1.

a)What are the main phases in the database design? What is done on each development phase?

b)What is the entity-relationship(ER) data model?

2.

a) Create entity“Student”with at least 5 attributes(One for each type of attribute:simple, composite, derived, multivalued)

b) Create entities“University”, “Course”, “Dormitory”,“Teacher”, “Office of theRegistrar”with at least 3 attributes each. (Entitytypes should be correct on datamodel)

3.Give examples forone-to-many, one-to-one, many-to-many,many-to-onerelations. (Draw the examples as a scheme)

4.Create ER data model with relations using data from the second task.

5.Create ER data model for IT company. (At least 5 entitiesand 8 relations)

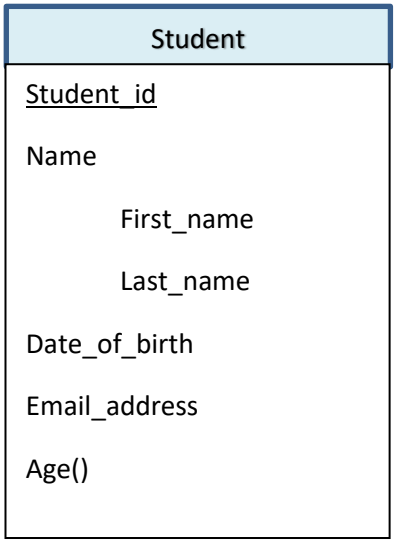
1. A) Initial phase - characterize fully the data needs of the prospective database users.

   Second phase – choosing a data model : applying the concepts of the chosen data model; translating these requirements into a conceptual schema of the database; a fully developed conceptual schema indicates the functional requirements of the enterprise.

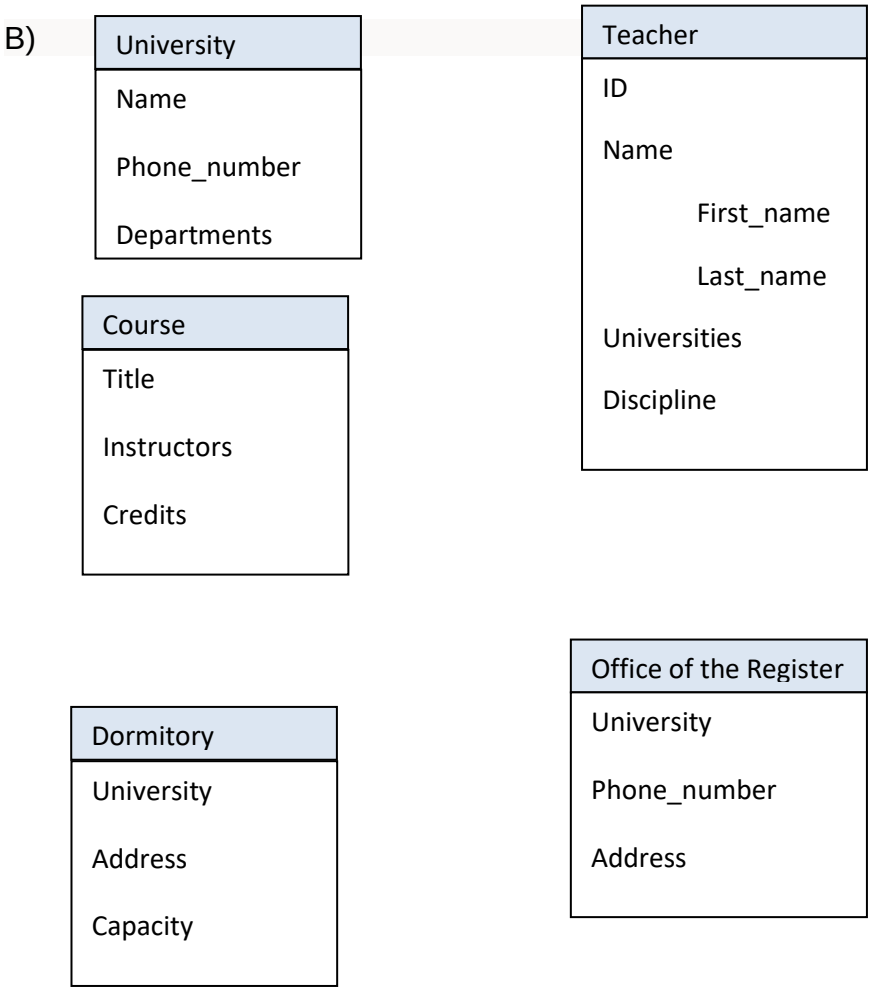
   Final Phase --Moving from an abstract data model to the implementation of the database: Logical Design –Deciding on the database schema; Physical Design – Deciding on the physical layout of the database.

