[Hospital Database Management System (DBMS)]

Project submitted to the
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for the partial fulfilment of the requirements to award the degree of

Bachelor of Technology
In
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HOSPITAL DATABASE MANAGEMENT SYSTEM

Abstract

In modern healthcare settings, hospitals face the challenge of managing complex operations efficiently while delivering high-quality patient care. The Hospital Management System (HMS) is a sophisticated software solution that leverages a Database Management System (DBMS) to centralize and digitize various aspects of hospital operations. This abstract explores the integration of different modules within the HMS, each utilizing the DBMS to streamline functions such as patient management, appointment scheduling, inventory control, pharmacy management, laboratory information systems, and billing and invoicing. By facilitating seamless coordination between these modules, the HMS aims to revolutionize hospital operations, improve workflow efficiency, enhance patient care delivery, and ensure compliance with regulatory standards.

Aim

The aim of the Hospital Database Management System is to revolutionize hospital operations by harnessing modern technology to enhance efficiency, improve patient care, and ultimately enhance patient outcomes.

Entity

- It is a “thing” or “object” in the enterprise that is distinguishable from other objects

  Described by a set of attributes
- List of Entities in the database:

1. Patients:

- This entity stores information about the individuals who receive medical care at the hospital.
- Each patient has a unique identifier called PatientID.
- For each patient, we record details such as their Name, Age, Gender, Contact (phone number), and Problem (what health problem they have).

2. Doctors:

- This entity represents the medical professionals who provide care at the hospital.
- Each doctor has a unique identifier called DoctorID.
- For each doctor, we record details such as their Name, Age, Specialization (the area of medicine they focus on), Salary, and Contact.

3. Appointments:

- This entity keeps track of scheduled meetings between patients and doctors.
- Each appointment is uniquely identified by an AppointmentID.

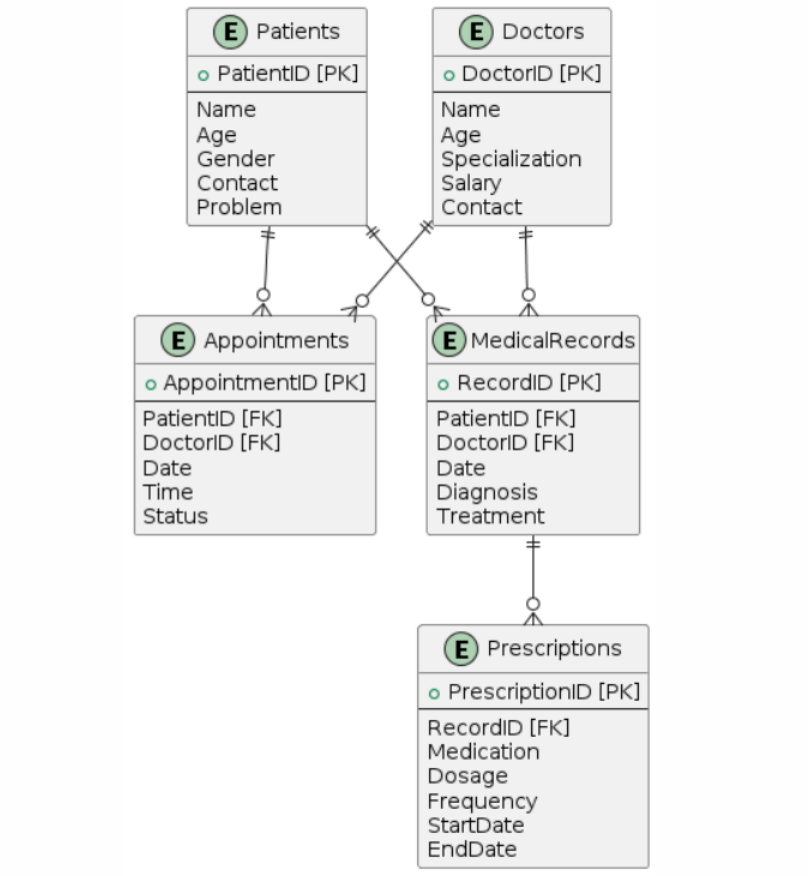
- For each appointment, we record the PatientID (identifying the patient), DoctorID (identifying the doctor), Date, Time, and Status (whether it's Scheduled, Cancelled, or Completed).

