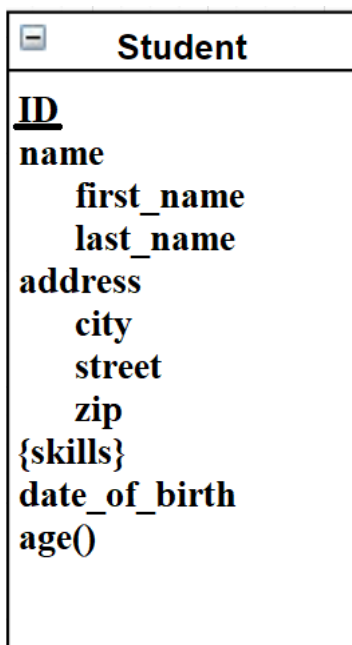


1)

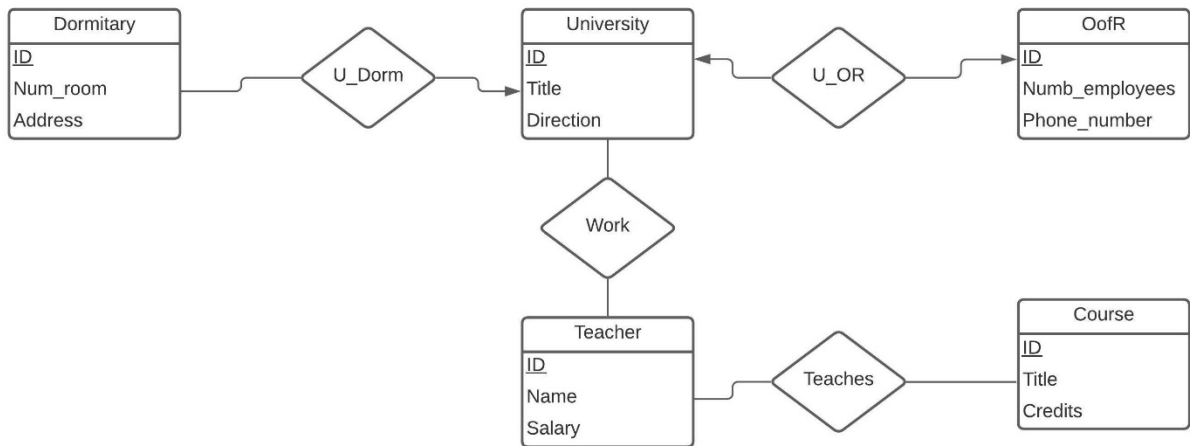
- a) Initial phase - characterize fully the data needs of the prospective database users.
Second phase - choosing a data model
 - Applying the concepts of the chosen data model
 - Translating these requirements into a conceptual schema of the database
 - Describe the kinds of operations (or transactions) that will be performed on the data.Final phase - Moving from an abstract data model to the implementation of the database
 - Logical Design
 - Physical Design
- b) The entity-relationship (E-R) data model was developed to facilitate database design by allowing specification of an enterprise schema that represents the overall logical structure of a database
Entity Relationship Model (ER Modeling) is a graphical approach to database design. It is a high-level data model that defines data elements and their relationship

2)

a)

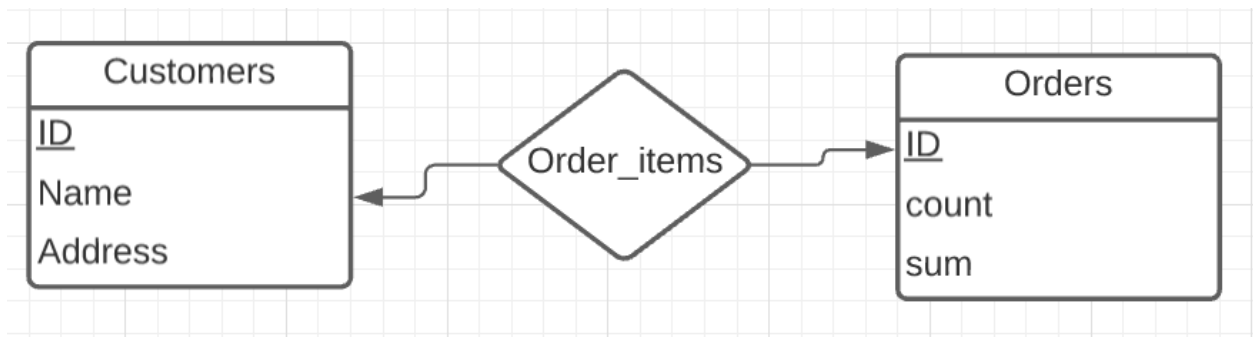


b)

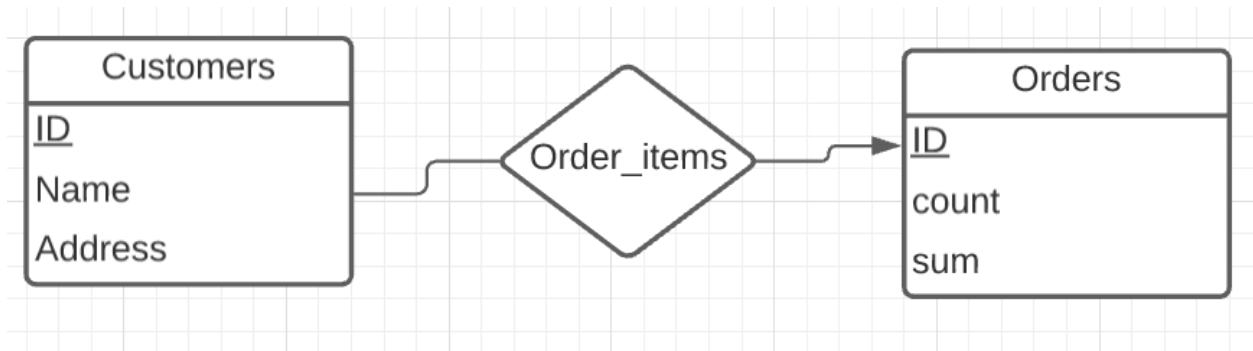


3)

