INTERNATIONAL UNIVERSITY, VNU-HCMC
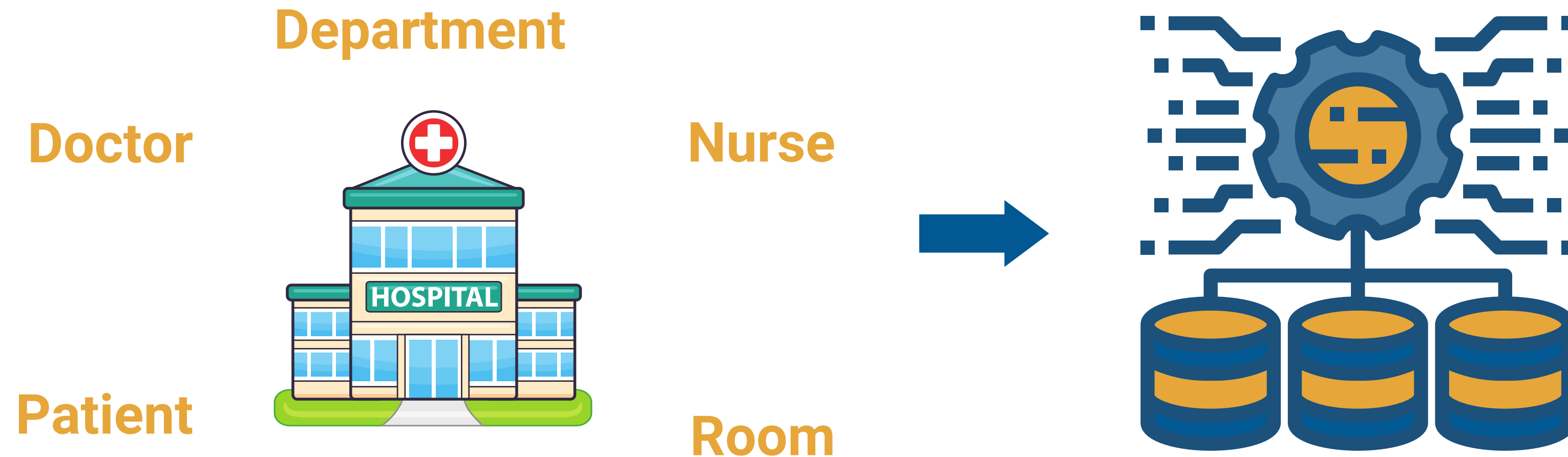
GROUP 07

HOSPITAL DATA MANAGEMENT

Course: Principles of Database Management
Lecturer: Assoc. Prof. Nguyen Thi Thuy Loan

ABOUT PROJECT

GOALS	TECHNOLOGY
Build a database	MySQL Server
Develop an user-friendly application	Node.js React.js

