

SQL

STRUCTURED QUERY LANGUAGE

UNDER GUIDANCE:

Mr.ARJUN L

(Besant Technology btm layout)

Presented by
SELVAKUMAR.J

Agenda

- Project Objective
- why it is used?
- Entity Relationship(ER) Diagram
- Qureries

Project Objective

- The objective of a Hospital Management System (HMS) project is to create a comprehensive software solution for healthcare facilities.
- It aims to streamline patient management, appointment scheduling, and doctor administration. The system should enable efficient billing, electronic medical record-keeping, and inventory management.
- Ultimately, the HMS seeks to improve patient care, enhance operational efficiency, and ensure regulatory compliance within the healthcare institution.



Why it is used?

1.Data Organization:SQL databases efficiently structure and manage vast healthcare data, such as patient records and appointments.

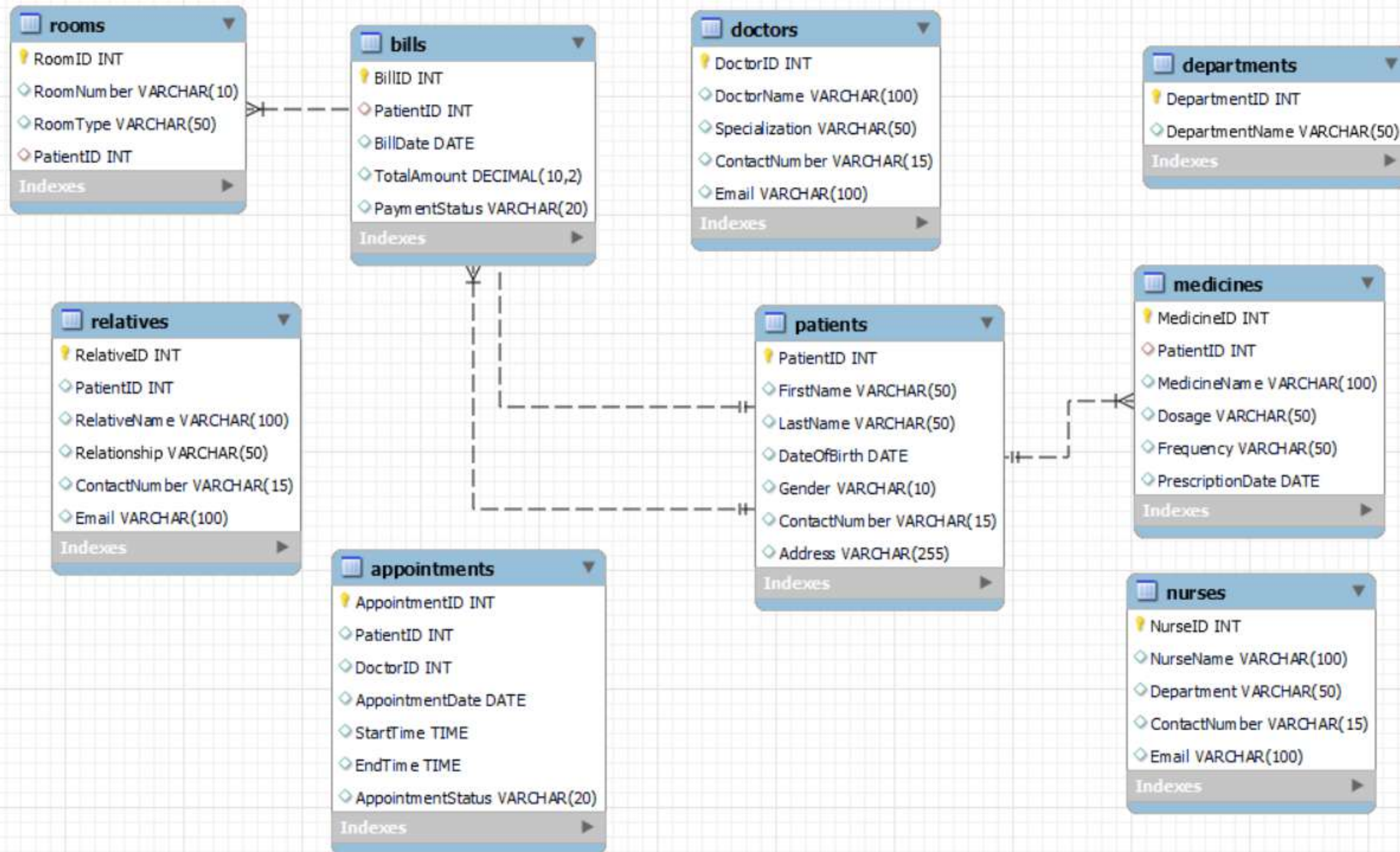
2.Data Integrity: SQL enforces data integrity, crucial for maintaining accurate and reliable medical information.

