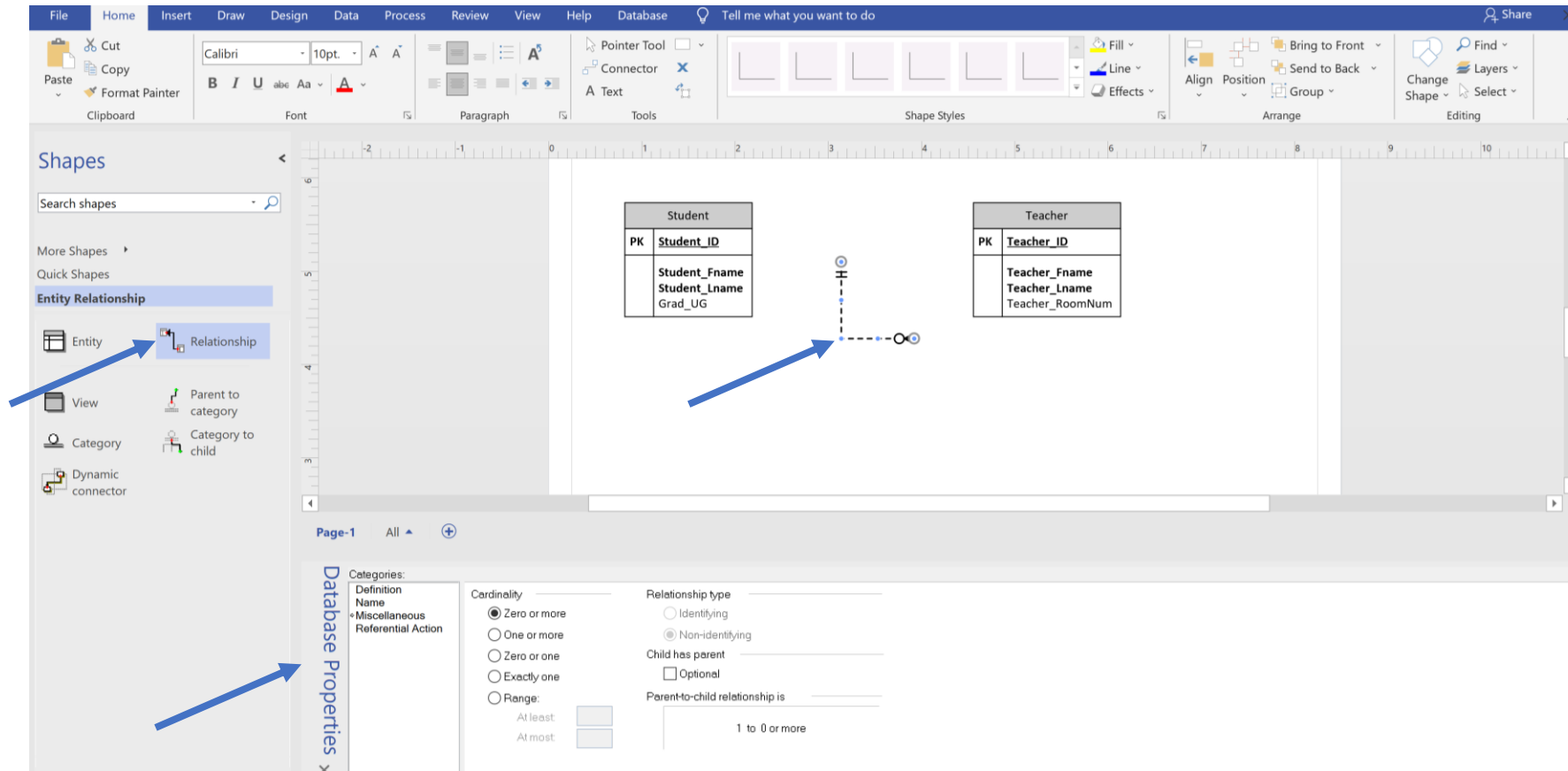
The Definition Options Include Entity Name and Details.



