1)
a) Initial phase - characterize fully the data needs of the prospective database users.
Second phase - choosing a data model
Final phase - Moving from an abstract data model to the implementationof the database
b) An entity–relationship model (or ER model) describes interrelated things of interest in a specific domain of knowledge.
A basic ER model is composed of entity types (which classify the things of interest) and specifies relationships that can
exist between entities (instances of those entity types).

STUDENT
- ID
- Full name
  - First name
  - Last name
- birth_date
- age()
- gpa()
- [phone_number]
- address
  - country
  - city
  - street   house
    - apartment

UNIVERSITY
- university_id
- university_name
- year_of_building
- amount_of_students
- university_location
  - country
  - city
  - street
  - building_num

DORMITORY
- dormitory_id
- total_rooms_num
- free_rooms_num
- repair_rooms_num
- dorm_area
- dorm_address
  - country
  - city
  - street   building_num

Office of the registrar
- employee_id
- employee_name
  - first_name
  - last_name
- gender
- occupation
- work_experience

COURSE
- course_id
- course_name
- num_of_credits
- semestr

FACULTY
- faculty_name
- num_of_students
- dean_name
  - first_name
  - last_name
- year_of_creation

TEACHER
- teacher_id
- teacher_name
  - first_name
  - last_name
- work_experience
- [phone_number]

Relationships:
- Studies at
- University_dormitory
- University_OR
- University_faculty
- Takes
- Faculty_course
- Faculty_teacher
- Teaches

EMPLOYEE

employee_id
employee_name
    first_name
    last_name
gender
work_experience

Works_in

COMPANY

company_id
company_name
address
country
city
street
    building_num

INSTRUCTOR

instructor_id
Full name
    First name
    Last name
birth_date
age
[phone_number]

Advisor

STUDENT

student_id
Full name
    First name
    Last name
birth_date
age
gpa
[phone_number]

POLITICIAN

politician_id
Full name
    First name
    Last name
birth_date
party_name

PRESIDENT

COUNTRY

country_name
population
language
area

HOTEL

Hotel_id
Hotel_name
Address
Country
City
Street
    building_num
avg_price
free_room_num
stars_num

Hotel_room

ROOM

room_num
room_area
room_star
room_floor

OFFICE
office_id
office_name
address
country
city
street
build_num
index
area

Invests

IT COMPANY
company_id
company_name
avg_salary
year_of_starting
num_of_employee
rating

CUSTOMERS
Customer_id
Full name
First name
Last name
budget
customer_company
special requests

Company_Office

Works_in

consist_of

Order

PROJECT
project_id
project_name
expenses
dedline
objectives

Works_on

EMPLOYEE
employee_id
full name
first name
last name
age
work_experience
post
[phone_number]

Works_on

Supervisor

FREELANCERS
freelancers_id
Full name
First name
Last name
Age
Work_experience
[phone_number]

Visor