

№1

a)

3 phases.

Initial phase - fully characterize the data needs of potential users of the database.

Second phase - choose a data model

1. Applying the concepts of the chosen data model
2. Translating these requirements into a conceptual schema of the database.
3. A fully developed conceptual schema indicates the functional requirements of the enterprise.
4. 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

1. Logical Design – Deciding on the database schema.
2. Database design requires that we find a “good” collection of relation schemas.
3. Business decision – What attributes should we record in the database?
4. Computer Science decision – What relation schemas should we have and how should the attributes be distributed among the various relation schemas?
5. Physical Design – Deciding on the physical layout of the database

b)

Entity Relationship Model (covered in this chapter)

1. Models an enterprise as a collection of entities and relationships
2. Entity: a “thing” or “object” in the enterprise that is distinguishable from other objects
3. Described by a set of attributes

№2.

N)

Student
<u>id</u>
<u>name</u>
first name
<del>sec</del> last name
date of birth
age
address
city
street
e mail
telephone number

b)

University
<u>ID</u>
name
year-price

Course
<u>ID-course</u>
title
credits

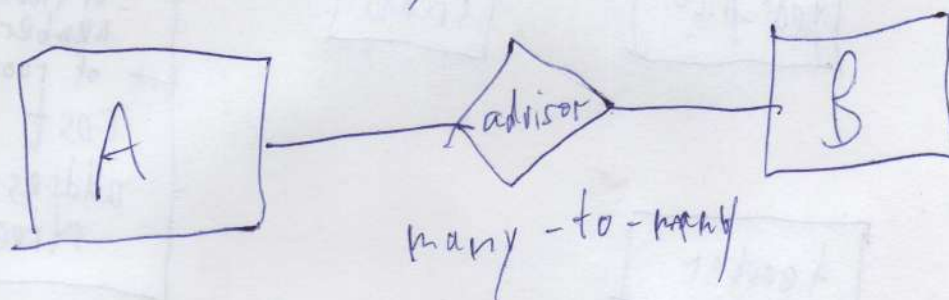
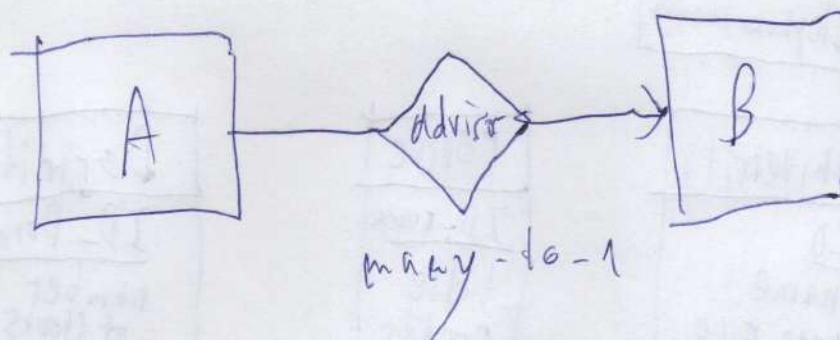
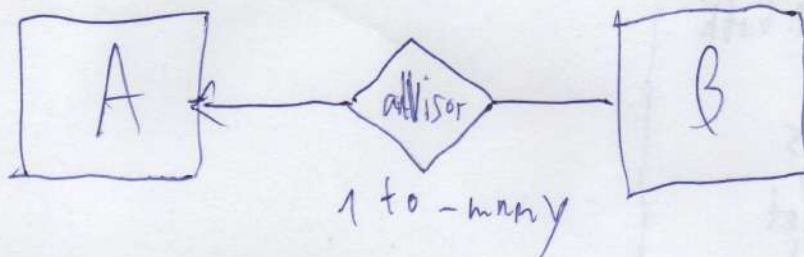
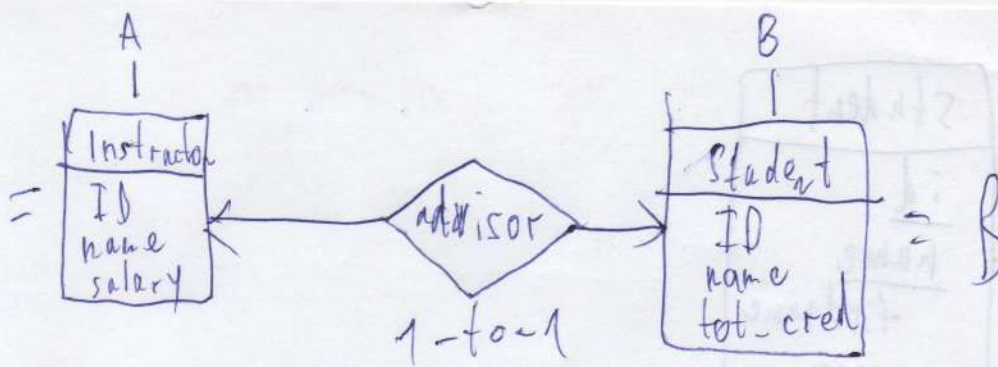
Dormitory
<u>ID-Dormitory</u>
number of floors
number of rooms
cost
address
street