3.Efficient Retrieval:SQL's querying capabilities enable swift access to patient data, simplifying clinical and administrative tasks.

4.Compliance and Security: SQL databases offer robust security features and can be configured to adhere to healthcare regulations like HIPAA.



Entity Relationship(ER) Diagram



Doctor-Table



	DoctorID	DoctorName	Specialization	ContactNumber	Email
▶	1	Dr. Sarah Smith	Cardiologist	111-222-3333	sarah.smith@example.com
	2	Dr. John Doe	Orthopedic Surgeon	222-333-4444	john.doe@example.com
	3	Dr. Emily Johnson	Pediatrician	333-444-5555	emily.johnson@example.com
	4	Dr. Michael Williams	Dermatologist	444-555-6666	michael.williams@example.com
	5	Dr. Lisa Anderson	Ophthalmologist	555-666-7777	lisa.anderson@example.com
	6	Dr. Robert Davis	ENT Specialist	666-777-8888	robert.davis@example.com
	7	Dr. Jessica Martinez	Psychiatrist	777-888-9999	jessica.martinez@example.com
	8	Dr. William Johnson	Cardiologist	888-999-0000	william.johnson@example.com
	9	Dr. Maria Garcia	Obstetrician	999-000-1111	maria.garcia@example.com
	10	Dr. James Brown	Neurologist	111-000-2222	james.brown@example.com
	11	Dr. Emily Wilson	Dentist	222-111-0000	emily.wilson@example.com
	12	Dr. Daniel Lee	Orthopedic Surgeon	333-444-5555	daniel.lee@example.com
	13	Dr. Olivia Harris	Dermatologist	444-555-6666	olivia.harris@example.com
	14	Dr. Benjamin Taylor	Psychiatrist	555-666-7777	benjamin.taylor@example.com
	15	Dr. Sophia Martin	Cardiologist	666-777-8888	sophia.martin@example.com
	16	Dr. Ethan Lopez	Gastroenterologist	777-888-9999	ethan.lopez@example.com
	17	Dr. Mia Adams	Pediatrician	888-999-0000	mia.adams@example.com
	18	Dr. Alexander Turner	ENT Specialist	999-000-1111	alexander.turner@example.com
	19	Dr. Ava Hall	Orthopedic Surgeon	111-000-2222	ava.hall@example.com
	20	Dr. Liam Hernandez	Neurologist	222-111-0000	liam.hernandez@example.com
	21	Dr. Charlotte Clark	Dermatologist	333-444-5555	charlotte.clark@example.com
	22	Dr. Noah Adams	Psychiatrist	444-555-6666	noah.adams@example.com
	23	Dr. Amelia Turner	Cardiologist	555-666-7777	amelia.turner@example.com
	24	Dr. William Morales	Dentist	666-777-8888	william.morales@example.com
	25	Dr. Sophia Walker	Gastroenterologist	777-888-9999	sophia.walker@example.com

