

Ex1

a)

Initial phase – characterize fully data needs for the user;

Second phase – Choosing 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 and physical designs;

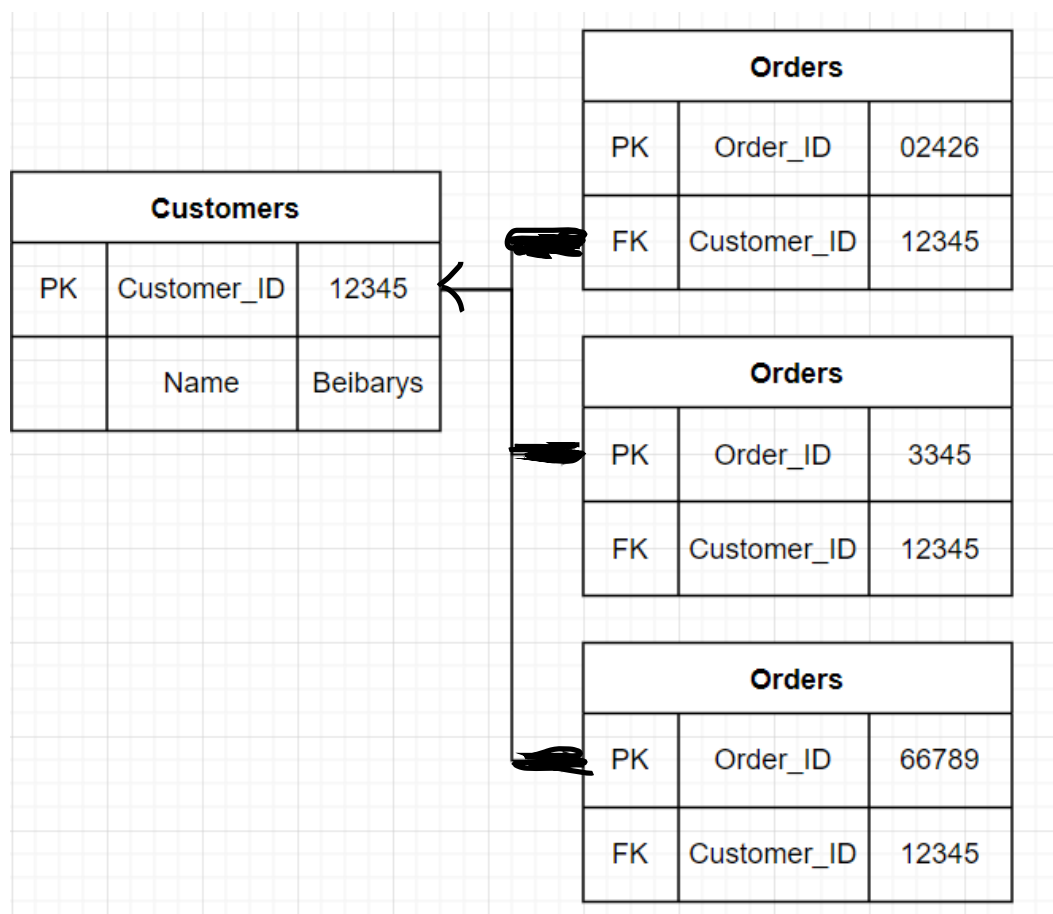
b)ER –

Represented diagrammatically by an entity-relationship diagram

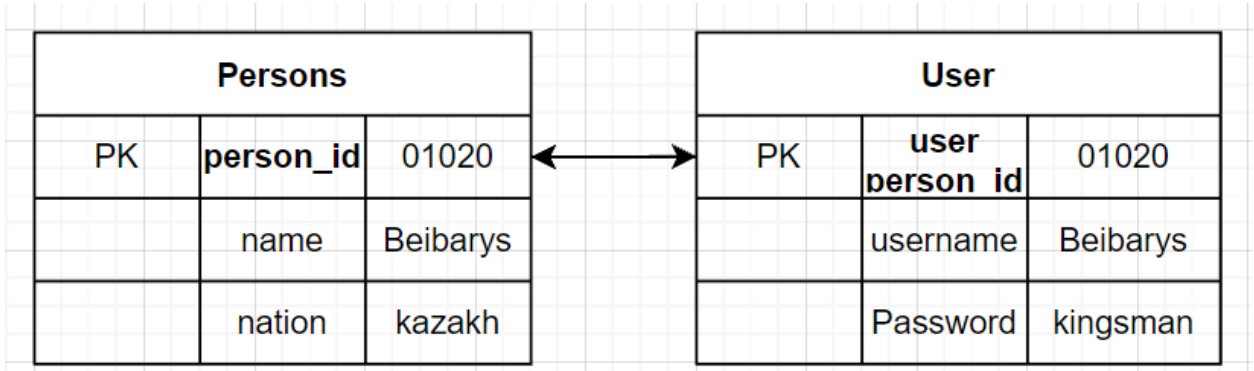
Models an enterprise as a collection of entities and relationships