PROJECT ANALYSIS

E-R DIAGRAM

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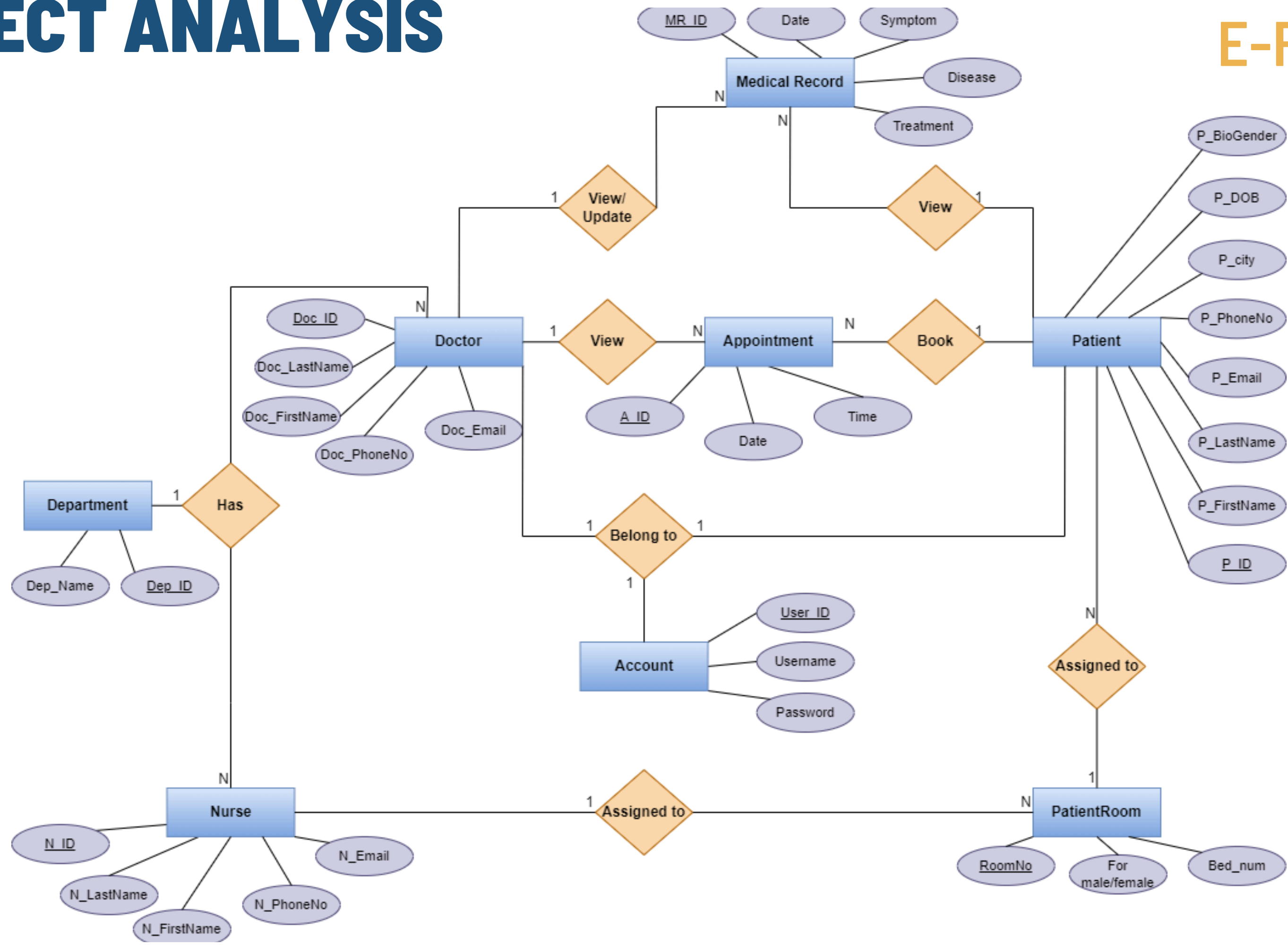
PROJECT ANALYSIS

ENTITIES

1. Department
dep_id INT PRIMARY KEY,
dep_name VARCHAR(100);

2. Account
userid INT PRIMARY KEY,
username VARCHAR(100),
passwo VARCHAR(250),
usertype VARCHAR(50);

3. Patient
p_id INT PRIMARY KEY,
p_name VARCHAR(100) ,
p_phone VARCHAR(10),
p_email VARCHAR(100),
p_province VARCHAR(250),
p_dob DATE,
p_biogender VARCHAR(15);

4. Doctor
doc_id INT PRIMARY KEY,
doc_name VARCHAR(50),
doc_phone VARCHAR(10),
doc_email VARCHAR(200);

5. Nurse
n_id INT PRIMARY KEY,
n_name VARCHAR(50),
n_phone VARCHAR(10),
n_email VARCHAR(100));

6. Appointment
a_id INT PRIMARY KEY,
a_date DATE,
starttime TIME,
endtime TIME,
status varchar(15);

7. MedicalRecord
mr_id INT PRIMARY KEY,
mr_date DATE,
symptom VARCHAR(50),
disease VARCHAR(50),
treatment VARCHAR(50);

8. PatientRoom
room_no VARCHAR(10) PRIMARY KEY,
r_type VARCHAR(1));

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PROJECT ANALYSIS

PROJECT ANALYSIS

RELATIONSHIP RULES

1. **Department - Doctor & Nurse:** (1-n)
   - A department has many doctors and nurses.
   - Each doctor or nurse works in a department only.
2. **Doctor - Patient:** (1-n)
   - A doctor treats many patients.
   - Each patient is treated by a doctor only.
3. **Patient - Appointment:** (1-n)
   - A patient can book many appointments.
   - Each appointment corresponds to a patient only.
4. **Doctor - Appointment:** (1-n)
   - Each doctor can view and update many appointments.
   - An appointment can only be managed by a doctor.

RELATIONSHIP RULES

5. **Patient & Doctor - MedicalRecord:** (1 - n)
   - A patient has only a medical record.
   - Doctors can update or view all their patients' medical records.

