Project objective:

1. Designing a database system to efficiently manage hospital operations, including patient information, doctors details, appointments and departmental structure.

2. Ensuring data integrity and consistency by implementing appropiate constraints and relationships between different entities within the hospital management system.

3. Creating a flexible database to enlist future modifications in the hospital's organizational structure, adding new branches, departments and doctors.

Introduction:
In a hospital, keeping things organized helps doctors, nurses and everyone to take good care and run the system more efficiently. My project that I am proposing is like a helpful organizer for a hospital. This project aims to create a system where information flows - patient names, doctors details and when appointments are scheduled.

This project aims to design a comprehensive database system that organizes essential aspects of hospital operations.

Database Tables:

1. 'hospital-branch' Table:

Attributes: branch_no, location, 'contact_no', 'email'

Relation: Connected to 'department' table through the branch-no foreign key.

2. 'department' Table:

Attributes: dept_id, dept-name, total_doc, dept-head, branch-no.

Relation: Connected to 'hospital-branch' table through the branch-no foreign key. Connected to the 'doctor' table through the dept-id foreign key.

3. 'doctor' Table:

Attributes: doc_code, doc_name, dept_id, designation, contact_no.

Relation: Connected to the 'department' table through the 'dept-id foreign key. Connected to the 'appointment' table through the doc_code foreign key.

4. 'patient' Table:

Attributes: p-id, p-name, gender, age, weight
Relationship: connected to the 'appointment' table through the p-id foreign key.

5. 'appointment' Table:

Attributes: app-si, app-date, app-time, p-id, doc-code.
Relationship: Connected to the 'doctor' table through 'doc-code foreign key. Connected to the 'patient' table through p-id foreign key.
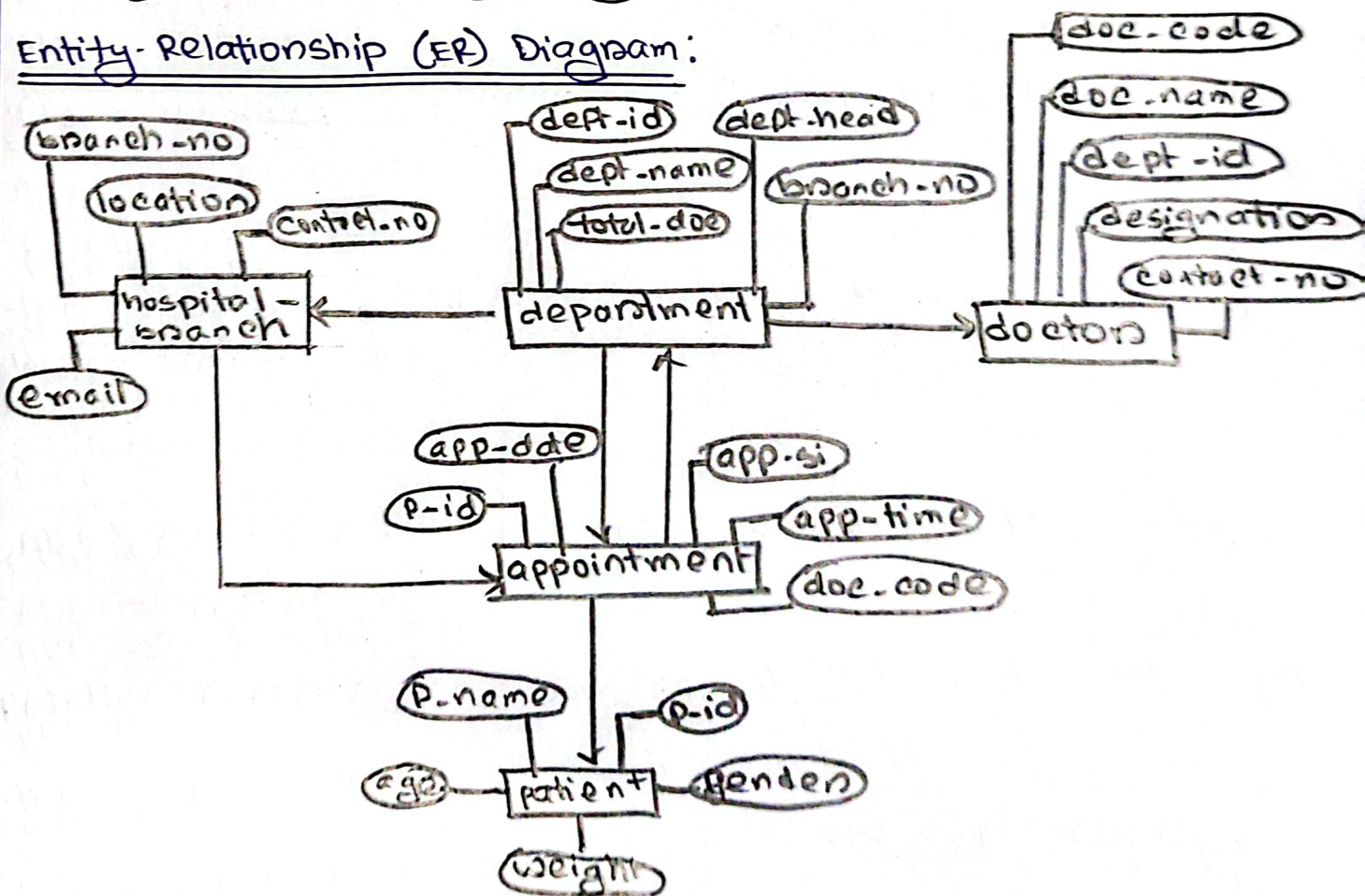
Entity-Relationship (ER) Diagram:

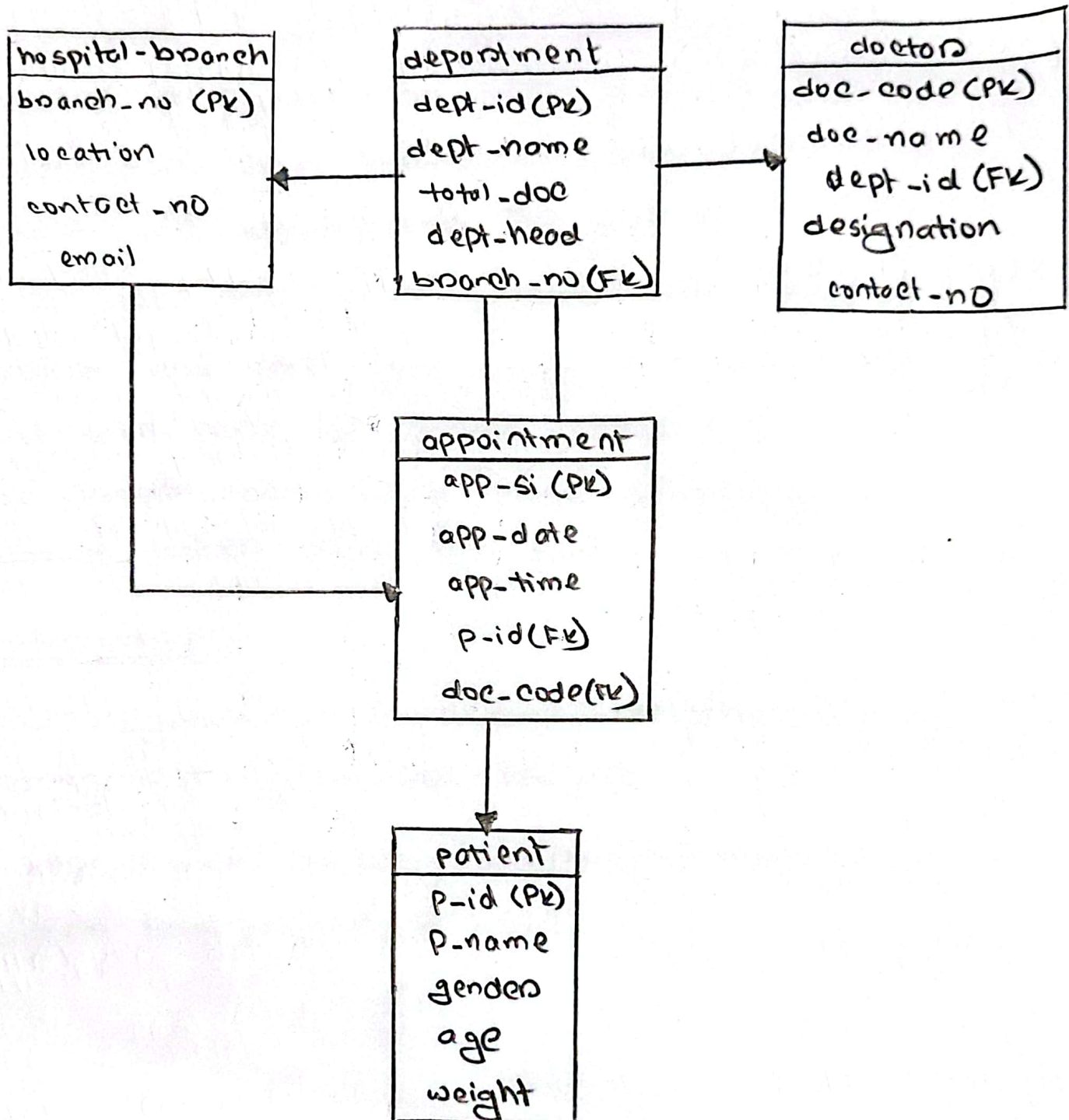Fig: ER diagram of Hospital Management System

schema Diagram:

hospital-branch
- branch_no (PK)
- location
- contact_no
- email

department
- dept-id (PK)
- dept-name
- total_doc
- dept-head
- branch_no (FK)

doctor
- doc-code (PK)
- doc-name
- dept-id (FK)
- designation
- contact-no

appointment
- app-si (PK)
- app-date
- app-time
- p-id (FK)
- doc-code (FK)

patient
- p-id (PK)
- p-name
- gender
- age
- weight

Fig: schema diagram of Hospital Management System.

Conclusion: In a hospital, its important to keep things organized of good patient care. This project created a system that helps hospitals manage information about branches, departments, doctors, patients and appointments. The goal of this project is to make the whole system run smoothly, so doctors and staff can easily find what they need and take care of patients better. With this system, the hospital can work more efficiently and provide better care for people.

References:

1. https://github.com/RushikeshShinde14/Hospital-Database-Management-System-SQL-Project

2. https://www.studocu.com/hospital-management-system-final-project/8250622