Nurse-Table



	NurseID	NurseName	Department	ContactNumber	Email
▶	1	Nurse Emily Smith	Cardiology	111-222-3333	emily.smith@example.com
	2	Nurse David Johnson	Orthopedics	222-333-4444	david.johnson@example.com
	3	Nurse Jessica Brown	Pediatrics	333-444-5555	jessica.brown@example.com
	4	Nurse Sarah Davis	Dermatology	444-555-6666	sarah.davis@example.com
	5	Nurse Michael Wilson	Ophthalmology	555-666-7777	michael.wilson@example.com
	6	Nurse Olivia Martinez	ENT	666-777-8888	olivia.martinez@example.com
	7	Nurse Sophia Taylor	Psychiatry	777-888-9999	sophia.taylor@example.com
	8	Nurse Benjamin Adams	Cardiology	888-999-0000	benjamin.adams@example.com
	9	Nurse Ava Turner	Obstetrics	999-000-1111	ava.turner@example.com
	10	Nurse James Hernandez	Neurology	111-000-2222	james.hernandez@example.com
	11	Nurse Mia Lopez	Dentistry	222-111-0000	mia.lopez@example.com
	12	Nurse Daniel Clark	Orthopedics	333-444-5555	daniel.clark@example.com
	13	Nurse Emily Harris	Dermatology	444-555-6666	emily.harris@example.com
	14	Nurse Robert Adams	Psychiatry	555-666-7777	robert.adams@example.com
	15	Nurse Lisa Martin	Cardiology	666-777-8888	lisa.martin@example.com
	16	Nurse Charlotte Turner	Gastroenterol...	777-888-9999	charlotte.turner@example.com
	17	Nurse Liam Smith	Pediatrics	888-999-0000	liam.smith@example.com
	18	Nurse Noah Wilson	ENT	999-000-1111	noah.wilson@example.com
	19	Nurse Isabella Hernandez	Orthopedics	111-000-2222	isabella.hernandez@example.com
	20	Nurse Ethan Davis	Neurology	222-111-0000	ethan.davis@example.com
	21	Nurse Emma Adams	Dermatology	333-444-5555	emma.adams@example.com
	22	Nurse William Harris	Psychiatry	444-555-6666	william.harris@example.com
	23	Nurse Mia Smith	Cardiology	555-666-7777	mia.smith@example.com
	24	Nurse Sophia Martinez	Gastroenterol...	666-777-8888	sophia.martinez@example.com
	25	Nurse Alexander Davis	Obstetrics	777-888-9999	alexander.davis@example.com

Department-Table



	DepartmentID	DepartmentName
▶	1	Cardiology
	2	Orthopedics
	3	Pediatrics
	4	Dermatology
	5	Ophthalmology
	6	ENT
	7	Psychiatry
	8	Obstetrics
	9	Neurology
	10	Dentistry
	11	Gastroenterology
	12	Emergency Medi...
	13	Radiology
	14	Anesthesiology
	15	Urology
	16	Nephrology
	17	Oncology
	18	Hematology
	19	Rheumatology
	20	Pulmonology
	21	Endocrinology
	22	Gynecology
	23	Allergy and Imm...
	24	Infectious Diseases
	25	Geriatrics

Appointment-Table



	AppointmentID	PatientID	DoctorID	AppointmentDate	StartTime	EndTime	AppointmentStatus
▶	1	1	1	2023-09-27	10:00:00	10:30:00	Scheduled
	2	2	2	2023-09-27	11:00:00	11:30:00	Scheduled
	3	3	3	2023-09-28	14:30:00	15:00:00	Scheduled
	4	4	4	2023-09-28	15:30:00	16:00:00	Scheduled
	5	5	5	2023-09-29	09:45:00	10:15:00	Scheduled
	6	6	6	2023-09-29	13:30:00	14:00:00	Scheduled
	7	7	7	2023-09-30	11:15:00	11:45:00	Scheduled
	8	8	8	2023-09-30	16:30:00	17:00:00	Scheduled
	9	9	9	2023-10-01	12:00:00	12:30:00	Scheduled
	10	10	10	2023-10-01	14:00:00	14:30:00	Scheduled
	11	11	11	2023-10-02	15:45:00	16:15:00	Scheduled
	12	12	12	2023-10-02	09:30:00	10:00:00	Scheduled
	13	13	13	2023-10-03	13:15:00	13:45:00	Scheduled
	14	14	14	2023-10-03	10:45:00	11:15:00	Scheduled
	15	15	15	2023-10-04	08:30:00	09:00:00	Scheduled
	16	16	16	2023-10-04	11:30:00	12:00:00	Scheduled
	17	17	17	2023-10-05	16:15:00	16:45:00	Scheduled
	18	18	18	2023-10-05	09:15:00	09:45:00	Scheduled
	19	19	19	2023-10-06	14:45:00	15:15:00	Scheduled
	20	20	20	2023-10-06	11:00:00	11:30:00	Scheduled
	21	21	21	2023-10-07	10:30:00	11:00:00	Scheduled
	22	22	22	2023-10-07	13:45:00	14:15:00	Scheduled
	23	23	23	2023-10-08	16:30:00	17:00:00	Scheduled
	24	24	24	2023-10-08	09:00:00	09:30:00	Scheduled
	25	25	25	2023-10-09	15:00:00	15:30:00	Scheduled

