Final Report

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Hospital Management Database

Project description:
This project aims at building a database system to manage information about hospitals.

Entity:
1. **Patients**: Id, full name, status, insurance policy, blood type, sex, age, phone number, address, emergency contact, in/out patient, medical history, condition, deceased.
   2. **Doctors**: id, full name, department, phone extension, pager number, specialty, age, rank, gender.
   3. **Reception:** name, id, telephone.
   4. **Clinical Assistant:** name, id, salary, department
   5. **Nurses**: id, full name, department, pager number, age, rank, gender.
   6. **Rooms**: number, department, description, occupied.
   7. **Departments**: head, name, location, extension.
   8. **Diagnosis:** date, remark, number, details, registration.
   9. **Bill**: Doctor Name, Patient name, bill number, amount.
   10. **Medicine**: name, number, price, company.

Relationships:
   1. Patients will have to check up with doctors and attending nurses.
   2. Patients will have to register to reception.
   3. Patients will pay a bill to an accountant.
   4. Patients will have to buy medicine prescribed in the diagnosis.
   5. Patients will stay in a room in a department.
   6. Doctors will work in a department and assigned room(office).
   7. Doctors will have to prescribe diagnosis to a patient.
   8. Nurses will work in a department and with patients.
   9. Accountants are assigned to a room.

Constraints:
   1. Patients have a unique Id.
   2. Patient have many doctors and many nurses and many diagnoses and bills and accountants and medicines.
   3. Patients have to be either In or out patients.
   4. Patients have only one room and one department if they are In patients.
   5. Doctors have unique Id.
   6. Doctors have only one department and room.
   7. Doctors will have many diagnoses and many patients.
   8. Nurses have a unique Id.
   9. Nurses are have only one department.
   10. Nurses will have many patients and many doctors.
   11. Accountants have unique Id.
   12. Accountants have many Bills and many patients.
   13. Accountants have only one room.
   14. Medicine have unique number.
   15. Medicine have many patients and diagnoses and doctors
   16. Bills have unique bill number.
   17. Reception has unique Id.
   18. Reception has only one room.
   19. Rooms have unique number and department.
   20. Rooms have only one occupant.
   21. Departments have unique name.
   22. Diagnoses has unique number.

Sample Queries:

1. List of patients treated by some doctor.
2. List of patients with a specific diagnosis.
3. List of any entity ordered according to any possible attribute
4. List of nurses in a department.
5. List of deceased patients.
6. List of patients in a department.
7. List of patients that took a specific medicine
8. Statistics for bills
9. List of patients that have same doctor, nurse and diagnosis
10. List of medicine prescribed by the same doctor.

I have created a multiple page website hosted locally that runs multiple queries to demonstrate the functionality of our project.

the interface provides the following functionalities:
- View a list of all patients
- Multiple Views that contains all info of the hospital (names of all Employees and departments)
- View a list of all doctors (in departments)
- View a list of prescribed medications
- Add a patient/doctor/medication
- Change (update) patient/doctor information
- CRUD operations for all tables
- Search function that searches the hospital given any field.