a. Phase-1
This phases focuses on collecting requirements from users. This is only possible when the user has a clear view of his needs. If the user is not clear about his needs, entires process can go off track
I. Data model requirements like ER model or UML model
II functional requirements
This involves daily-to-day tasks and operations undertaken by enterprise.

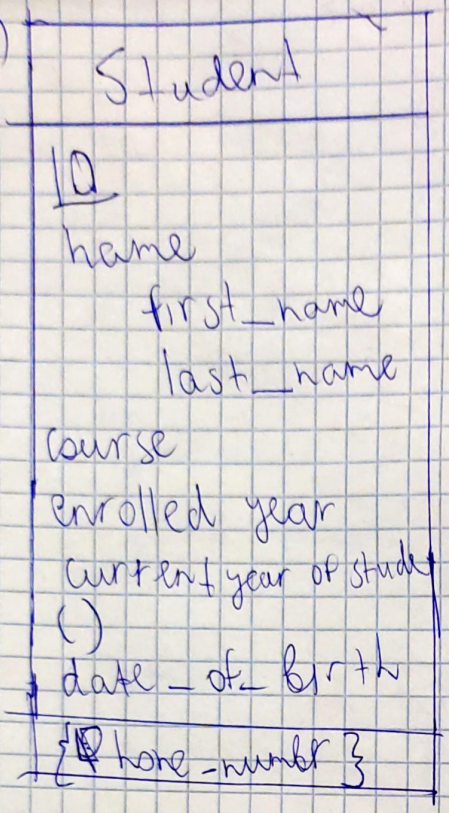
Phase-2
Conversion phase
We need to convert the data model into a representational level model such as RDM and choose a RDBMS system to create database

Phase-3
functional requirements to application programs conversion
High-level languages like C++, python are used with SQL to comm. with the databases and modify them, to capture all records of activities.

b. Its an enterprise schema that represents the overall structure of a database which involves three basic concepts entity, relationship and attributes

2.

a)



b)

University
name
rectors' name
{departments}
{faculties_offered}

Course
course_id
dept_name
title
credits

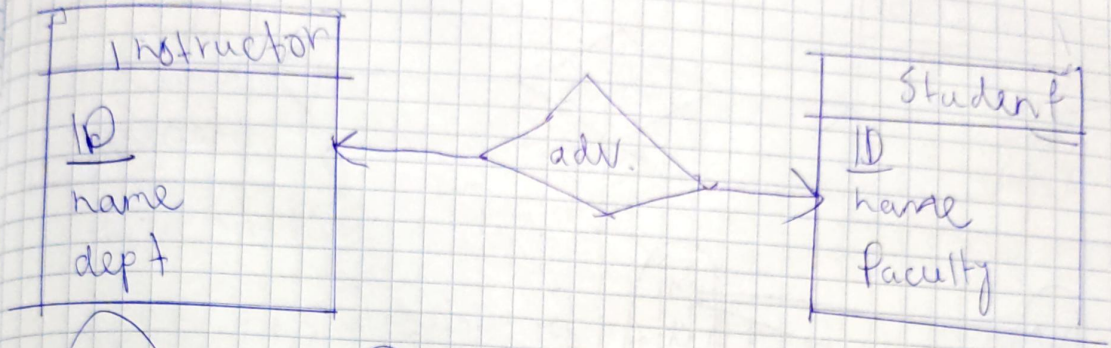
Dormitory
university.name
location
city
adress
number_of_subd.

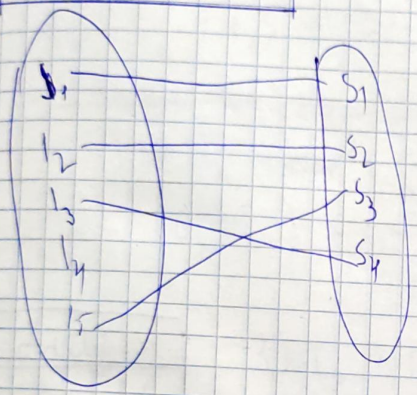
teacher
inst_id
name
{lang_speaks}
salary