4. Medical Records:

- This entity stores detailed information about the medical history and treatment of patients.
- Each medical record has a unique identifier called RecordID.
- For each medical record, we record the PatientID (identifying the patient), DoctorID (identifying the doctor who provided the treatment), Date (when the record was created), Diagnosis (the medical condition or illness diagnosed), and Treatment (the course of action taken by the doctor).

5. Prescriptions:

- This entity records the medications prescribed to patients as part of their treatment.
- Each prescription has a unique identifier called PrescriptionID.
- For each prescription, we record the RecordID (identifying the medical record to which the prescription belongs), Medication (the name of the prescribed medicine), Dosage (the amount of medicine to be taken), Frequency (how often the medicine should be taken), Start Date, and End Date (the duration for which the medicine is prescribed).



Attributes

- They are characteristics of an entity, and has an oval symbol.
- There are different types of attributes:

- Key attribute: An attribute uniquely distinguishes the entity in an entity set.
- Simple attribute: An attribute that cannot be further subdivided into components.
- Composite attribute: An attribute that can be split into components.
- Single-valued attribute: The attribute which takes up only a single value for each entity instance.
- Multivalued attribute: The attribute which takes up more than a single value for each entity instance.
- Stored attribute: An attribute that stores the data which can be used to get the derived attribute.
- Derived attribute: An attribute that can be derived from other attributes.

- Attributes for each entity in the hospital database:

1. **Patient:** PatientId, Name, Age, Gender, Contact, Problem.
2. **Doctor**: DoctorID, Name, Age, Specialization, Salary, Contact.
3. **Appointments**: AppointmentId, PatientId, DoctorId, Date, Time, Status.
4. **Medical Records**: RecordId, PatientId, DoctorId, Date, Diagnosis, Treatment.
5. **Prescriptions**: PrescriptionId, RecordID, Medication, Dosage, Frequency, StartDate, EndDate.

Relationships

- A relationship is an association among several entities

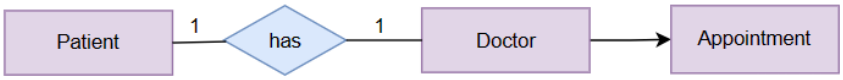
- Relationships for each in hospital database

1. A patient can have medical records.
2. A patient can have a problem.
3. A doctor can have medical records.
4. A doctor can give appointments.
5. An appointment can have a medication.
6. A prescription can have a medication.

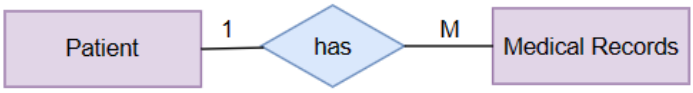
Relations:

1. **Patient has Doctor**
   Relation: has
   Cardinality: many to one

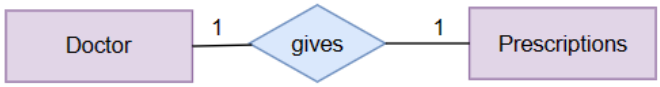
2. **Patient has Doctor Appointment**
   Relation: has
   Cardinality: one to one



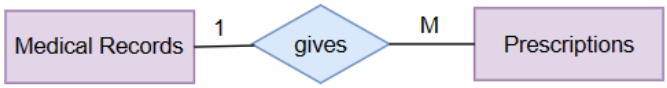
3. **Patient has Medical Records**
   Relation: has
   Cardinality: one to many



