

U of U Health

Hospital Management System

IS 6420-001 Fall 23 Database Theory and Design

REPORT

Group 9

Scott ````

Rajasekhar ````

Michael ````

Kunal ````



HEALTH
UNIVERSITY OF UTAH

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EXECUTIVE SUMMARY

This tool is pivotal in ensuring a more streamlined, efficient, and secure exchange of patient data. Healthcare professionals can easily access comprehensive medical histories, lab results, and imaging data in real-time. This accessibility facilitates informed and timely decision-making.

Patients utilizing services across different locations benefit immensely from this seamless integration. Every piece of essential information is readily available, ensuring personalized and consistent care. Doctors and specialists can collaborate effectively, sharing insights and information irrespective of their geographical locations, which in turn enhances the quality of care delivered.

Administrators will find immense value in our tool. Enhanced coordination of billing, appointment scheduling, and monitoring doctor availability becomes possible. Furthermore, embedded real-time data analytics and reporting features provide actionable insights, contributing to improved operational efficiency and patient satisfaction.

Above all, the foundation of our database is security and privacy. With robust encryption and authentication protocols, we safeguard sensitive patient data, ensuring compliance with the highest data protection and privacy standards. This commitment underscores our dedication to a more collaborative, efficient, and patient-centric healthcare environment.

The primary objectives of this project are to:

- Efficiently manage patient data, ensuring accuracy, security, and ease of access.
- Facilitate doctor-patient interactions through appointment scheduling and medical record management.
- Simplify billing processes, allowing for easy tracking of patient expenses and payment status.
- Maintain an up-to-date pharmacy inventory to ensure the availability of medications.
- Enable efficient tracking of laboratory tests and results for improved patient care.
- Implement a role-based user management system for secure access control.

GENERAL DESCRIPTION

The University of Utah Health (U of U Health) is a leading academic health sciences center devoted to delivering top-quality patient care, advancing medical knowledge through research, and training the upcoming generation of healthcare professionals. As part of the University of Utah, U of U Health integrates patient care, education, and research to create an environment where the best healthcare is available.

The University of Utah Hospital System was founded in 1965 following the closure of Salt Lake County General Hospital. Starting off with a basic intensive care unit they have grown into a major system of both patient care and research. Their crowning jewel has been the evolution of the Huntsman Cancer Center breaking ground in 2004. Starting off with only 50 beds, currently the Huntsman Cancer Center has grown to over 100 patients a year and is a leading force in cancer research with 237 research teams dedicated to studying all forms of cancer.

Vision and Objectives:

The vision of U of U Health is to be a model for excellence in patient care, education, and research. Its objectives include:

- Delivering patient-centered care with a focus on innovation.
- Advancing medical knowledge through cutting-edge research.
- Educating healthcare professionals to meet the evolving needs of the community.

Products/Services:

U of U Health offers comprehensive medical services, including primary and specialty care, surgical services, emergency care, and advanced treatments. The organization is also at the forefront of medical research, contributing to breakthroughs in various fields. Educational programs provided by U of U Health include medical and nursing schools, fostering the development of the next generation of healthcare leaders.

Use of Transactional Database:

Transactional databases play a pivotal role in supporting the day-to-day operations of U of U Health. These databases are utilized across various departments, including patient management, billing, appointment scheduling, and inventory management. For instance, in the hospital management system, transactional databases track patient admissions, manage doctor appointments, process billing and payments, and maintain electronic health records. This ensures the seamless flow of information and enables healthcare professionals to make informed decisions.

U of U Health is renowned for its commitment to advancing medical knowledge. It is home to cutting-edge research facilities and collaborative initiatives contributing to medical breakthroughs. The organization embraces a patient-centric approach, prioritizing the well-being and experience of individuals seeking healthcare services. With a strong emphasis on

education, U of U Health provides excellent patient care and nurtures future healthcare practitioners' skills and knowledge.

PRIORITY REQUIREMENT SUMMARY

In response to the growing complexity of healthcare services, the project seeks to enhance the efficiency, accuracy, and accessibility of patient data, medical records, and administrative processes.

Scope of the Project

The scope of the Hospital Management System encompasses various aspects of healthcare management, including:

1. Patient Information Management

The system provides a centralized database for storing and managing patient information, ensuring data accuracy and confidentiality. Patients are uniquely identified by a PatientID, allowing for efficient tracking of their medical history, contact details, and insurance information.

2. Doctor-Patient Interaction

Appointment scheduling is streamlined through the system, facilitating efficient communication between doctors and patients. Medical records are electronically maintained, ensuring easy access to patient diagnoses, treatments, and prescriptions.