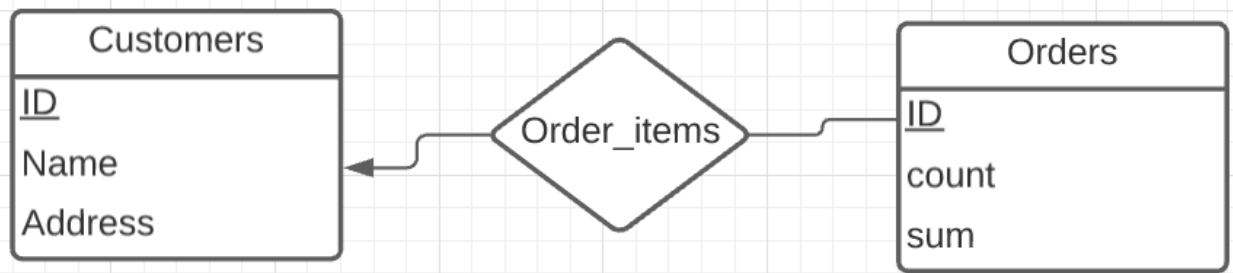
One-to-one



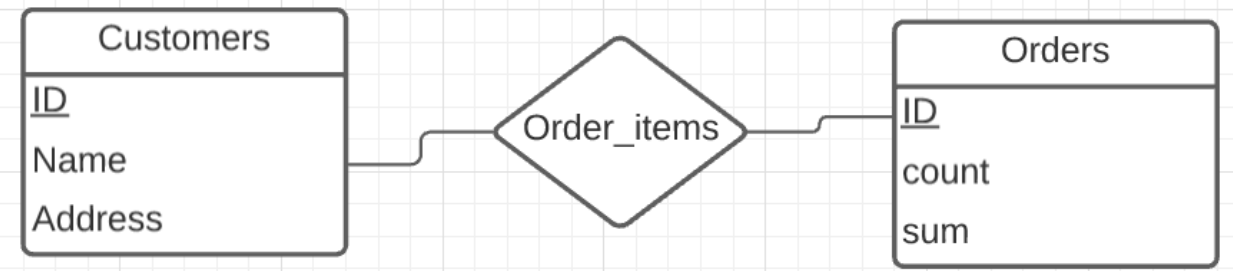
Many-to-one



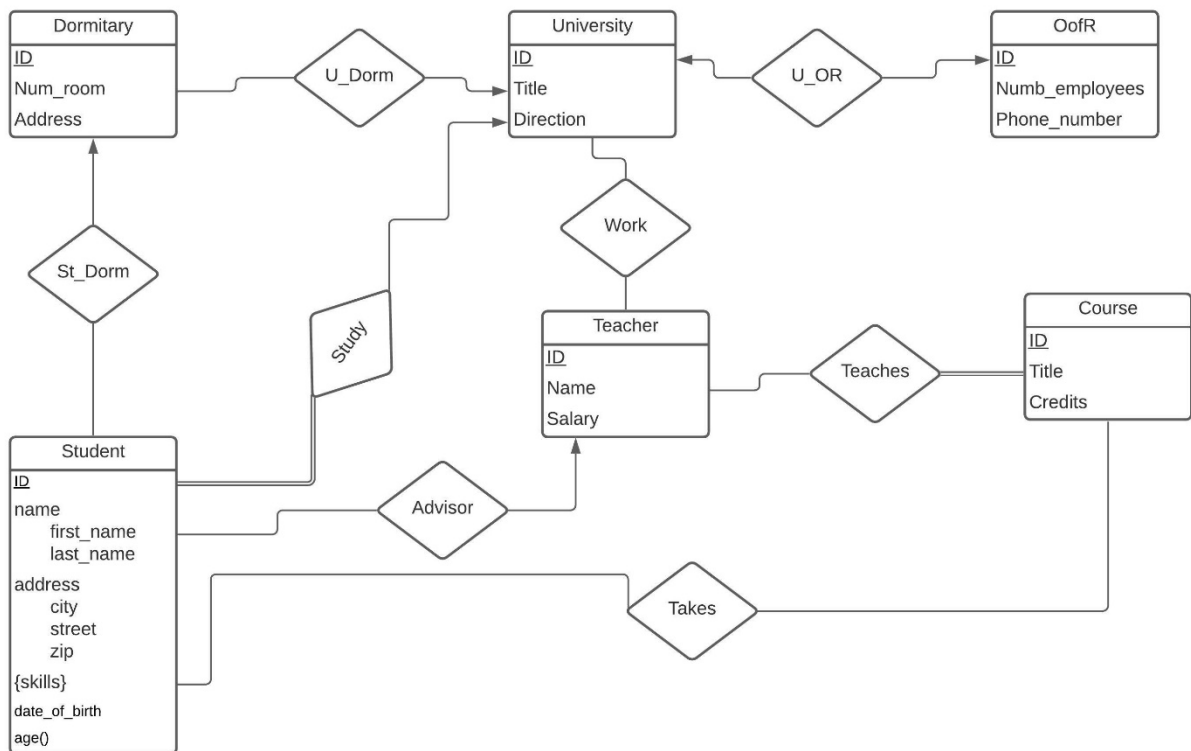
One-to-many



Many-to-many



4.



5.