office_of_the_rg
univ.name
room_number
staff_members
dd_director

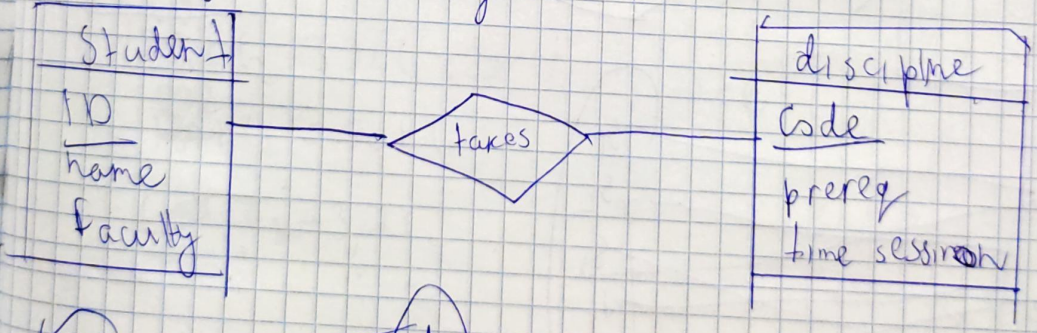
3

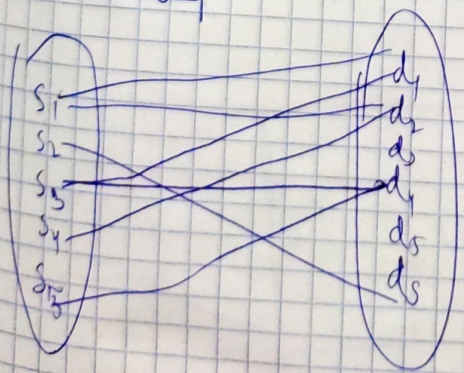
one-to-one





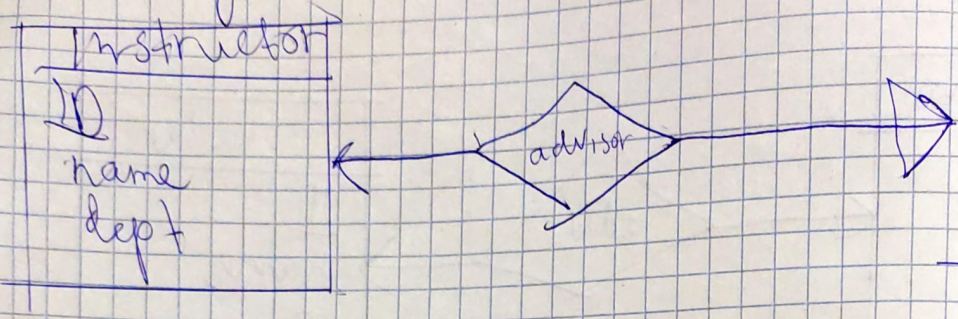
b. many-to-many

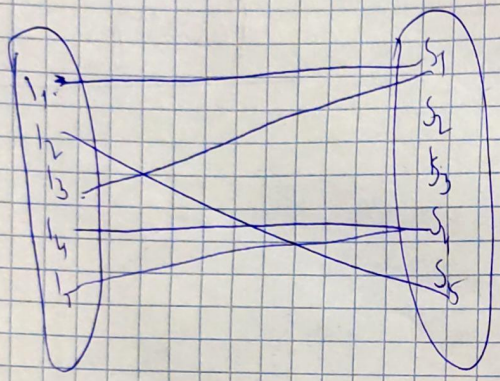




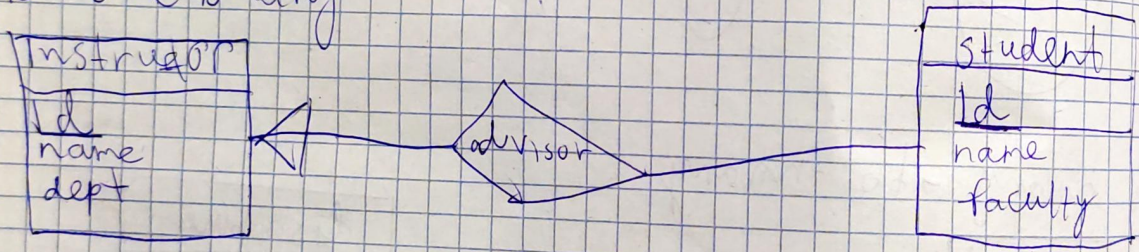
e_of_the_reg
: name
_number
_members
_director