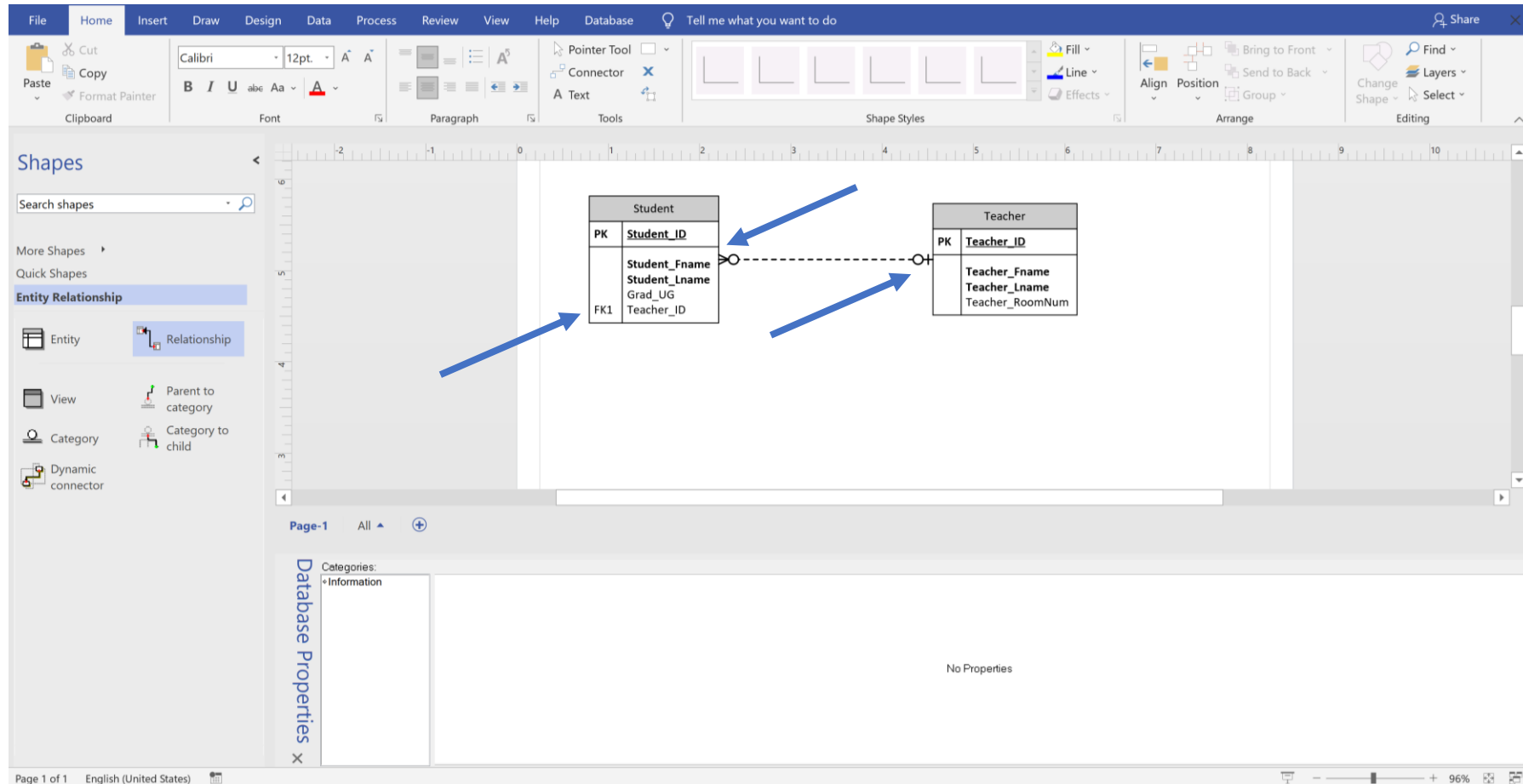
Columns Options Allow you to Specify Attribute Name, Data Type, Notes (Definitions), Whether it is Required, and to Identify the Primary Key Attribute(s) for the Entity



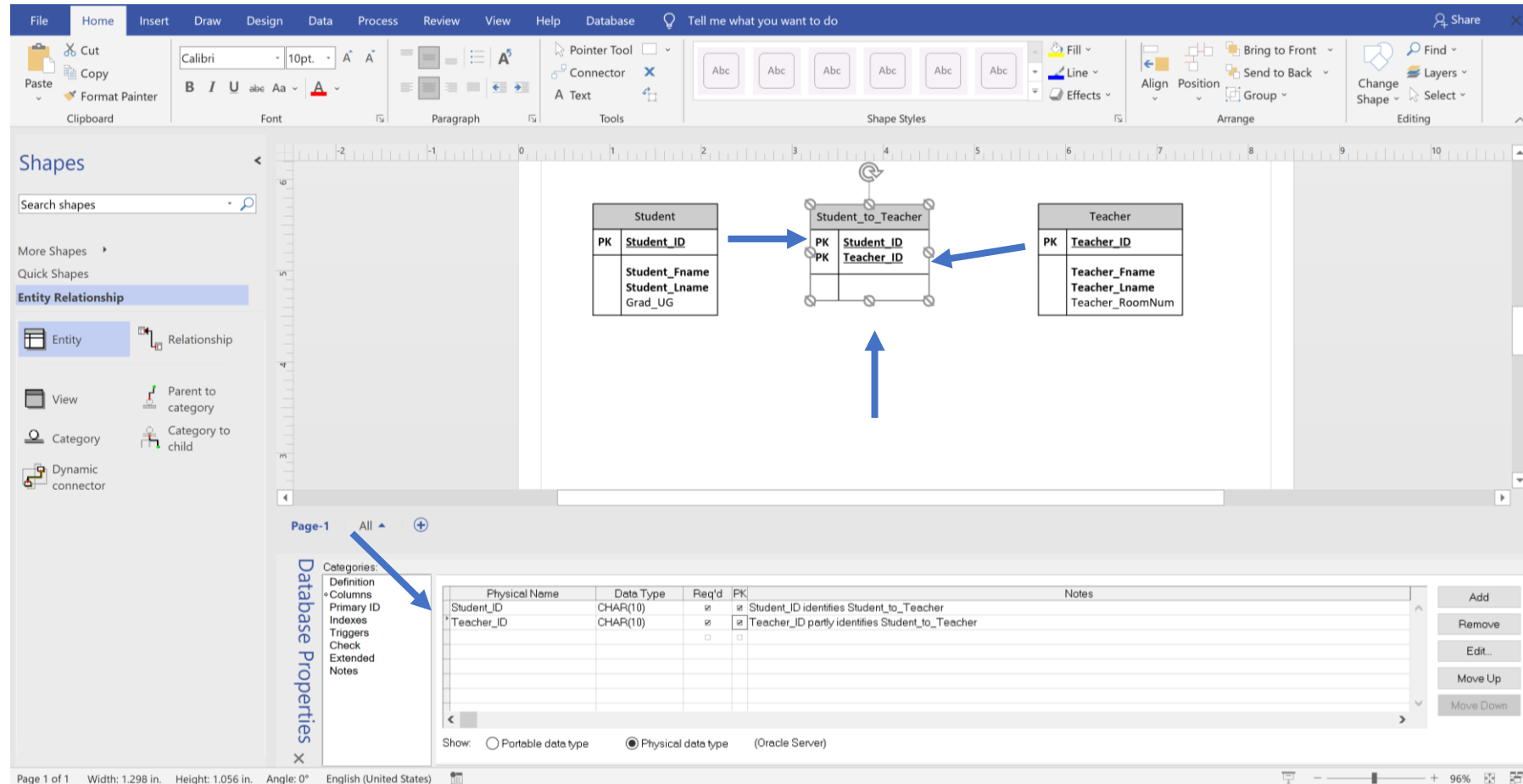
A Relationship Can be Created Between Entities by Dragging a Relationship onto the Diagram



If we Have a One-to-Many (1:M) Relationship Between Teacher and Student (i.e. Teacher 1:M Student), we can Connect the Relationship With the Crows Feet (“many”) on the Student Entity, and it will Automatically add a Foreign Key of Teacher_ID in the Student Entity.