4. **Doctor gives Prescription**
   Relation: gives
   Cardinality: one to one



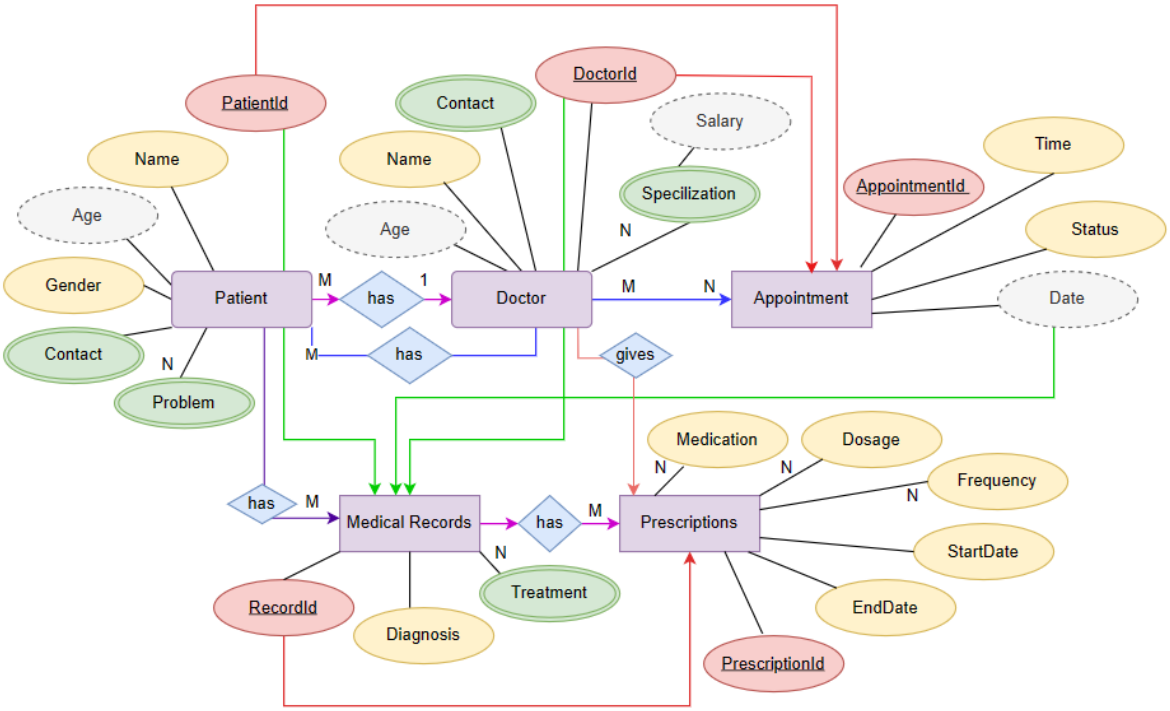
5. **Medical Records have Prescriptions**
   Relation: have
   Cardinality: one to many



E-R Model

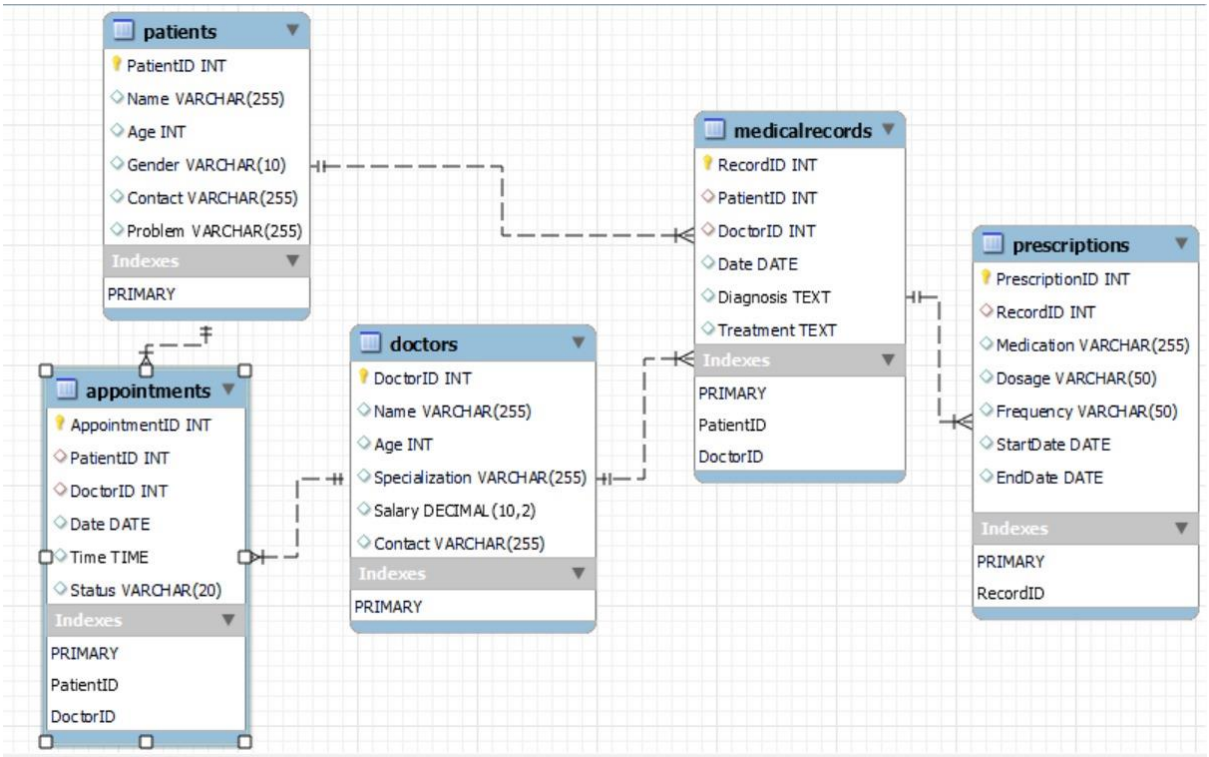
- ER model stands for an Entity-Relationship model.
- It is a high-level data model. This model is used to define the data elements and relationships for a specified system.
- It develops a conceptual design for the database. It also develops a very simple and easy-to-design view of data.