Relatives-table



	RelativeID	PatientID	RelativeName	Relationship	ContactNumber	Email
▶	1	1	Mary Smith	Mother	111-222-3333	mary.smith@example.com
	2	2	Robert Johnson	Father	222-333-4444	robert.johnson@example.com
	3	3	Emily Davis	Guardian	333-444-5555	emily.davis@example.com
	4	4	Jessica Brown	Spouse	444-555-6666	jessica.brown@example.com
	5	5	David Wilson	Brother	555-666-7777	david.wilson@example.com
	6	6	Sophia Martinez	Sister	666-777-8888	sophia.martinez@example.com
	7	7	John Taylor	Father	777-888-9999	john.taylor@example.com
	8	8	Anna Adams	Mother	888-999-0000	anna.adams@example.com
	9	9	Michael Turner	Spouse	999-000-1111	michael.turner@example.com
	10	10	Olivia Hernandez	Sister	111-000-2222	olivia.hernandez@example.com
	11	11	Daniel Clark	Guardian	222-111-0000	daniel.clark@example.com
	12	12	Mia Lopez	Mother	333-444-5555	mia.lopez@example.com
	13	13	William Adams	Father	444-555-6666	william.adams@example.com
	14	14	Sophia Martin	Spouse	555-666-7777	sophia.martin@example.com
	15	15	Liam Turner	Brother	666-777-8888	liam.turner@example.com
	16	16	Ava Brown	Sister	777-888-9999	ava.brown@example.com
	17	17	Noah Smith	Guardian	888-999-0000	noah.smith@example.com
	18	18	Isabella Davis	Mother	999-000-1111	isabella.davis@example.com
	19	19	Ethan Adams	Father	111-000-2222	ethan.adams@example.com
	20	20	Charlotte Johnson	Spouse	222-111-0000	charlotte.johnson@example.com
	21	21	Liam Hernandez	Brother	333-444-5555	liam.hernandez@example.com
	22	22	Amelia Wilson	Sister	444-555-6666	amelia.wilson@example.com
	23	23	William Morales	Guardian	555-666-7777	william.morales@example.com
	24	24	Sophia Walker	Mother	666-777-8888	sophia.walker@example.com
	25	25	Alexander Turner	Father	777-888-9999	alexander.turner@example.com

Room-Table



	RoomID	RoomNumber	RoomType	PatientID
▶	1	101	Single	1
	2	102	Single	2
	3	103	Single	NULL
	4	104	Single	NULL
	5	105	Single	5
	6	201	Single	6
	7	202	Single	NULL
	8	203	Single	8
	9	204	Single	9
	10	205	Single	NULL
	11	301	Double	11
	12	302	Double	12
	13	303	Double	13
	14	304	Double	NULL
	15	305	Double	15
	16	401	Suite	NULL
	17	402	Suite	NULL
	18	403	Suite	18
	19	404	Suite	19
	20	405	Suite	NULL
	21	501	Single	NULL
	22	502	Single	22
	23	503	Single	NULL
	24	504	Single	NULL
	25	505	Single	25