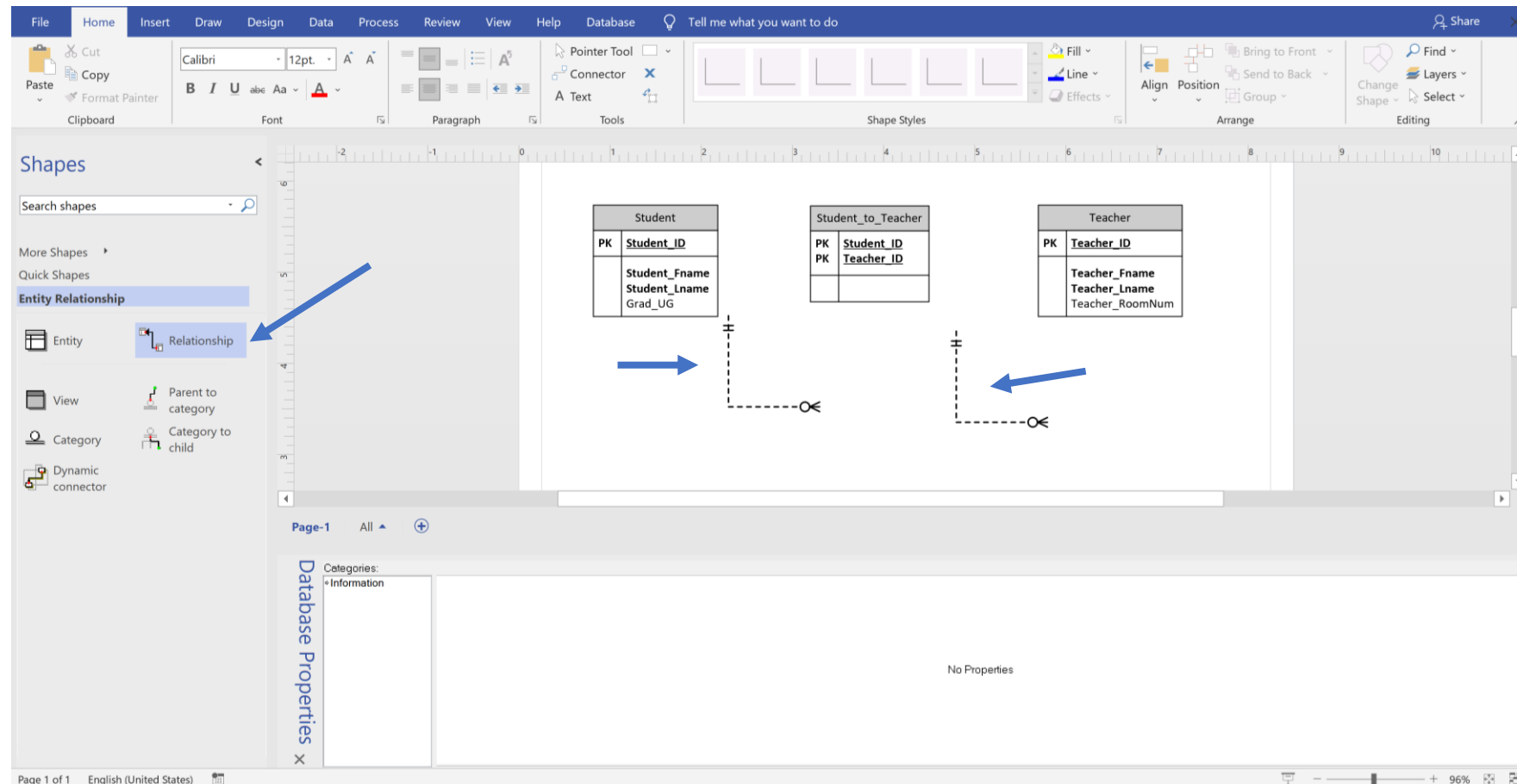
If we Have a Many to Many (M:N) Relationship Between Teacher and Student (i.e. Teacher M:N Student), we Must Create an Associative Entity to Decompose the Relationship from M:N into one 1:M and one N:1 Relationship.



