Group Number-7

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Hospital Data Management System

Scope of Database:

This is a database system allows you to access and store details of hospital and its medical facilities. Our task is to provide systematic record of patients, doctors, rooms, and pharmaceutical drugs related to the hospital. Database requirements for the same are given below.

Description/Requirements:

Database will contain primary details of patients, doctors, staff members and pharmacy.

- Hospital may have many patients identified with their unique id.
- Each patient will have name, dob, contact number, blood group, disease type, id, gender.
- There will be two types of patients: in patient and out patient, in patient will be assigned a room in hospital.
- Each entry of patient will be recorded in the database.
- Doctors will have name, mobile number, specialty, dob, status.
- Staff will have id, name, mobile number, type, status, and gender.
- Data of laboratory checkup will be stored in the database. It will contain details such as patient id, type of test, lab number and Date&Time.
- Database will also contain data of patients who have been donated blood and amount of blood.

- Blood Bank entity will store the data of amount of blood preserved in the blood bank of hospital.
- Each entity of type Blood Transfusion will be connected to a single entity of Blood Bank entity.
- Bill will contain patient id, Date&Time, room charge, laboratory charge, medicine charges operation charge and other charges.
- The data of medicines which are available at the hospital will be saved in the database.
- Rooms will have their unique number, number of beds it has, number of patients.
- A room can have one or more than one patient depending on its type. It is possible that a room is vacant.
- More than one patient can be admitted to one room.
- If any operation happens in the hospital, then the details of the operation such as doctors evolved in it, patient, operation type, and its timing will be saved in the database.
- One patient can be treated by one or more than one doctor during an operation.
- Prescriptions mentioned by the doctors to the patients will be saved.
- All the data will be updated regularly by the operational staff.

Entities

1) Patient

- Id (Adhaar number)
- name
- gender
- Disease
- Mobile Number
- dob
- Blood group
- Type (Inpatient or outpatient)
- Days admitted (for inpatient)

2) Doctor

- Id (Adhaar number)
- name
- Mobile num
- Specialty
- Status (still working or not)
- Type
- Dob

3) Staff

- Id (Adhaar number)
- Name
- Gender
- Type
- Mobile number
- Status (still working or not)
- Dob

4)Medicine

- Medicine Id
- Medicine Name
- Company name
- Cost per unit
- Amount in a unit
- Amount available

5) Room

- Room no

- No of beds occupied
- No of beds
- Patient ids

6) Bill

- Patient id
- Date&Time
- Room charge
- Lab charges
- Blood charges
- Service charge
- Operation charge

7) Lab Reports

- Type
- Lab No
- Patient id
- Date&Time

8) Prescription

- Medicine id
- Patient id
- Morning dose
- Noon dose
- Night dose
- From (date)
- To (date)

9) Blood Bank

- Date
- A+
- A-
- B+
- B-
- AB+
- AB-
- O+
- O-

10) Blood Transfusion

- Date
- Amount given to patient
- Patient ID
- Time

Relationships

1. Inpatient to Room – Admitted to – N to 1 – Total to Partial
2. Inpatient to Blood Transfusion – Transfused to – 1 to N – Partial to Total
3. Blood Bank to Blood Transfusion – Taken from – 1 to N – Partial to Total
4. Patient to Lab Report – Report of – 1 to N – Partial to Total
5. Patient to Bill – to Pay – 1 to N – Partial to Total
6. Patient to Prescription – Prescribed to – 1 to N – Partial to Total
7. Inpatient to Doctor – Operation – M to N – Partial to Partial
8. Medicine to Prescription – Being Prescribed – 1 to N – Partial to Total
9. Doctor to Prescription – Prescribed by – 1 to N – Partial to Total

Queries that the database system should be able to answer: (You can consider this as requirements from application user)

- Given a doctor, one can retrieve the data of patients which have been operated by him/her in an operation.
- One can get a list of patients with similar diseases.
- One can get to know if a particular medicine is available or not in the pharmacy and if available then we can also know in how much quantity it is available.
- Prescriptions mentioned by the doctors to the patients will be saved and will be accessible to patients and nurses.
- Given a doctor id one can retrieve all the details of that doctor.
- Given a patient id one can find if he is currently admitted or not.
- One can find if a room has an empty bed or not.
- One can find patients who are given a particular medicine.
- By the patient ID, one can get the details of his/her lab tests.
- Using patient ID, one can find amount of blood transfused.