Medicine-Table



	MedicineID	PatientID	MedicineName	Dosage	Frequency	PrescriptionDate
▶	1	1	Aspirin	500 mg	Once a day	2023-09-27
	2	2	Ibuprofen	400 mg	Twice a day	2023-09-28
	3	3	Amoxicillin	250 mg	Three times a day	2023-09-29
	4	4	Lisinopril	10 mg	Once a day	2023-09-30
	5	5	Simvastatin	20 mg	Once a day	2023-10-01
	6	6	Metformin	1000 mg	Twice a day	2023-10-02
	7	7	Atorvastatin	40 mg	Once a day	2023-10-03
	8	8	Levothyroxine	50 mcg	Once a day	2023-10-04
	9	9	Prednisone	5 mg	Once a day	2023-10-05
	10	10	Warfarin	2 mg	Once a day	2023-10-06
	11	11	Alprazolam	0.25 mg	Twice a day	2023-10-07
	12	12	Citalopram	20 mg	Once a day	2023-10-08
	13	13	Hydrochlorot...	25 mg	Once a day	2023-10-09
	14	14	Escitalopram	10 mg	Once a day	2023-10-10
	15	15	Losartan	50 mg	Once a day	2023-10-11
	16	16	Metoprolol	25 mg	Twice a day	2023-10-12
	17	17	Gabapentin	300 mg	Three times a day	2023-10-13
	18	18	Pantoprazole	40 mg	Once a day	2023-10-14
	19	19	Duloxetine	30 mg	Once a day	2023-10-15
	20	20	Omeprazole	20 mg	Once a day	2023-10-16
	21	21	Tramadol	50 mg	As needed	2023-10-17
	22	22	Trazodone	50 mg	Once a day	2023-10-18
	23	23	Amitriptyline	25 mg	Once a day	2023-10-19
	24	24	Furosemide	40 mg	Once a day	2023-10-20
	25	25	Cephalexin	500 mg	Four times a day	2023-10-21

BILL-TABLE



	BillID	PatientID	BillDate	TotalAmount	PaymentStatus
▶	1	1	2023-09-27	350.00	Paid
	2	2	2023-09-28	225.50	Paid
	3	3	2023-09-29	150.75	Pending
	4	4	2023-09-30	420.30	Paid
	5	5	2023-10-01	180.00	Pending
	6	6	2023-10-02	275.25	Paid
	7	7	2023-10-03	195.60	Paid
	8	8	2023-10-04	90.75	Pending
	9	9	2023-10-05	320.50	Paid
	10	10	2023-10-06	135.25	Paid
	11	11	2023-10-07	275.25	Pending
	12	12	2023-10-08	200.00	Paid
	13	13	2023-10-09	150.75	Pending
	14	14	2023-10-10	420.30	Paid
	15	15	2023-10-11	180.00	Pending
	16	16	2023-10-12	245.50	Paid
	17	17	2023-10-13	195.60	Paid
	18	18	2023-10-14	90.75	Pending
	19	19	2023-10-15	320.50	Paid
	20	20	2023-10-16	135.25	Paid
	21	21	2023-10-17	275.25	Pending
	22	22	2023-10-18	200.00	Paid
	23	23	2023-10-19	150.75	Pending
	24	24	2023-10-20	420.30	Paid
	25	25	2023-10-21	180.00	Pending

Write a Query to Retrieve the list of all patients:

SELECT * FROM Patients;

	PatientID	FirstName	LastName	DateOfBirth	Gender	ContactNumber	Address
▶	1	John	Doe	1990-05-15	Male	123-456-7890	123 Main St, City
	2	Jane	Smith	1985-08-20	Female	987-654-3210	456 Elm St, Town
	3	Robert	Johnson	2000-02-10	Male	555-123-4567	789 Oak St, Village
	4	Emily	Davis	1993-04-25	Female	444-555-8888	567 Maple St, Suburb
	5	Michael	Wilson	1982-12-03	Male	222-333-4444	890 Birch St, County
	6	Sarah	Brown	1998-07-12	Female	111-222-3333	678 Pine St, Township
	7	David	Garcia	2001-01-28	Male	999-888-7777	345 Cedar St, District
	8	Anna	Martinez	1995-09-06	Female	777-888-5555	234 Oak St, Metropolis
	9	James	Taylor	1987-03-17	Male	555-444-3333	789 Birch St, City
	10	Mia	Lee	1999-06-02	Female	666-555-4444	123 Elm St, Town
	11	Christopher	Harris	1980-11-14	Male	333-222-1111	567 Pine St, Village
	12	Olivia	Clark	1992-08-07	Female	222-444-6666	890 Oak St, Suburb
	13	Sophia	Lopez	2003-03-22	Female	999-555-3333	456 Birch St, County
	14	Matthew	Jackson	1994-12-19	Male	555-777-4444	123 Maple St, Township
	15	Aiden	Hall	1989-04-02	Male	777-666-5555	345 Cedar St, District
	16	Emma	Young	1997-10-09	Female	333-444-5555	678 Pine St, Metropolis
	17	Liam	Walker	2002-05-13	Male	555-999-7777	890 Elm St, City
	18	Ava	Gonzalez	1991-07-26	Female	666-999-5555	567 Oak St, Town
	19	Noah	Perez	1986-09-18	Male	444-888-7777	234 Birch St, Village
	20	Isabella	Sanchez	1996-01-05	Female	777-444-3333	123 Cedar St, Suburb
	21	Ethan	Turner	2000-08-31	Male	222-777-5555	456 Pine St, County
	22	Charlotte	Hernandez	1993-11-27	Female	555-666-3333	789 Elm St, Township
	23	Liam	Davis	1998-02-14	Male	999-555-1111	567 Cedar St, District
	24	Amelia	Flores	1984-06-30	Female	777-333-2222	234 Pine St, Metropolis
	25	William	Morales	1997-03-08	Male	555-444-2222	123 Oak St, City