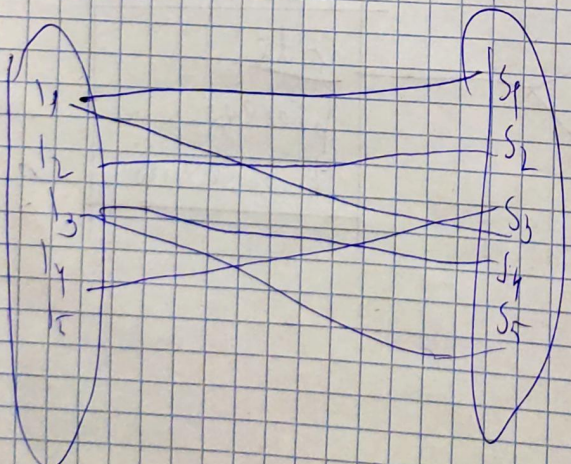
c. many-to-one



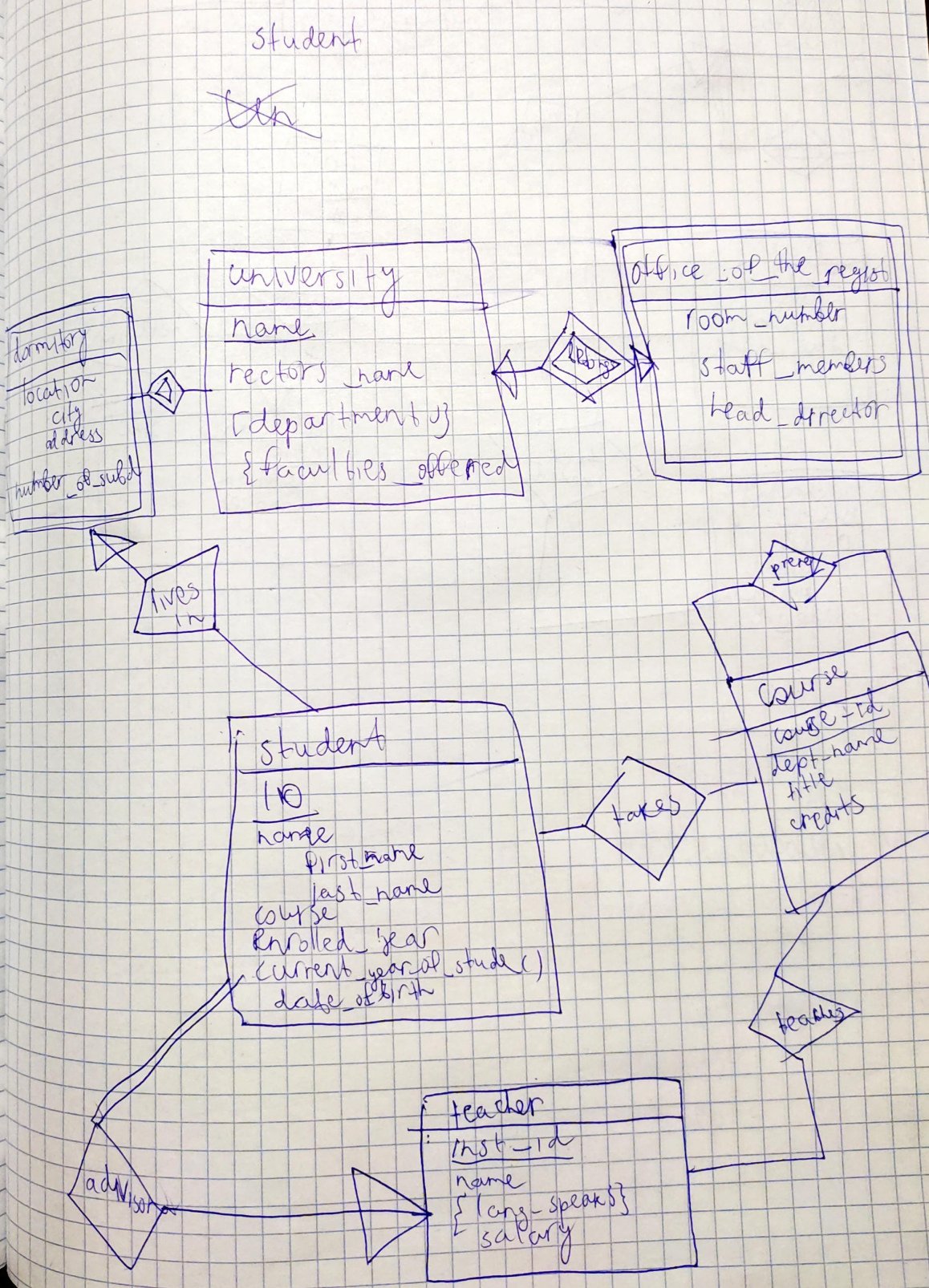


d. one-to-many

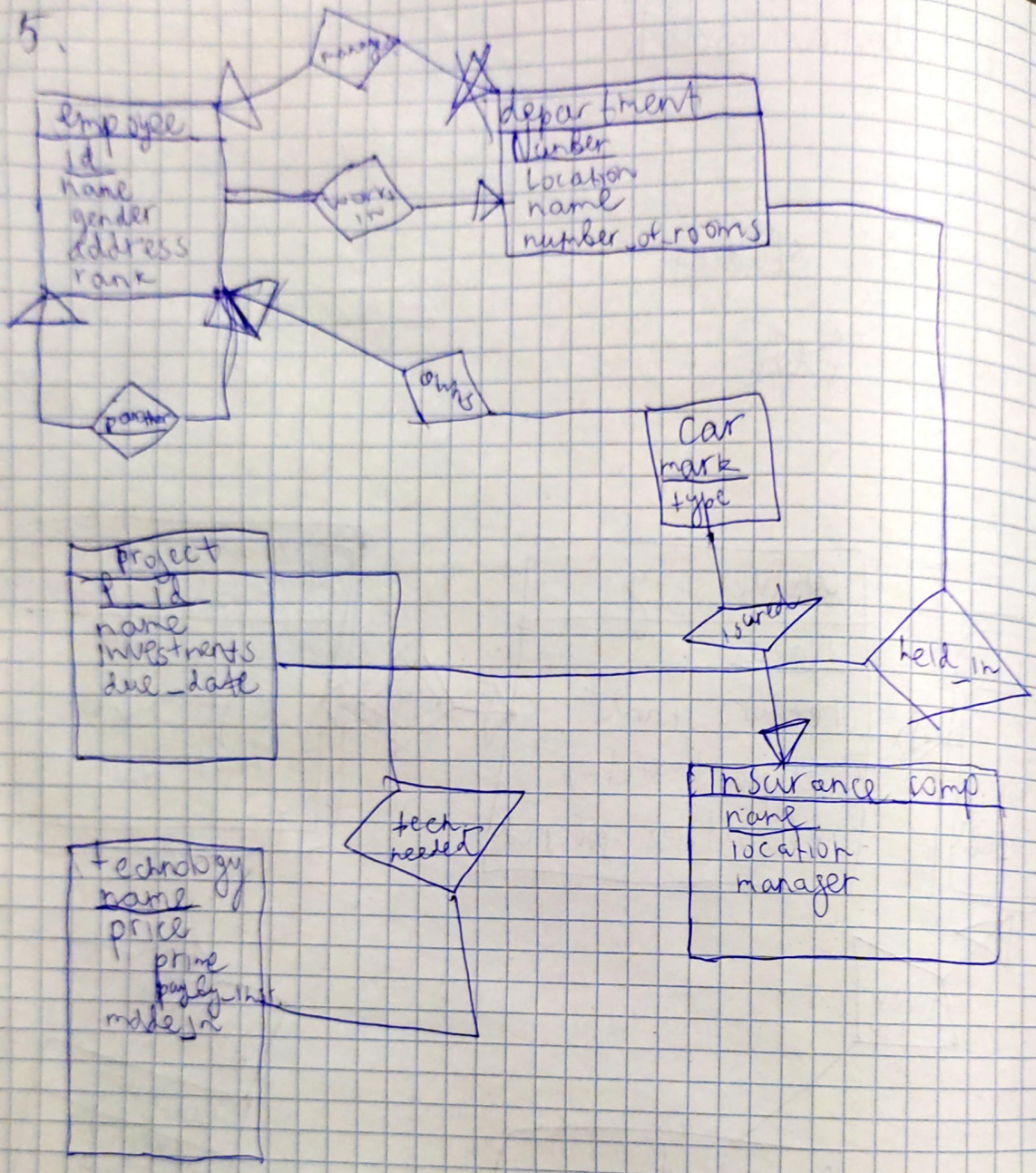




4. ER data model



5.


manages
department
Number
location
name
number_of_rooms
Employee
id
name
gender
address
rank
works in
partner
owns
Car
mark
type
Project
id
name
investments
due_date
insured
held_in
Insurance comp
name
location
manager
tech needed
Technology
name
price
prime
payload_mass
made_in