**ANP-C7971**

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*ProjectName:* ***Database Design for Hospital Management System***

A HOSPITAL MANAGEMENT SYSTEM (HMS) is a comprehensive software solution designed to streamline and automate various administrative within a hospital. It facilitates the efficient management of patient records, appointments, and medical inventory, improving overall operational efficiency.

HOSPITAL MANAGEMENT SYSTEM

The HMS serves as a centralized database that stores vital information about patients, doctors, nurses, and other staff. This allows for easy access to patient histories, treatment plans, and appointment schedules, ensuring that healthcare providers can deliver timely and effective care.

Additionally, the system enhances communication among departments, reduces paperwork, and minimizes errors associated with manual data entry. It often includes modules for managing laboratory tests, radiology, and pharmacy services, further integrating various hospital functions.

By improving data management and accessibility, an HMS ultimately leads to better patient outcomes, enhanced service quality, and increased satisfaction for both patients and healthcare providers. Its implementation is crucial for modern healthcare facilities aiming to deliver efficient and high-quality medical services.

**Entities:**

* Patient
* Receptionist\_
* Doctor
* Medical
* Treatment
* HsptlRoom\_
* Nurse
* Billing

**Entity-Relationships:**

**1. Patient:**

* **Relationships:**
  + **Treatment (One-to-Many): A patient can receive multiple treatments.**
  + **HsptlRoom (One-to-Many): A patient can be assigned to multiple hospital rooms over time.**

**2. Receptionist\_:**

* **Relationships:**
  + **Out-Patient (One-to-Many): A receptionist can handle multiple outpatient visits.**

**3. Doctor:**

* **Relationships:**
  + **Medical Record (One-to-Many): A doctor can create multiple medical records.**
  + **Treatment (One-to-Many): A doctor can prescribe multiple treatments.**
  + **Medication (One-to-Many): A doctor can prescribe multiple medications.**

**4. Medical:**

* **Relationships:**
  + **Treatment (One-to-Many): A medication can be part of multiple treatments.**
  + **Doctor (Many-to-One): A doctor prescribes medications.**

**5. Treatment:**

* **Relationships:**
  + **Patient (Many-to-One): A treatment is assigned to a specific patient.**
  + **Medication (Many-to-Many): A treatment can involve multiple medications, and a medication can be used in multiple treatments.**

**6. HsptlRoom\_:**

* **Relationships:**
  + **Patient (One-to-One or One-to-Many): A patient can occupy one room at a time, but a room can have multiple patients over time.**
  + **Nurse (One-to-Many): A nurse can be assigned to multiple hospital rooms.**

**7. Nurse:**

* **Relationships:**
  + **HsptlRoom (One-to-Many): A nurse can be assigned to care for multiple rooms.**
  + **Treatment (One-to-Many): A nurse may assist in multiple treatments.**

**Entities and Attributes:**

**1. Patient**

* + **Patient ID (PK)**
  + **Name**
  + **Age**
  + **Gender**
  + **Diagnosis**
  + **PhoneNo**
  + **Address (Village & City)**

**2. Receptionist**

* + **Receptionist ID (PK)**
  + **Patient ID (FK)**
  + **Doctor ID (FK)**
  + **Name**
  + **PhoneNo**
  + **Hire Date**
  + **Shift Schedule**
  + **Salary**

**3. Doctor**

* + **Doctor ID (PK)**
  + **Name**
  + **Specialty**
  + **PhoneNo**
  + **Availability Schedule(Mng &Evng)**

**4. Medical**

* + **Medication ID (PK)**
  + **Name**
  + **Dosage**
  + **Prescribing Doctor ID (FK)**
  + **MFD**
  + **EXD**
  + **Price**

**5. Treatment**

* + **Treatment ID (PK)**
  + **Patient ID (FK)**
  + **Doctor ID (FK)**
  + **Treatment Date**
  + **Treatment Name**
  + **Follow-Up Required (Yes/No)**
  + **TreatmentCost**