ER Diagram



Relational Diagram

Converting ER model to tables/relations, commonly used, flexible.
Each and every column header is called an attribute. The row header is called a tuple.



Conversion of ER diagram into Tables

Creating Table Patients

```
CREATE TABLE Patients (
   PatientID INT PRIMARY KEY AUTO_INCREMENT,
   Name VARCHAR(255),
   Age INT,
   Gender VARCHAR(10),
   Contact VARCHAR(255),
   Problem VARCHAR(255)
);
```

Creating Table Doctors

```
CREATE TABLE Doctors (
   DoctorID INT PRIMARY KEY AUTO_INCREMENT,
   Name VARCHAR(255),
   Age INT,
   Specialization VARCHAR(255),
   Salary DECIMAL(10,2),
   Contact VARCHAR(255)
);
```

Creating Table Appointments

```
CREATE TABLE Appointments (
   AppointmentID INT PRIMARY KEY AUTO_INCREMENT,
   PatientID INT,
   DoctorID INT,
   Date DATE,
   Time TIME,
   Status VARCHAR(20),
   FOREIGN KEY (PatientID) REFERENCES Patients(PatientID),
   FOREIGN KEY (DoctorID) REFERENCES Doctors(DoctorID)
);
```

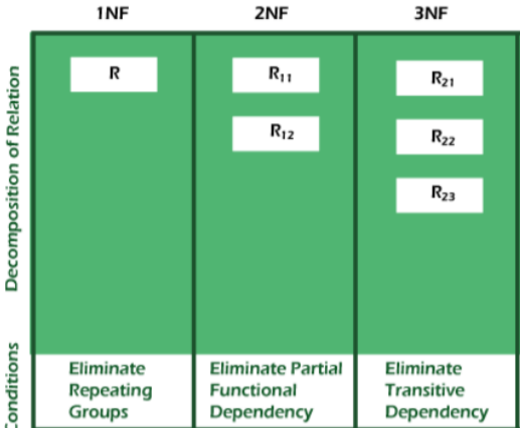
Creating Table Medical Records

```
CREATE TABLE MedicalRecords (
   RecordID INT PRIMARY KEY AUTO_INCREMENT,
   PatientID INT,
   DoctorID INT,
   Date DATE,
   Diagnosis TEXT,
   Treatment TEXT,
   FOREIGN KEY (PatientID) REFERENCES Patients(PatientID),
   FOREIGN KEY (DoctorID) REFERENCES Doctors(DoctorID)
);
```

Creating Table Prescriptions

```
CREATE TABLE Prescriptions (
   PrescriptionID INT PRIMARY KEY AUTO_INCREMENT,
   RecordID INT,
   Medication VARCHAR(255),
   Dosage VARCHAR(50),
   Frequency VARCHAR(50),
   StartDate DATE,
   EndDate DATE,
   FOREIGN KEY (RecordID) REFERENCES MedicalRecords(RecordID)
);
```

Normalization



Normalization is used to minimize the redundancy from a relation or set of relations.

1. First Normal Form (1NF):
A relation is said to be in its First Normal form if it has got no non-atomic attribute. (Non-atomic attribute means the attribute which can't be subdivided).

2. Second Normal Form (2NF):
A relation that is in 1NF is said to have a second normal form if it satisfies any one of the following conditions.
a. The primary key contains only one attribute.
b. There exist no non-key attributes.
c. Every non-key attribute present in the relation should functionally depend upon a full set of the primary key.

3. Third Normal Form (3NF):
The relation in 2Nf is said to be 3NF if there exists no transitive dependency of any non-key attribute on the set of the primary key.

Normalization of Database:

1. **Patients Table (PatientId, Name, Age, Gender, Contact, Problem)**

   1NF: Meets the 1NF because it has no non-atomic attribute.
   2NF: It doesn't meet the 2NF because the non-prime attribute is not fully functionally dependent on the entire primary key.
   3NF: This is not in 3N due to the existence of the transitive dependency.