6. **Patient - PatientRoom:** (1 - n)
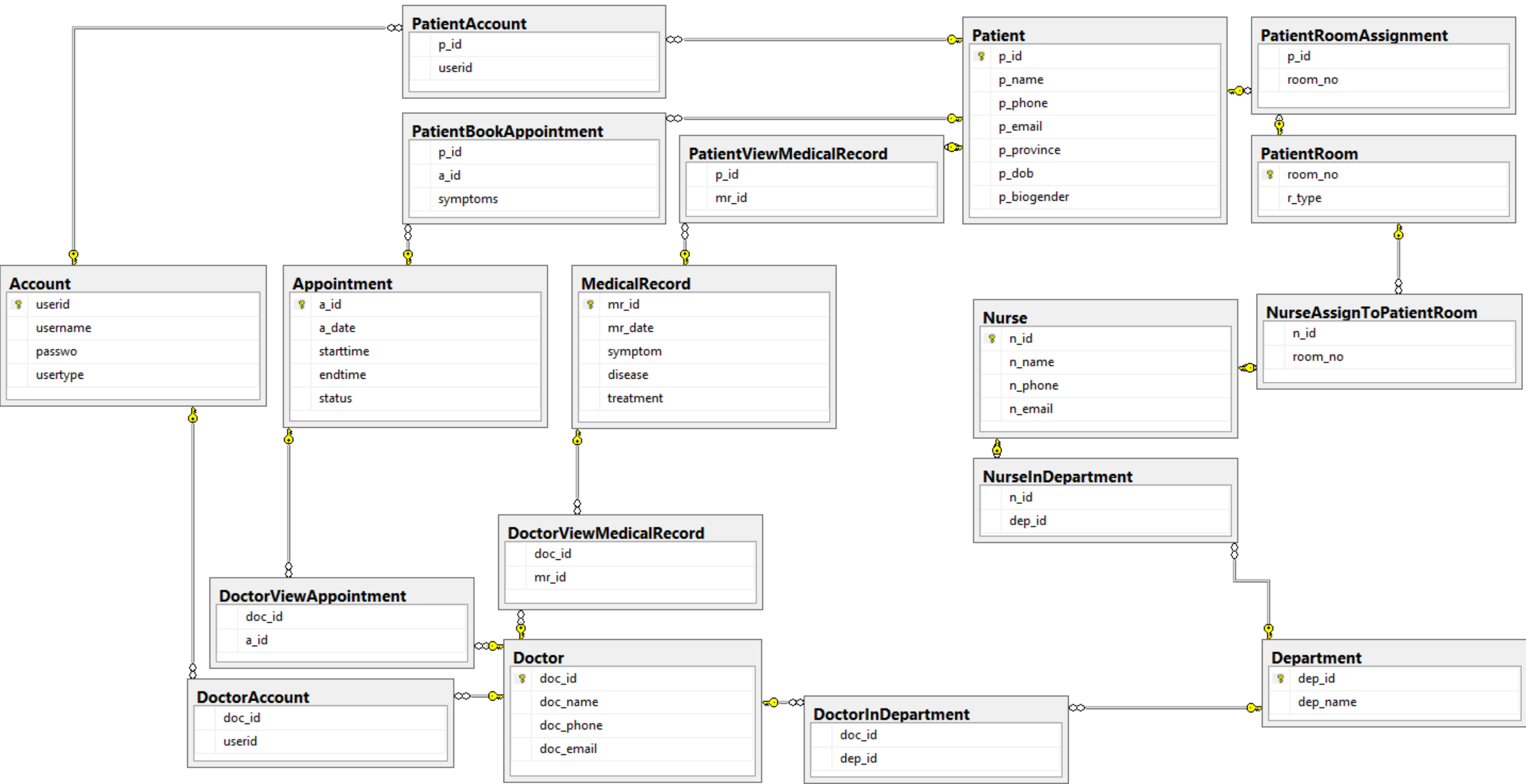   - A patient is assigned to a room only.
   - A room can have many patients.

7. **Nurse-PatientRoom:** (1 - n)
   - A nurse serves many patient rooms.
   - Each patient room is served by a nurse only.

8. **Doctor & Patient - Account:** (1-1)
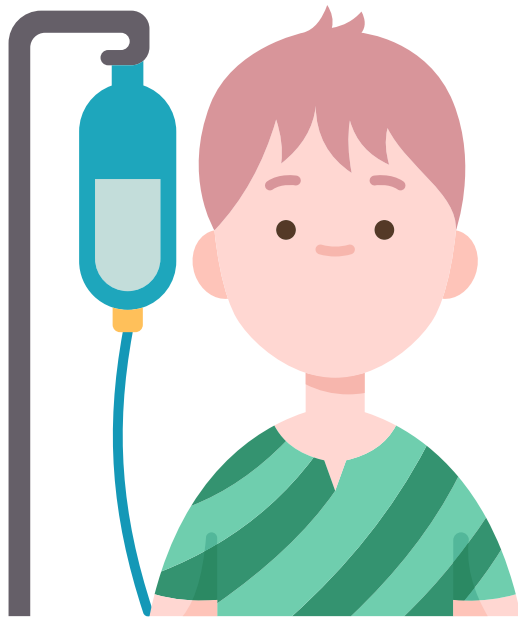   - Every doctor or patient has only an account.
   - An account corresponds to a user only.