3. Billing and Financial Management

The project simplifies billing procedures, allowing for the efficient tracking of patient expenses and payment status. It ensures transparency in financial transactions, reducing errors and improving revenue management.

4. Pharmacy Inventory Management

The system maintains an up-to-date pharmacy inventory, enabling healthcare providers to ensure the availability of essential medications. Medication details are meticulously recorded, including name, description, price, and stock quantity.

5. Laboratory Test Tracking

Efficient tracking of laboratory tests and results enhances patient care. LabTests and LabResults tables store information about tests, their descriptions, prices, and results, with links to patients and doctors.

6. Lab Results Tracking

The presence of both table lab tests and lab results in the model supports enhanced data granularity, where every test and its corresponding result are meticulously documented. This bifurcation aids in avoiding data congestion and ensures that each piece of information is easily retrievable and understandable. It also facilitates better analytics, allowing for detailed insights into patterns of test prescriptions, their frequencies, and their outcomes.

7. User Access Control

A role-based user management system ensures secure access control, allowing staff members to access only the data relevant to their roles. This safeguards patient information and maintains data integrity.

8. Departments Table

The Department table is integral in the healthcare database, connecting to the Hospital, Doctor, and Room tables. It organizes departments within a hospital, each identified with a unique ID and associated with specific hospitals and resources. Users can understand the hospital's structure and resource allocation through this table, aiding in efficient management. It provides insights into departmental functionalities and specializations, enhancing operational efficiency. Thus, it's pivotal for informed decision-making and optimizing patient care.

9. Diagnosis Table

The diagnosis table is essential in storing detailed information about patients' medical conditions, identified by a unique diagnosis ID. It connects directly to the Patient and Medical Record tables, ensuring that each medical condition is associated with a specific patient and their medical history. This table becomes a critical resource for healthcare professionals to track, manage, and analyze patients' health conditions over time. Users can quickly retrieve accurate and up-to-date diagnosis information, aiding in effective treatment planning. Overall, the Diagnosis table is instrumental in enhancing personalized patient care and treatment accuracy.

10. Appointments Table

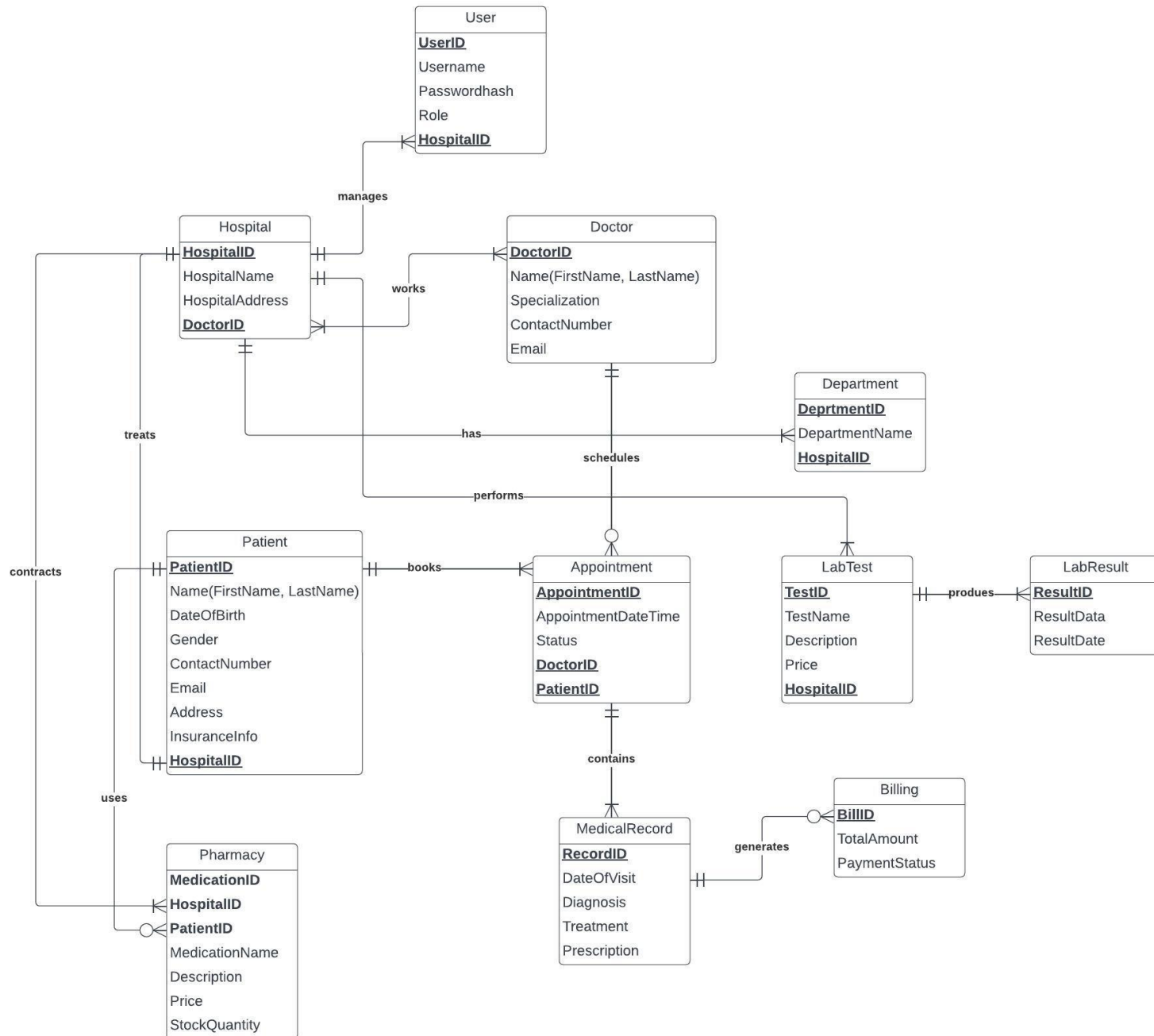
The Appointment table manages scheduling between patients and doctors, containing essential data like appointment dates and statuses. It's linked to both Patient and Doctor tables, ensuring organized and efficient appointment tracking. This table aids in enhancing the patient's journey through timely and well-managed consultations.