SELECT * FROM Appointments WHERE PatientID = 1;

[illegible]

Write a query to Find the total number of appointments for each doctor:

```
SELECT DoctorID, COUNT(*) AS TotalAppointments  
FROM Appointments  
GROUP BY DoctorID;
```

	DoctorID	TotalAppointments
▶	1	1
	2	1
	3	1
	4	1
	5	1
	6	1
	7	1
	8	1
	9	1
	10	1
	11	1
	12	1
	13	1
	14	1
	15	1
	16	1
	17	1
	18	1
	19	1
	20	1
	21	1
	22	1
	23	1
	24	1
	25	1

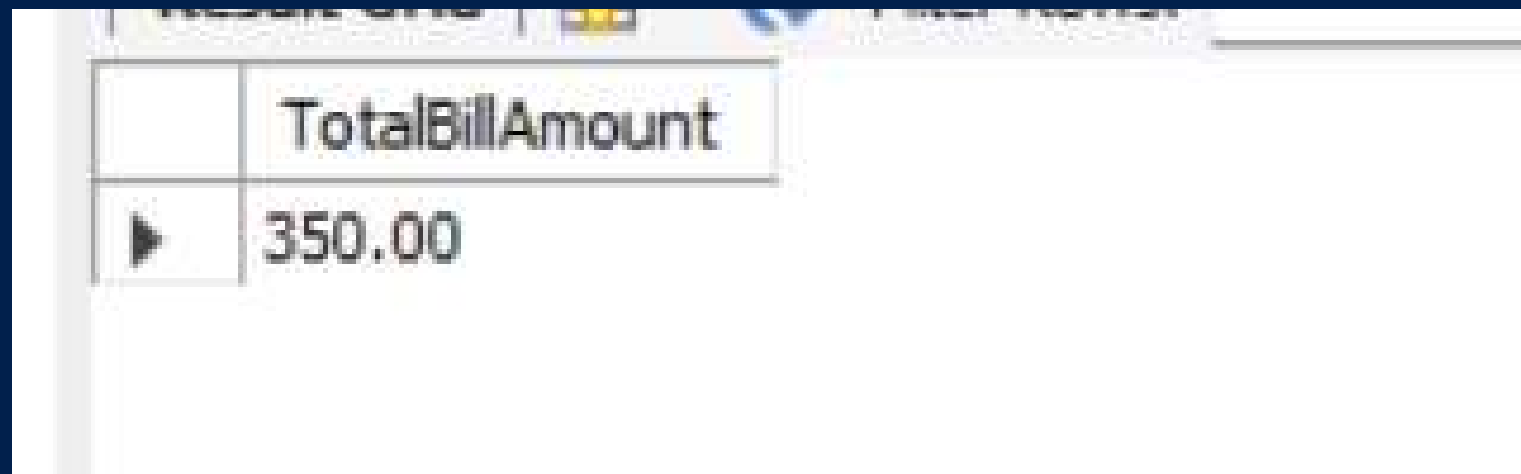
Write a Query to List all medicines prescribed for a specific patient:

```
SELECT * FROM Medicines WHERE PatientID = 1;
```

	MedicineID	PatientID	MedicineName	Dosage	Frequency	PrescriptionDate
▶	1	1	Aspirin	500 mg	Once a day	2023-09-27
●	NULL	NULL	NULL	NULL	NULL	NULL

Write a query Calculate the total bill amount for a specific patient:

```
SELECT SUM(TotalAmount) AS TotalBillAmount  
FROM Bills  
WHERE PatientID = 1;
```



A screenshot of a database query result window. The window displays a single row of data. The first column is labeled 'TotalBillAmount' and the second column contains the value '350.00'. There is a small black triangle icon to the left of the value '350.00'.