PATIENT ID	NAME	AGE	GENDER	CONTACT	PROBLEM
1001	Amulya	35	Female	9876543210	Sprained Ankle
1002	Rajesh	28	Male	9876543211	Spinal Cord Injury
1003	Ajay	40	Male	9876543212	Chest pain
1004	Priya	10	Female	9876543213	Fever, Cough

The decomposition of the Patient's table into 1NF is shown below:

PATIENT ID	NAME	AGE	GENDER	CONTACT	PROBLEM
1001	Amulya	35	Female	9876543210	Sprained Ankle
1002	Rajesh	28	Male	9876543211	Spinal Cord Injury
1003	Ajay	40	Male	9876543212	Chest Pain
1004	Priya	10	Female	9876543213	Fever
1004	Priya	10	Female	9876543213	Cough

Solution: Split the last column into 2 parts

2. **Doctor's Table (DoctorId, Name, Age, Specialization, Salary, Contact)**

1NF: Meets the 1NF because it has no non-atomic attribute.
2NF: Meets the 2NF Rule-1 The primary key contains only one attribute.
3NF: This is not in 3N due to the existence of the transitive dependency.

DOCTOR ID	NAME	AGE	SPECIALIZATION	SALARY	CONTACT
1	Dr.Vikram Malhotra	32	Cardiology	150000	6305094874
1	Dr.Vikram Malhotra	32	Dermatology	50000	6305094874
2	Dr.Rahul Kapoor	58	Neurology	150000	6304585693
3	Dr.Sneha Joshi	41	Pediatrics	10000	8074126426
4	Dr.Pooja Verma	29	Orthopedics	15000	9876543203

To convert the given table into 2NF, we decompose it into two tables:

Doctor Details:

DOCTOR ID	NAME	AGE	CONTACT	SALARY
1	Dr.Vikram Malhotra	32	6305094874	150000
2	Dr.Rahul Kapoor	58	6304585693	150000
3	Dr.Sneha Joshi	41	8074126426	10000
4	Dr.Pooja Verma	29	9876543203	15000

Doctor Specialization:

Doctor ID	SPECIALIZATION
1	Cardiology
1	Dermatology
2	Neurology
3	Paediatrics
4	Orthopaedics

Doctor Details → Doctor ID, Name, Age, Contact, Salary.
Doctor Specialization → Doctor ID, Specialization.

Solution: Split the relation into two relations named Doctor Details and Doctor Specialization.

Doctor Details (Doctor ID (key), Name, Age, Contact, Salary).
Doctor Specialization (Doctor ID (key), Specialization).

3. Appointment's Table (Appointment ID, Patient ID, Doctor Id, Date, Time, Status)

1NF: Meets the 1NF because it has no non-atomic attribute.
2NF: Meets the 2NF Rule-1 The primary key contains only one attribute.
3NF: This is not in 3N due to the removal of the transitive dependency

AppointmentID	Patient ID	Doctor ID	DATE	TIME	STATUS
1	1001	4	2024-04-15	10:15	Completed
2	1002	2	2024-04-16	16:30	Scheduled
3	1003	1	2024-04-17	11:00	Scheduled
4	1004	3	2024-04-18	14:45	Cancelled

To convert the given table into 3NF, we decompose it into three tables:

Appointment Table:

AppointmentID	Date	Time	Status
1	2024-04-15	10:15	Completed
2	2024-04-16	16:30	scheduled
3	2024-04-17	11:00	scheduled
4	2024-04-18	14:45	canceled

Patient Table:

Appointment ID	Patient ID
1	1001
2	1002
3	1003
4	1004

Doctor Table:

Appointment ID	Doctor ID
1	4
2	2
3	1
4	3

Appointment Table → Appointment ID, Date, Time, Status.
Patient Table → Appointment Id, Patient ID.
Doctor Table → Appointment Id, Doctor ID.

Solution: Split the relation into three relations named Appointment table, Patient Table and Doctor Table.