11. Room Table

The Room table catalogs the various rooms within a hospital, including their types and locations. It's connected to the Department and Hospital tables, offering insights into the allocation and availability of rooms. This table is essential for efficient hospital resource management and patient accommodation planning.

The data for the "University of Utah Hospital" Database Project is generated from Mockaroo, a powerful data mocking and generation platform. Mockaroo provides a flexible and customizable environment for generating realistic and diverse datasets, which are essential for populating our hospital's database. By using Mockaroo, we can simulate a wide range of patient records, medical histories, billing information, and clinical data to ensure the completeness and integrity of our database. Mockaroo's versatility enables us to create a dataset that closely mirrors real-world scenarios, allowing for thorough testing and validation of our database system. This approach not only enhances the accuracy of our data but also ensures that our database can effectively handle the various types of information crucial to the hospital's operations.

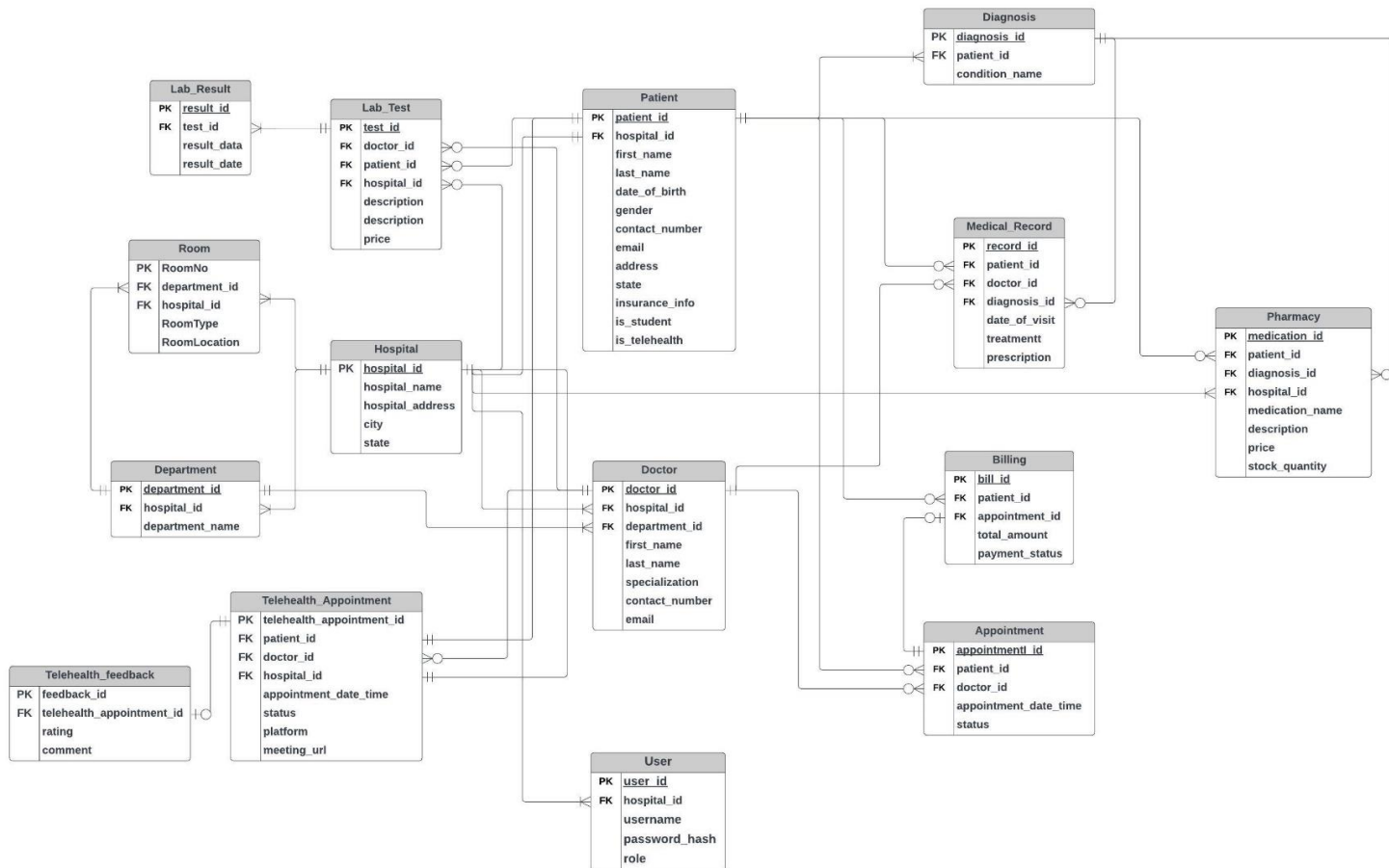
CONCEPTUAL MODEL



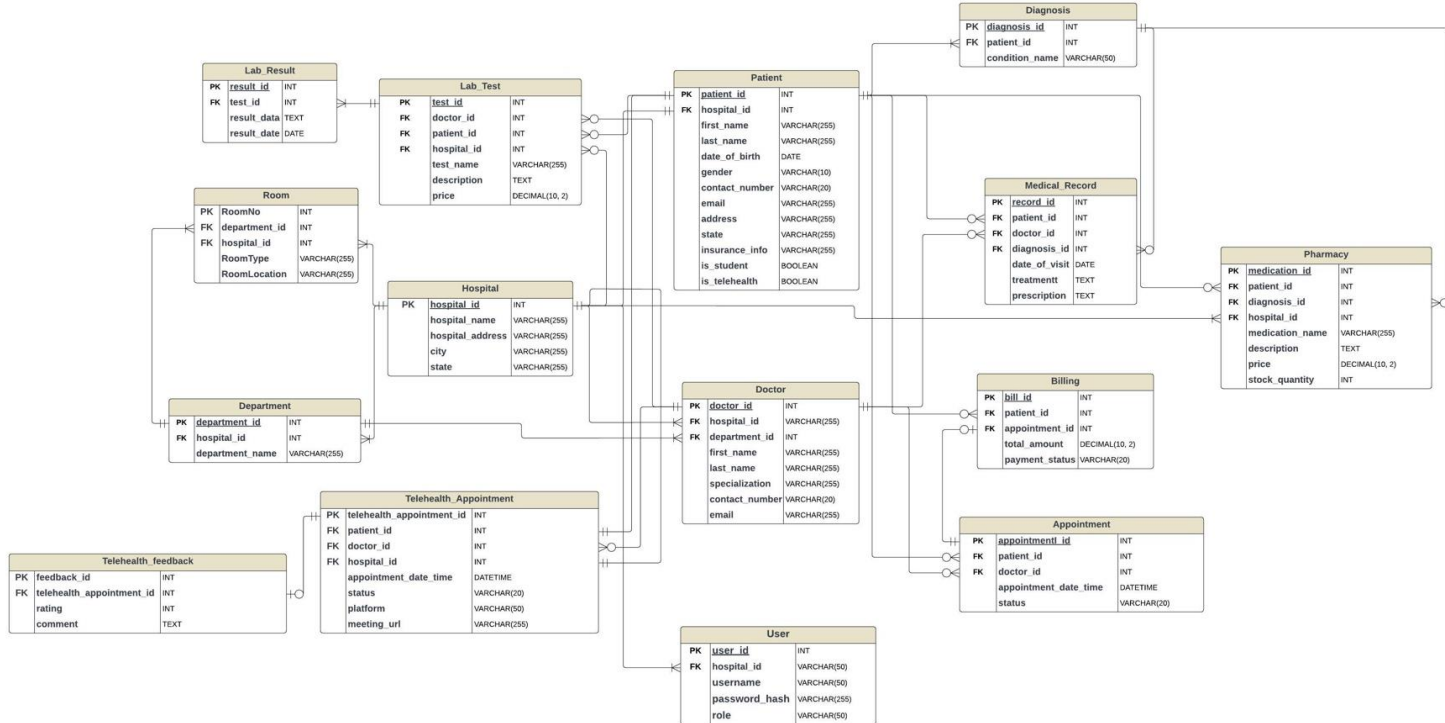
The conceptual model above represents the business requirements of the University of Utah Health-Hospital Management System.

