

Laboratory work 4

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

- 1) Initial phase - characterize fully the data needs of the prospective database users.
- 2) Second phase - choosing a data model.
- 3) Final phase - Moving from an abstract data model to the implementation of the database.

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

Entity-relationship data model is a high-level conceptual data model diagram. ER helps to systematically analyse data requirements to produce a well-designed database.

ER is based on two concepts:

1. entities (data)
2. relationships.

2a.

student
ID
name
address
street
house
age
{phonenumber}

2b.

University
name
students
faculties

COURSE
name
professors
credits

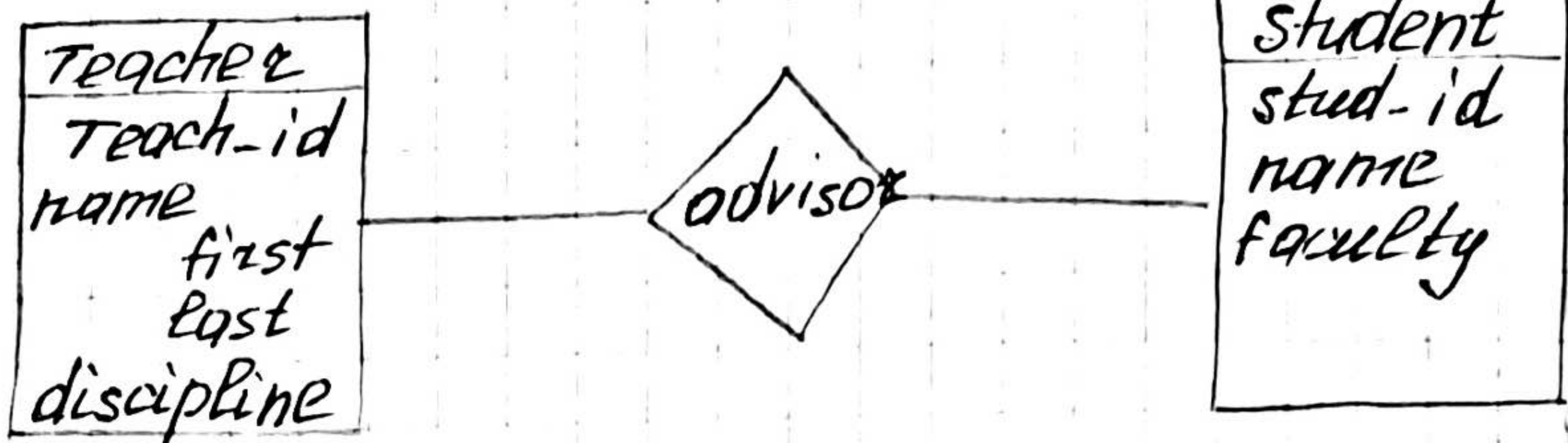
Dormitory
address
place-num
cost

Teacher
ID
name
first
last
salary

OR
name
{phone}
{email}

3

1) One to one



2) One to many



3) Many to many



4. Create ER data model with relations using from 2-nd task.

University

name

students

faculties

give-places

Dormitory

address

place_num

cost

teach in

Teacher

ID

name

first

last

salary

teach

Course

name

proffesors

credits

work in

OR

name

{phone}

{email}