PatientAccount
- p_id
- userid

Patient
- 🔑 p_id
- p_name
- p_phone
- p_email
- p_province
- p_dob
- p_biogender

PatientRoomAssignment
- p_id
- room_no

PatientBookAppointment
- p_id
- a_id
- symptoms

PatientViewMedicalRecord
- p_id
- mr_id

PatientRoom
- 🔑 room_no
- r_type

Account
- 🔑 userid
- username
- passwo
- usertype

Appointment
- 🔑 a_id
- a_date
- starttime
- endtime
- status

MedicalRecord
- 🔑 mr_id
- mr_date
- symptom
- disease
- treatment

Nurse
- 🔑 n_id
- n_name
- n_phone
- n_email

NurseAssignToPatientRoom
- n_id
- room_no

NurseInDepartment
- n_id
- dep_id

DoctorViewMedicalRecord
- doc_id
- mr_id

DoctorViewAppointment
- doc_id
- a_id

Doctor
- 🔑 doc_id
- doc_name
- doc_phone
- doc_email

DoctorAccount
- doc_id
- userid

DoctorInDepartment
- doc_id
- dep_id

Department
- 🔑 dep_id
- dep_name

FEATURE 1: REGISTER

1

Sign Up

Check email: exist?

2

Successfull Register

Data Insertion

**Account Table
+
Patient Table**

**Account Table
+
Doctor Table**

FEATURE 2: LOGIN

LOGIN

Check user type →

OR

FEATURE 3: SCHEDULE APPOINTMENT

Book Appointment → Add new data →

**Appointment Table
+
PatientViewAppointment Table
+
DoctorViewAppointment Table
+
MedicalRecord Table
+
PatientViewMedicalRecord Table**
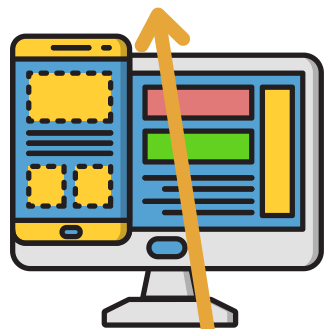
FEATURE 3: VIEW APPOINTMENT

FEATURE 4: VIEW MEDICAL RECORD
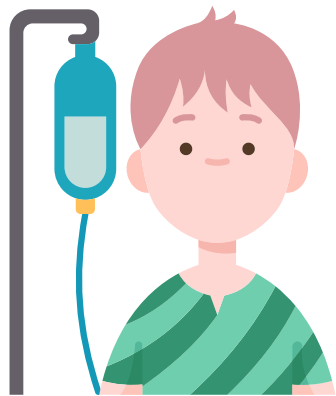
View Medical Record
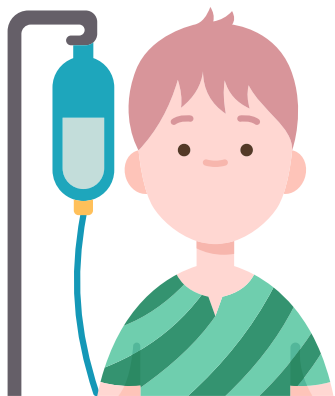
View Appointment → **Query data** → **Appointment Info**

ACHIEVEMENT

✓Built a relational database

✓Achieved the 3NF standards

✓Developed an application

FUTURE WORK

Improve Database:

✓Remove unnecessary tables

New UI feature:

✓Patient Room Management

✓Payment after Appointment Schedule

MEMBERS

Full Name	ID	Role	Responsibility
1. Phạm Lê Thanh Nhàn	ITDSIU20073	Leader	Database, UI
2. Nguyễn Trần Quốc Thịnh	ITITIU20312	Member	Database, UI
3. Huỳnh Nguyễn Quốc Hưng	ITCSIU21183	Member	UI
4. Nguyễn Quốc Hưng	ITITIU21211	Member	UI
5. Bành Vĩnh Thuận	ITITIU21323	Member	Database

THANK YOU!

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