Appointment Table (Appointment ID (key), Date, Time, Status).
Patient Table (Appointment ID (key), Patient ID).
Doctor Table (Appointment ID (key), Doctor ID)

4. **Medical Records (RecordID, PatientID, DoctorID, Date, Diagnosis, Treatment)**

1NF: Meets the 1NF because it has no non-atomic attribute.
2NF: Meets the 2NF Rule-1 The primary key contains only one attribute.
3NF: This is not in 3N due to the existence of the transitive dependency

RecordID	PatientID	DoctorID	Date	Diagnosis	Treatment
1	1001	4	2024-04-15	Sprained Ankle	Rest and Ice
2	1002	2	2024-04-16	Spinal Cord injury	Immobilisation
3	1003	1	2024-04-17	Chest Pain	Aspirin and evaluation
4	1004	3	2024-04-18	Fever	Paracetamol and rest

To convert the given table into 2NF, we decompose it into two tables:

Appointments Table:

RecordID	PatientID	DoctorID	Date
1	1001	4	2024-04-15
2	1002	2	2024-04-16
3	1003	1	2024-04-17
4	1004	3	2024-04-18

Treatment Table:

RecordID	Diagnosis	Treatment
1	Sprained Ankle	Rest and Ice
2	Spinal Cord injury	Immobilisation
3	Chest Pain	Aspirin and evaluation
4	Fever	Paracetamol and rest

Appointment Table → RecordID, PatientID, DoctorID, Date.
Treatment Table → RecordID, Diagnosis, Treatment.

Solution: Split the relation into two relations named Appointment Table and Treatment Table.

Appointment Table (RecordID (key), PatientID, DoctorID, Date).
Treatment Table (RecordID (key), Diagnosis, Treatment).

5. Table Prescriptions

1NF: Meets the 1NF because it has no non-atomic attribute.
2NF: Meets the 2NF Rule-1 The primary key contains only one attribute.
3NF: This is not in 3N due to the existence of the transitive dependency

Prescription Table:

PrescriptionID	RecordID	Medication	Dosage	Frequency	StartDate	EndDate
1	1	Ibuprofen	400mg	Every6 hrs	2024-04-15	2024-04-19
2	2	Methylpredn isolone	40mg	Once daily	2024-04-19	2024-04-21
3	3	Nitroglycern	0.4mg	As needed	2024-04-20	2024-04-22
4	4	Paracetamol, Aspirin	500mg	Every 6hrs	2024-04-18	2024-04-22

The decomposition of the Patient's table into 1NF is shown below:

PrescriptionID	RecordID	Medication	Dosage	Frequency	StartDate	EndDate
1	1	Ibuprofen	400mg	Every 6 hrs	2024-04-15	2024-04-19
2	2	Methylpredni solone	40mg	Once daily	2024-04-19	2024-04-21
3	3	Nitroglycerin	0.4mg	As needed	2024-04-20	2024-04-22
4	4	Paracetamol	500mg	Every 6hrs	2024-04-18	2024-04-22
4	4	Aspirin	500mg	Every 6hrs	2024-04-18	2024-04-22

Solution: Split the last column into 2 parts

Creation of Data In The Tables [ENTITY RECORDS]

Inserting the data into the tables:

Patients Table:

INSERT INTO Patients (PatientID**,** Name, Age, Gender, Contact, Problem) VALUES
('1001 ', 'Amulya', '28','Female', '9876543210', 'Sprained Ankle'),
('1002 ','Rajesh', '28', 'Male', '9876543211', 'Spinal cord injury'),
('1003 ','Ajay', '40', 'Male', '9876543212', 'Chest pain'),
('1004 ','Priya', '10', 'Female', '9876543213', 'Fever');

PatientID	Name	Age	Gender	Contact	Problem
1001	Amulya	35	Female	9876543210	Sprained Ankle
1002	Rajesh	28	Male	9876543211	Spinal cord injury
1003	Ajay	40	Male	9876543212	Chest pain
1004	Priya	10	Female	9876543213	Fever

Doctors Table:

INSERT INTO Doctors (DoctorID, Name, Age, Specialization, Salary, Contact) VALUES
('1', 'Dr. Vikram Malhotra', '32', 'Cardiology', '150000', '6305094874'),
('2', 'Dr. Rahul Kapoor', '58', 'Neurology', '150000', '6304585693'),
('3', 'Dr. Sneha Joshi', '41', 'Pediatrics', '10000', '8074126426'),
('4', 'Dr. Pooja Verma', '29', 'Orthopedics', '15000', '9876543203');

DoctorID	Name	Age	Specialization	Salary	Contact
1	Dr. Vikram Malhotra	32	Cardiology	150000	6305094874
2	Dr. Rahul Kapoor	58	Neurology	150000	6304585693
3	Dr. Sneha Joshi	41	Pediatrics	10000	8074126426
4	Dr. Pooja Verma	29	Orthopedics	15000	9876543203

Appointments Table:

INSERT INTO Appointments (AppointmentID, PatientID, DoctorID, Date, Time, Status) VALUES
('1', '1001', '4', '2024-04-15', '10:15', 'Completed'),
('2', '1002', '2', '2024-04-16', '16:30', 'Scheduled'),
('3', '1003', '1', '2024-04-17', '11:00', 'Scheduled'),
('4', '1004', '3', '2024-04-18', '14:45', 'Cancelled');

AppointmentID	PatientID	DoctorID	Date	Time	Status
1	1001	4	2024-04-15	10:15	Completed
2	1002	2	2024-04-16	16:30	Scheduled
3	1003	1	2024-04-17	11:00	Scheduled
4	1004	3	2024-04-18	14:45	Cancelled

Medical Records Table:

INSERT INTO MedicalRecords(RecordId, PatientID, DoctorID, Date, Diagnosis, Treatment) VALUES
('1', '1001', '4', '15-04-24', 'Sprained Ankle', 'Rest and Ice'),
('2', '1002', '2', '16-04-24', 'Spinal Cord injury', 'Immobilization'),
('3', '1003', '1', '17-04-24', 'Chest Pain', 'Aspirin and evaluation'),
('4', '1004', '3', '18-04-24', 'Fever', 'Paracetamol and rest');

RecordID	PatientID	DoctorID	Date	Diagnosis	Treatment
1	1001	4	2024-04-15	Sprained Ankle	Rest and Ice
2	1002	2	2024-04-16	Spinal Cord injury	Immobilization
3	1003	1	2024-04-17	Chest Pain	Aspirin and evaluation
4	1004	3	2024-04-18	Fever	Paracetamol and rest

Prescriptions Table:

INSERT INTO Prescriptions (PrescriptionId, RecordID, Medication, Dosage, Frequency, StartDate, EndDate) VALUES

('1', '1', 'Ibuprofen', '400 mg', 'Every 6 hrs', '15-04-24', '19-04-24'),
('2', '2', 'Methylprednisolone', '40 mg', 'Once daily', '19-04-24', '21-04-24'),
('3', '3', 'Nitroglycerin', '0.4 mg', 'As needed', '20-04-24', '22-04-24'),
('4', '4', 'Paracetamol', '500 mg', 'Every 6 hrs', '18-04-24', '22-04-24');

PrescriptionID	RecordID	Medication	Dosage	Frequency	StartDate	EndDate
1	1	Ibuprofen	400mg	Every 6 hrs	2024-04-15	2024-04-19
2	2	Methylpredni-solone	40mg	Once daily	2024-04-19	2024-04-21

3	3	Nitroglycerin	0.4mg	As needed	2024-04-20	2024-04-22
4	4	Paracetamol	500mg	Every 6 hrs	2024-04-18	2024-04-22

Few sql queries on the created tables

➳ *Data Retrieval Queries:*

1) **Find all records in "Medical Records"**

SQL Command:

```
SELECT * FROM Medical Records;
```

2) **Write a query to find Medication, Dosage and Frequency from "Prescription" table**

SQL Command:

```
SELECT * Medication, Dosage, Frequency
FROM Prescriptions;
```

3) **Write a query to retrieve all "Appointments" where DoctorId is '4'**

SQL Command:

```
SELECT*
FROM Appointments
WHERE DoctorId = 4;
```

➳ *Data Manipulation Queries:*

1) **Find query that inserts multiple records into the "Patients" table**

SQL Command:

```
INSERT INTO Patients (PatientId, Name, Age, Gender, Contact,
Problem) VALUES
(5, 'Raju', 30, 'M', '9876543342', 'Leukemia'),
(6, 'Latha', 53, 'F', '8769654341', 'Fracture');
```

2) **Write a query to update the salary of a doctor with DoctorID '1' in the "Doctors" table**

SQL Command:

```
UPDATE Doctors
SET Salary = 180000
WHERE DoctorID = 1;
```

3) **Write a query to delete records from "Appointments" table where PatientID is '1002':**

SQL Command:

```
DELETE FROM Appointments
WHERE PatientID = '1002';
```

4) **Write a query to add a new column "Address" to the "Patients" table with data type of 'VARCHAR (255)'**