   B) Entity relationship data model – models an enterprise as a collection of entities and relationships.

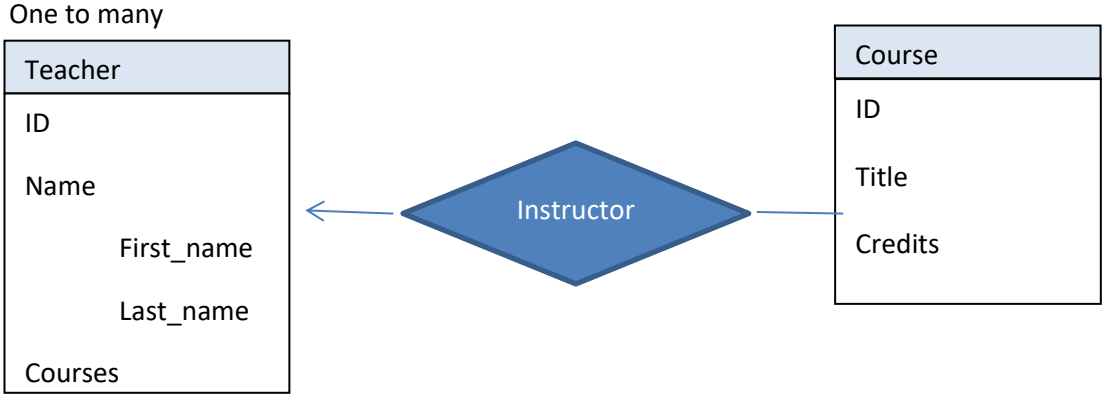
2.A)



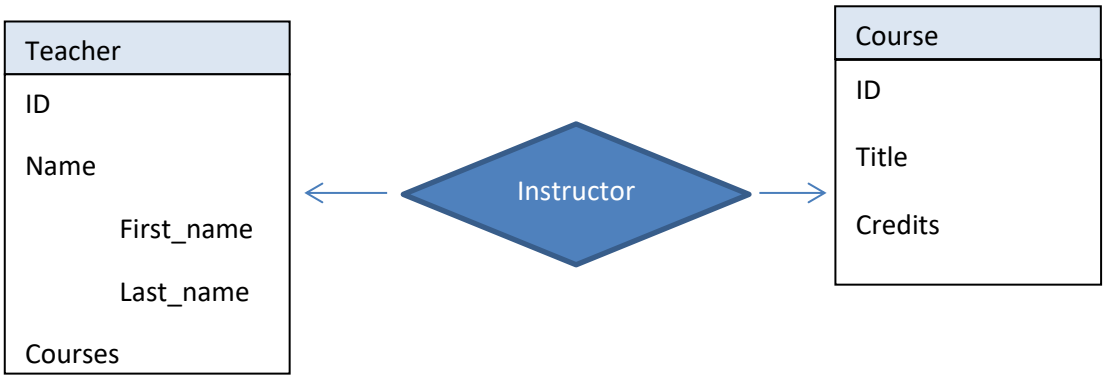
B)