TotalBillAmount
350.00

Write a query to Find the number of available rooms of each type (Single, Double, Suite):

```
SELECT RoomType, COUNT(*) AS AvailableRooms  
FROM Rooms  
WHERE PatientID IS NULL  
GROUP BY RoomType;
```

	RoomType	AvailableRooms
▶	Single	7
	Double	1
	Suite	3

[illegible]

SELECT *

FROM Appointments

WHERE DATE(AppointmentDate) = CURDATE();

[illegible]

Write a query to Find the patient with the highest total bill amount:

```
SELECT PatientID, SUM(TotalAmount) AS  
TotalBillAmount  
FROM Bills  
GROUP BY PatientID  
ORDER BY TotalBillAmount DESC  
LIMIT 1;
```

	PatientID	TotalBillAmount
▶	4	420.30

**Write a query to list the patients with overdue bills
(PaymentStatus = 'Pending'):**

```
SELECT *  
FROM Patients P  
INNER JOIN Bills B ON P.PatientID = B.PatientID  
WHERE B.PaymentStatus = 'Pending';
```

	PatientID	FirstName	LastName	DateOfBirth	Gender	ContactNumber	Address	BillID	PatientID	BillDate	TotalAmount	PaymentStatus
▶	3	Robert	Johnson	2000-02-10	Male	555-123-4567	789 Oak St, Village	3	3	2023-09-29	150.75	Pending
	5	Michael	Wilson	1982-12-03	Male	222-333-4444	890 Birch St, County	5	5	2023-10-01	180.00	Pending
	8	Anna	Martinez	1995-09-06	Female	777-888-5555	234 Oak St, Metropolis	8	8	2023-10-04	90.75	Pending
	11	Christopher	Harris	1980-11-14	Male	333-222-1111	567 Pine St, Village	11	11	2023-10-07	275.25	Pending
	13	Sophia	Lopez	2003-03-22	Female	999-555-3333	456 Birch St, County	13	13	2023-10-09	150.75	Pending
	15	Aiden	Hall	1989-04-02	Male	777-666-5555	345 Cedar St, District	15	15	2023-10-11	180.00	Pending
	18	Ava	Gonzalez	1991-07-26	Female	666-999-5555	567 Oak St, Town	18	18	2023-10-14	90.75	Pending
	21	Ethan	Turner	2000-08-31	Male	222-777-5555	456 Pine St, County	21	21	2023-10-17	275.25	Pending
	23	Liam	Davis	1998-02-14	Male	999-555-1111	567 Cedar St, District	23	23	2023-10-19	150.75	Pending
	25	William	Morales	1997-03-08	Male	555-444-2222	123 Oak St, City	25	25	2023-10-21	180.00	Pending

Write a query to find the top 5 most prescribed medicines in terms of frequency:

```
SELECT MedicineName, COUNT(*) AS PrescriptionCount
FROM Medicines
GROUP BY MedicineName
ORDER BY PrescriptionCount DESC
LIMIT 5;
```

	MedicineName	PrescriptionCount
▶	Aspirin	1
	Ibuprofen	1
	Amoxicillin	1
	Lisinopril	1
	Simvastatin	1

To Retrieve a list of patients who are currently admitted to the hospital (occupied rooms):

```
SELECT P.*  
FROM Patients P  
INNER JOIN Rooms R ON P.PatientID = R.PatientID  
WHERE R.PatientID IS NOT NULL;
```