**6. HsptlRoom**

* + **Room ID (PK)**
  + **Patient ID (FK)**
  + **Nurse ID (FK)**
  + **RoomType (ICU/Private-Room/General Ward)**
  + **Capacity (Member’s)**
  + **Occupied Status (Yes/No)**
  + **Cost**

**7. Nurse**

* + **Nurse ID (PK)**
  + **Name**
  + **Patient ID (FK)**
  + **Doctor ID (FK)**
  + **PhoneNumber**
  + **Salary**

**8. Billing**

* + **Billing ID (PK)**
  + **Patient ID (FK)**
  + **Billing Date**
  + **Payment Method (Cash,Credit Card)**
  + **Total Amount**
  + **Payment Status (Paid,Unpaid)**
  + **PhoneNo**

These attributes provide comprehensive information for each entity in the Hospital Management System, ensuring efficient data management and retrieval.

**ENTITY RELATIONSHIP DIAGRAM - HOSPITAL MANAGEMENT SYSTEM**

Nurse  
ID

PhnNo

Availability  
Schedule

PhnNo

Specialty

Name

D\_ID

Shift  
Schedule

HireDate

PhnNo

Name

Doctor  
ID

Patient  
ID

R\_ID

Salary

Address

PhnNo

Diagnosis

Gender

Age

Name

Patient  
ID

Treatment  
Name

FallowUpRequired

Cost

Treatment  
Date

DoctorID

Patient  
ID

TreatmentID

Medication  
ID

Prescribed  
Doctor ID

Dosage

Price

MFD

EXD

Name

Occupied  
Status

Cost

Capacity

Patient  
ID

Nurse  
ID

Room-  
Type

Room  
ID

PhnNo

Salary

Doctor  
ID

Patient  
ID

Name

Payment  
Status

Payment  
Method

Total  
Amt

Patient  
ID

Bill  
ID

Bill  
Date

Prescribes

Treatment

Do

Need

Assign

HsptlRoom

Has A

Appointment

Doctor

Reception

Approch

Patient

Pay

Billing

Care

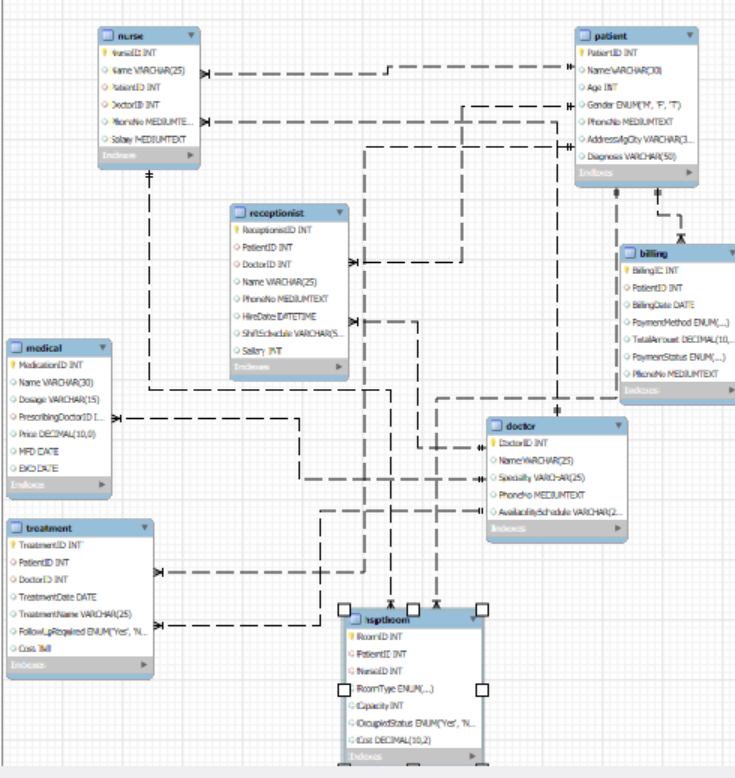
Assists

Nurse

Medical

Has

**ERR - DIAGRAM**

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