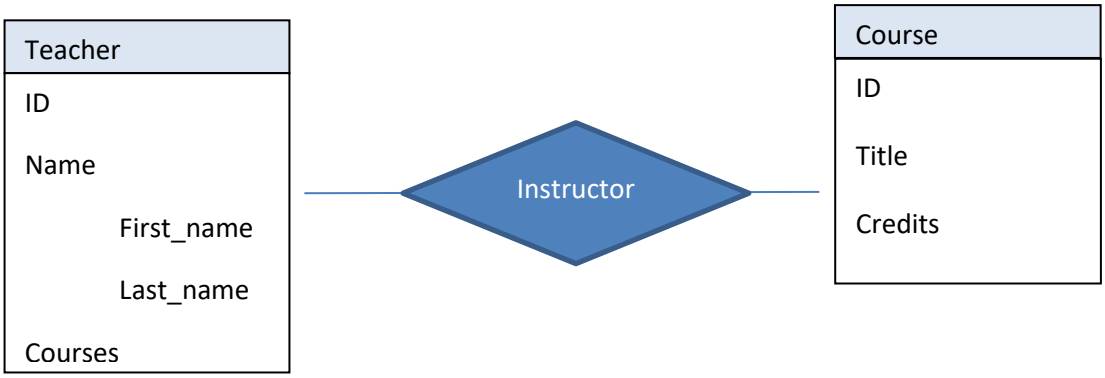
3. One to many



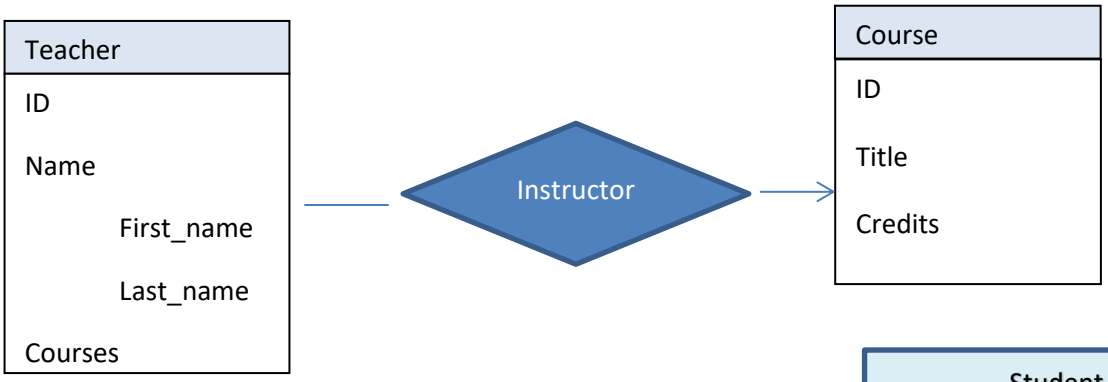
One to one



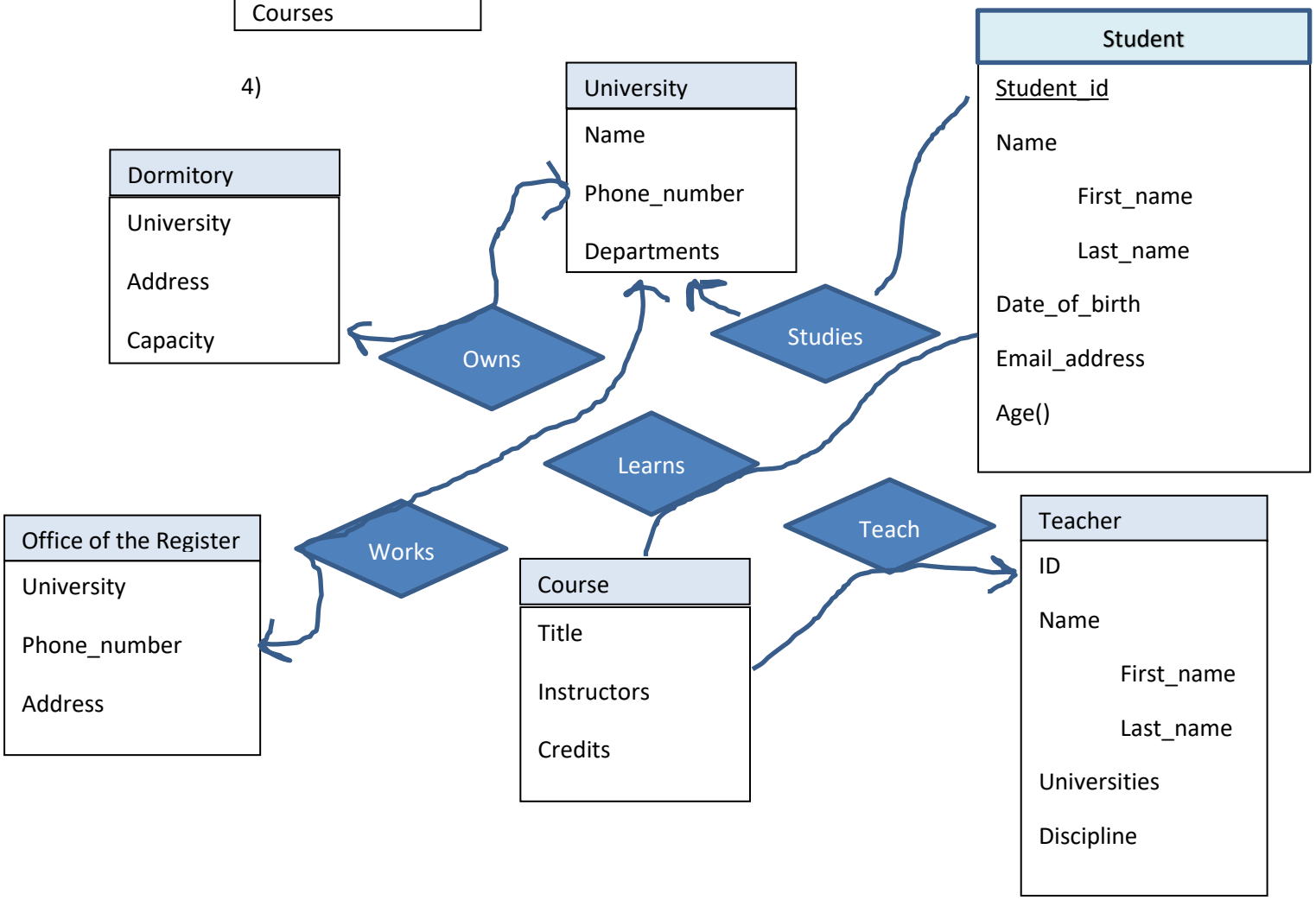
Many to many

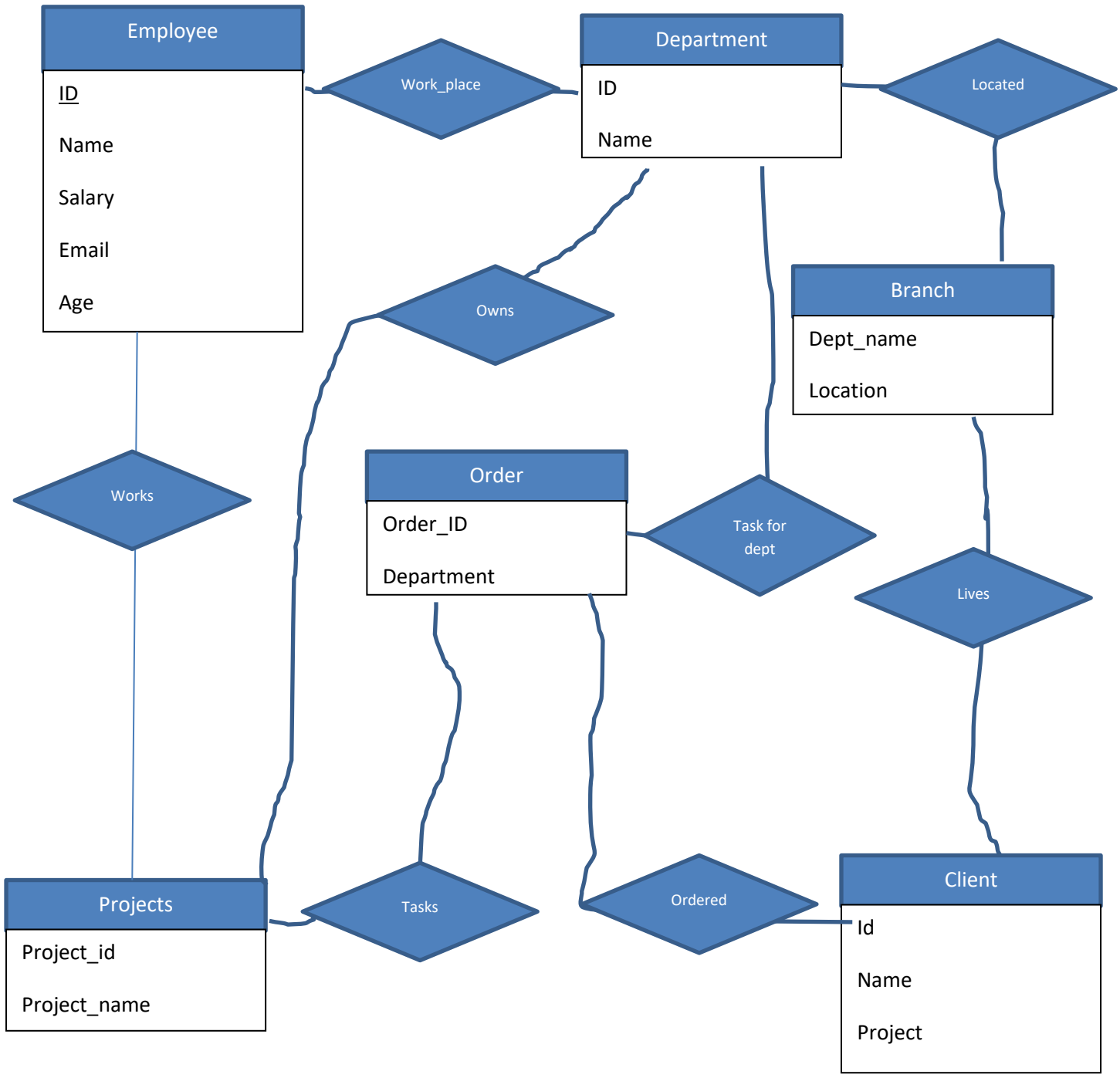


Many to one



4)




Employee
ID
Name
Salary
Email
Age
Work_place
Department
ID
Name
Located
Owns
Branch
Dept_name
Location
Works
Order
Order_ID
Department
Task for dept
Lives
Projects
Project_id
Project_name
Tasks
Ordered
Client
Id
Name
Project