	PatientID	FirstName	LastName	DateOfBirth	Gender	ContactNumber	Address
▶	1	John	Doe	1990-05-15	Male	123-456-7890	123 Main St, City
	2	Jane	Smith	1985-08-20	Female	987-654-3210	456 Elm St, Town
	5	Michael	Wilson	1982-12-03	Male	222-333-4444	890 Birch St, County
	6	Sarah	Brown	1998-07-12	Female	111-222-3333	678 Pine St, Township
	8	Anna	Martinez	1995-09-06	Female	777-888-5555	234 Oak St, Metropolis
	9	James	Taylor	1987-03-17	Male	555-444-3333	789 Birch St, City
	11	Christopher	Harris	1980-11-14	Male	333-222-1111	567 Pine St, Village
	12	Olivia	Clark	1992-08-07	Female	222-444-6666	890 Oak St, Suburb
	13	Sophia	Lopez	2003-03-22	Female	999-555-3333	456 Birch St, County
	15	Aiden	Hall	1989-04-02	Male	777-666-5555	345 Cedar St, District
	18	Ava	Gonzalez	1991-07-26	Female	666-999-5555	567 Oak St, Town
	19	Noah	Perez	1986-09-18	Male	444-888-7777	234 Birch St, Village
	22	Charlotte	Hernandez	1993-11-27	Female	555-666-3333	789 Elm St, Township
	25	William	Morales	1997-03-08	Male	555-444-2222	123 Oak St, City

Calculate the average duration of appointments (in minutes):

```
SELECT AVG(TIMESTAMPDIFF(MINUTE, StartTime, EndTime)) AS  
AverageAppointmentDuration  
FROM Appointments;
```

	AverageAppointmentDuration
▶	30.0000

To Retrieve the list of patients and their corresponding doctor's contact information:

```
SELECT P.FirstName, P.LastName, D.DoctorName,  
D.ContactNumber AS DoctorContact  
FROM Patients P  
INNER JOIN Appointments A ON P.PatientID = A.PatientID  
INNER JOIN Doctors D ON A.DoctorID = D.DoctorID;
```

	FirstName	LastName	DoctorName	DoctorContact
*	John	Doe	Dr. Sarah Smith	111-222-3333
	Jane	Smith	Dr. John Doe	222-333-4444
	Robert	Johnson	Dr. Emily Johnson	333-444-5555
	Emily	Davis	Dr. Michael Williams	444-555-6666
	Michael	Wilson	Dr. Lisa Anderson	555-666-7777
	Sarah	Brown	Dr. Robert Davis	666-777-8888
	David	Garcia	Dr. Jessica Martinez	777-888-9999
	Anna	Martinez	Dr. William Johnson	888-999-0000
	James	Taylor	Dr. Maria Garcia	999-000-1111
	Mia	Lee	Dr. James Brown	111-000-2222
	Christopher	Harris	Dr. Emily Wilson	222-111-0000
	Olivia	Clark	Dr. Daniel Lee	333-444-5555
	Sophia	Lopez	Dr. Olivia Harris	444-555-6666
	Matthew	Jackson	Dr. Benjamin Taylor	555-666-7777
	Aiden	Hall	Dr. Sophia Martin	666-777-8888
	Emma	Young	Dr. Ethan Lopez	777-888-9999
	Liam	Walker	Dr. Mia Adams	888-999-0000
	Ava	Gonzalez	Dr. Alexander Turner	999-000-1111
	Noah	Perez	Dr. Ava Hall	111-000-2222
	Isabella	Sanchez	Dr. Liam Hernandez	222-111-0000
	Ethan	Turner	Dr. Charlotte Clark	333-444-5555
	Charlotte	Hernandez	Dr. Noah Adams	444-555-6666
	Liam	Davis	Dr. Amelia Turner	555-666-7777
	Amelia	Flores	Dr. William Morales	666-777-8888
	William	Morales	Dr. Sophia Walker	777-888-9999

Calculate the total number of patients in each gender category:

```
SELECT Gender, COUNT(*) AS TotalPatients  
FROM Patients  
GROUP BY Gender;
```

	Gender	TotalPatients
▶	Male	13
	Female	12

Calculate the total revenue generated by the hospital for a specific year (e.g., 2023):

```
SELECT SUM(TotalAmount) AS TotalRevenue  
FROM Bills  
WHERE YEAR(BillDate) = 2023;
```

	TotalRevenue
▶	5784.10

Thank You