SQL Command:

```
ALTER TABLE Patients
ADD Address VARCHAR (255);
```

5) **Write a query to modify the age of patient with PatientId '1001'**

SQL Command:

```
UPDATE Patients
SET Age = 35
WHERE PatientID = 1001;
```

➳ *Aggregate Functions:*

1) **Calculate the 'average age' of patients in the "Patients" table**

SQL Command:

```
SELECT AVG(Age) AS AverageAge
FROM Patients;
```

2) **Calculate the 'total salary' of all doctors in the "Doctor" table**

SQL Command:

```
SELECT SUM(Salary) AS TotalSalary
FROM Doctors;
```

Creation of 5 views using the tables

1) Completed Patient Appointments View

```
CREATE VIEW CompletedPatientAppointmentsView AS
SELECT p.Name AS PatientName, p.Age, p.Gender, a.Date AS AppointmentDate, a.Time AS
AppointmentTime, a.Status
FROM Patients p
INNER JOIN Appointments a ON p.PatientID = a.PatientID
WHERE a.Status = 'Completed';
```

QUERY: SELECT * FROM CompletedPatientAppointmentsView;

PatientName	Age	Gender	AppointmentDate	AppointmentTime	Status
Amulya	35	Female	2024-04-15	10:15:00	Completed

2) Patient Medical Records For Diagnosis View

```
CREATE VIEW PatientMedicalRecordsForDiagnosisView AS
SELECT p.Name AS PatientName, m.Date AS RecordDate, m.Diagnosis, m.Treatment
FROM Patients p
INNER JOIN MedicalRecords m ON p.PatientID = m.PatientID
WHERE m.Diagnosis IN ('Fever', 'Chest Pain');
```

QUERY: SELECT* FROM PatientMedicalRecordsForDiagnosisView;

PatientName	RecordDate	Diagnosis	Treatment
Ajay	2024-04-17	Chest Pain	Aspirin and evaluation
Priya	2024-04-18	Fever	Paracetamol and rest

3)Patient Medical Records View

```
CREATE VIEW PatientMedicalRecordsView AS
SELECT p.Name AS PatientName, m.Date AS RecordDate, m.Diagnosis, m.Treatment
FROM Patients p
INNER JOIN MedicalRecords m ON p.PatientID = m.PatientID;
```

QUERY: SELECT * FROM PatientMedicalRecordsView ;

PatientName	RecordDate	Diagnosis	Treatment
Amulya	2024-04-15	Sprained Ankle	Rest and Ice
Rajesh	2024-04-16	Spinal Cord injury	Immobilization
Ajay	2024-04-17	Chest Pain	Aspirin and evaluation
Priya	2024-04-18	Fever	Paracetamol and rest

4)Doctor Patients View

```
CREATE VIEW DoctorPatientsView AS
SELECT d.Name AS DoctorName, p.Name AS PatientName, a.Date AS AppointmentDate,
a.Time AS AppointmentTime, a.Status
FROM Doctors d
INNER JOIN Appointments a ON d.DoctorID = a.DoctorID
INNER JOIN Patients p ON a.PatientID = p.PatientID;
```

QUERY: SELECT * FROM DoctorPatientsView;

DoctorName	PatientName	AppointmentDate	AppointmentTime	Status
Dr. Pooja Verma	Amulya	2024-04-15	10:15:00	Completed
Dr. Vikram Malhotra	Ajay	2024-04-17	11:00:00	Scheduled
Dr. Sneha Joshi	Priya	2024-04-18	14:45:00	Canceled

5)Prescription Details View

```
CREATE VIEW PrescriptionDetailsView AS
SELECT p.Name AS PatientName, m.Date AS RecordDate, pr.Medication, pr.Dosage,
pr.Frequency, pr.StartDate, pr.EndDate
FROM Patients p
INNER JOIN MedicalRecords m ON p.PatientID = m.PatientID
INNER JOIN Prescriptions pr ON m.RecordID = pr.RecordID;
```

QUERY: SELECT * FROM PrescriptionDetailsView;

PatientName	RecordDate	Medication	Dosage	Frequency	StartDate	EndDate
Amulya	2024-04-15	Ibuprofen	400 mg	Every 6 hrs	2024-04-15	2024-04-19
Rajesh	2024-04-16	Methylprednisolone	40 mg	Once daily	2024-04-19	2024-04-21
Ajay	2024-04-17	Nitroglycerin	0.4 mg	As needed	2024-04-20	2024-04-22
Priya	2024-04-18	Paracetamol	500 mg	Every 6 hrs	2024-04-18	2024-04-22

THANK YOU

SUBMITTED BY:

NAME	REGISTRATION NUMBER
Kanyadhara Bandhavi	AP22110010079
Kakarlapudi Hema	AP22110010080
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