Teacher
<u>teacher_id</u>
name
{course-id}

Bot R
<u>ID-university</u>
student_id
student name
student_fn
student-sn

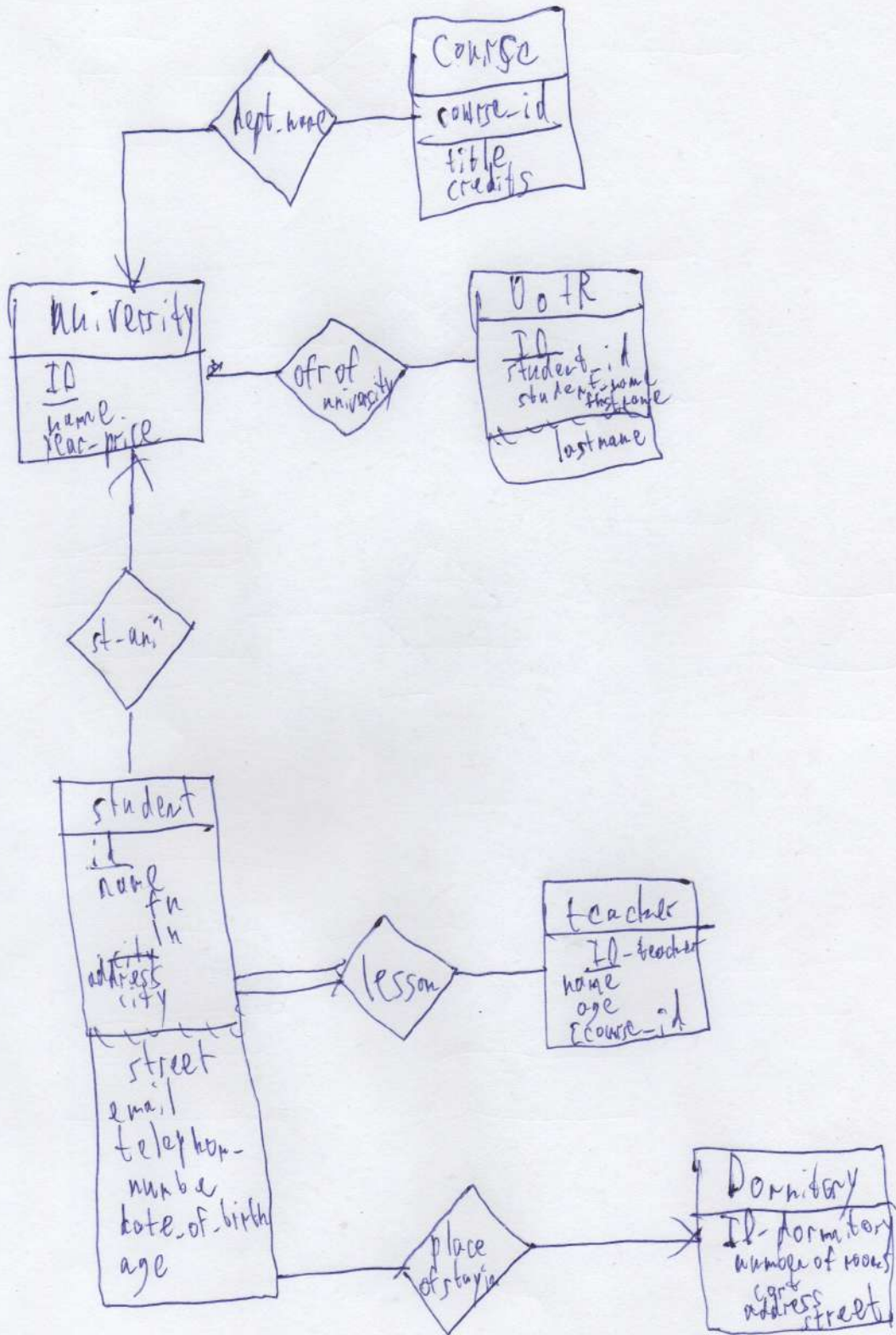
3)

A





Nº 4.



N=5.