Ex3

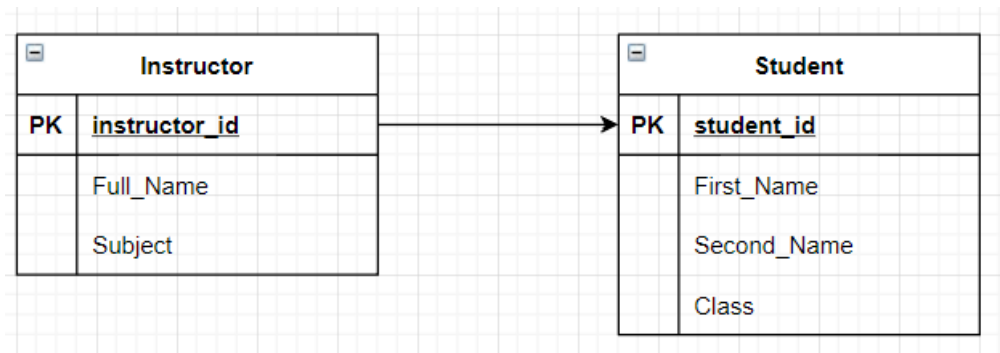
1)One to many relation:



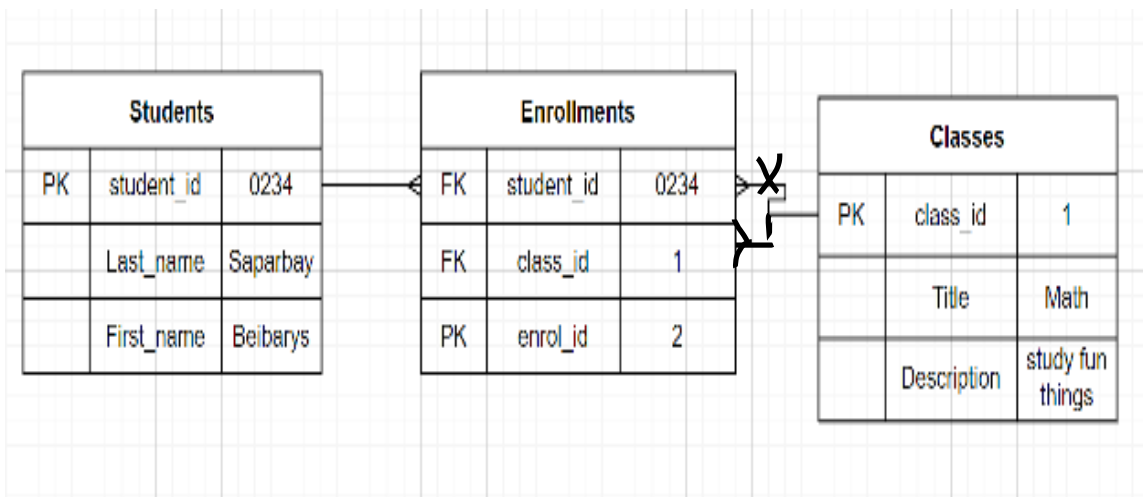
2)One to one relation:



3)Many to one relation:

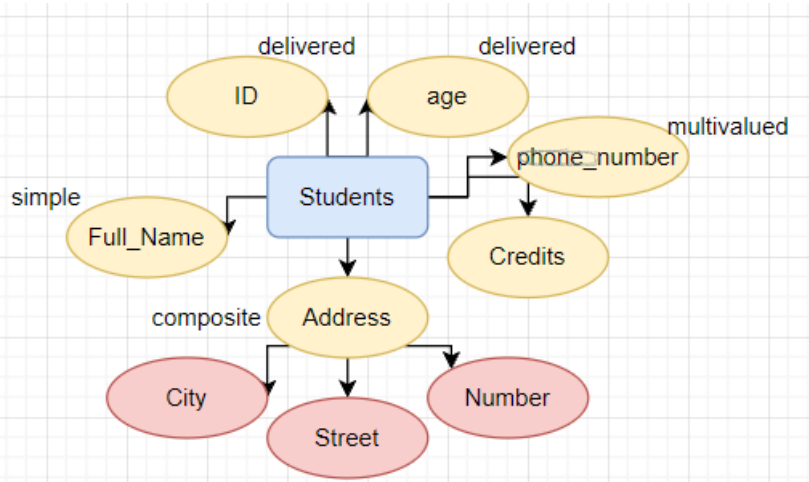


4)Many to many relation:



Ex2

a)



b)

UNIVERSITY
name
address
rating

OFFICE_REGISTRATOR
address
room_number
employee_name

DORMITARY
address
repaired_or_not
cost

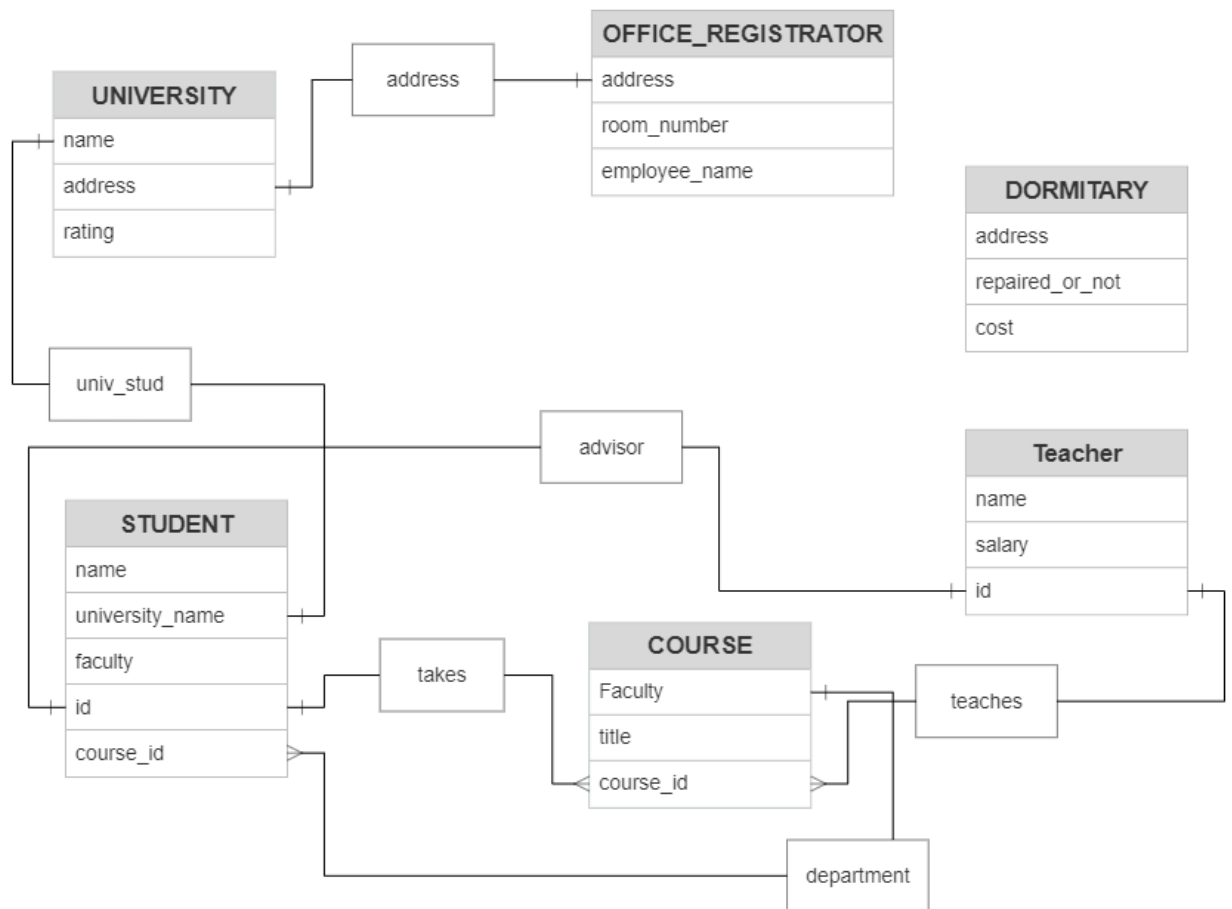
STUDENT
name
university_name
faculty
id
course_id

COURSE
Faculty
title
course_id

Teacher
name
salary
id

advisor
student_id
teacher_id

Ex4



EX5