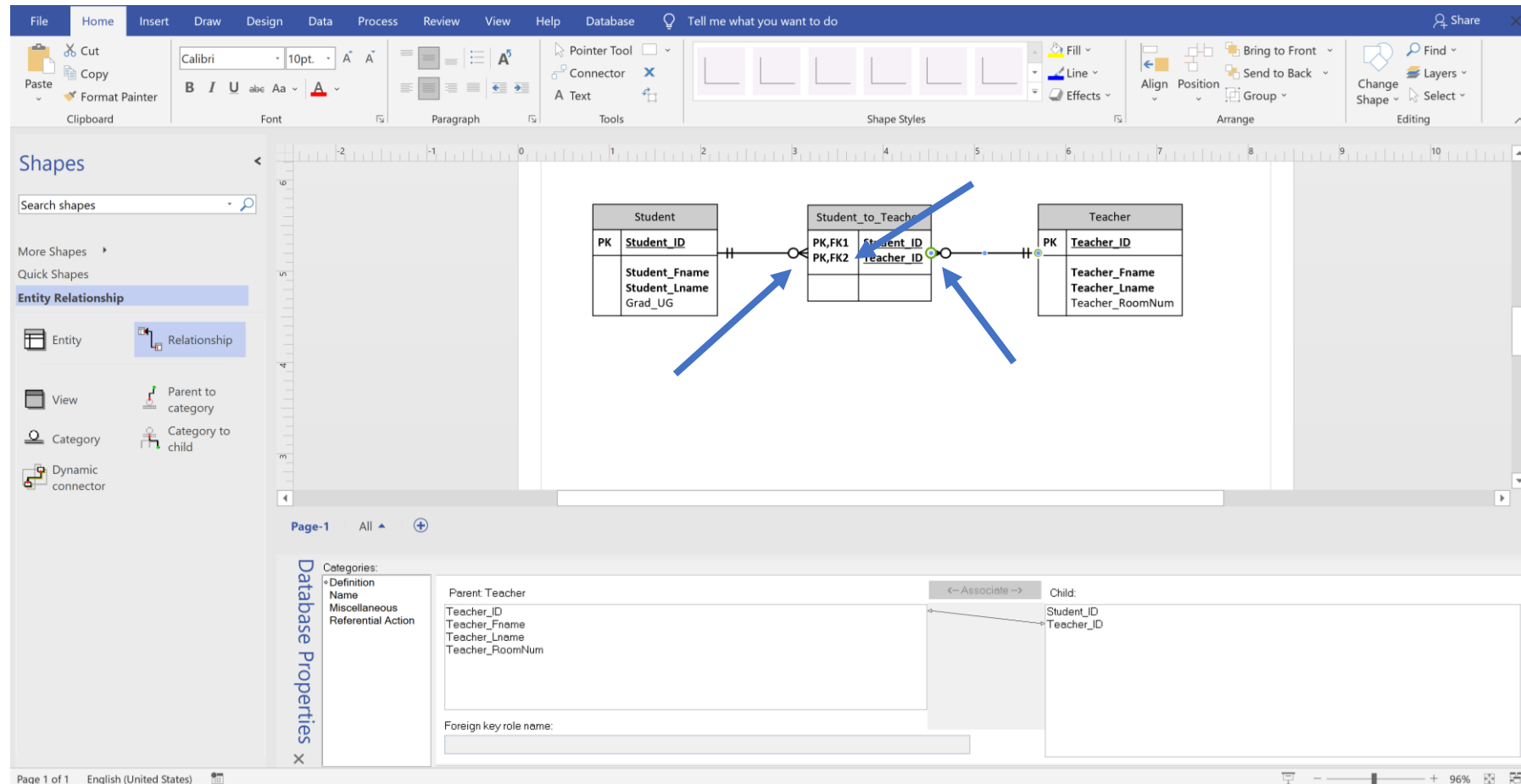
The Associative Entity has a Composite Primary Key Consisting of The Primary Key From Each Entity it is Associating.



For the Associative Entity, we Need Two Relationships Dragged and Dropped Onto the Diagram.



The Crows Feet (“Many”) Side of Each Relationship Connects to the Associative Entity (Here, the Student_to_Teacher Entity), and the One Side Connects to Each of the Other Entities. (The Foreign Key Specifications are Added to the Associative Entity Automatically.)



The Entity Relationship Diagram from Microsoft Visio 2019 with an Associative Entity (i.e. Representing a Decomposed Many-to-Many Relationship) Should Look Like This Example.