LOGICAL MODEL

The logical model below converts the conceptual model into a more detailed, structured in Third Normal form (3 NF).



PHYSICAL MODEL



The physical model shows the actual physical implementation of the database design of the University of Utah Health-Hospital Management System.

It details the actual tables, columns, data types, and constraints, transforming the logical model into a functional database structure.

The "Hospital" table acts as a central hub, connecting to numerous other tables such as "Patient," "Doctor," and more through foreign keys to create a coherent network of associations.

REQUIREMENTS REVIEW

1. Patient Information Management

- a. **Status:** Complete
- b. **Context:** We have successfully implemented a centralized database for storing and managing patient information, ensuring data accuracy and confidentiality. Each patient is uniquely identified by a PatientID, facilitating efficient trafficking of their medical history, contact details, and insurance information.

2. Doctor-Patient Interaction

- a. **Status:** Complete
- b. **Context:** The appointment scheduling is fully functional, and electronic maintenance of medical records is streamlined. Doctors and patients can efficiently communicate, and all necessary information is easily accessible.

3. Billing and Financial Management

- a. **Status:** Complete
- b. **Context:** We have developed a comprehensive billing procedure that allows efficient tracking of patient expenses and payment statuses, ensuring transparency in financial transactions.

4. Pharmacy Inventory Management

- a. **Status:** Complete
- b. **Context:** The system maintains an updated pharmacy inventory, recording details like medical name, description, price, and stock quantity, ensuring the availability of essential medications.

5. Laboratory Test Tracking

- a. **Status:** Complete
- b. **Context:** Lab tests and results are efficiently tracked and stored in dedicated tables, ensuring easy retrieval and understanding, facilitating enhanced patient care.

6. User Access Control

- a. **Status:** Complete
- b. **Context:** A role-based user management system has been implemented, allowing staff members access only to data relevant to their roles, ensuring patient information security and data integration.

7. HIPPA Protocol Compliance

- a. **Status:** Complete
- b. **Context:** We strictly adhere to HIPPA protocols, ensuring that patient privacy and data security are paramount. All of the necessary security measures, including data encryption and role-based access controls, have been implemented.

8. Telehealth Services

- a. **Status:** Complete
- b. **Context:** We integrated Telehealth services effectively, enabling the management of Telehealth appointments and collection of patient feedback to continually refine the services.

9. Predictive Modeling for In-Patient Out-Patient Triage

- a. **Status:** Complete

- b. **Context:** We have created a function for the future so clinics can effectively predict who needs to be assigned to in-patient care versus out-patient care.

Conclusion:

The “ideal requirements” have been successfully implemented, with each contributing to a more streamlined, efficient, and secure exchange of patient data. The system is designed not just for the present but is adaptable to meet future healthcare demands, marking U of U Health as a pioneering institution in the integration of technological advancements in healthcare delivery.

ETHICAL CONSIDERATIONS

HIPAA Protocol Compliance

Introduction

Healthcare data security and patient privacy are of paramount importance in the Hospital Management System project for the University of Utah Health. To ensure that the system complies with the highest standards of data protection and patient confidentiality, the project adheres to the Health Insurance Portability and Accountability Act (HIPAA) protocol. HIPAA is a critical regulation in the healthcare industry, established to safeguard patient information and protect the rights of individuals receiving medical services.

Key HIPAA Compliance Considerations

The Hospital Management System project addresses several key HIPAA compliance considerations:

1. **Protected Health Information (PHI):** HIPAA defines PHI as individually identifiable health information. Within the project, patient data, medical records, and related information fall under the scope of PHI. Stringent measures are in place to ensure the confidentiality, integrity, and availability of PHI. This also includes safeguards to ensure it is meeting the standards for minimum necessary information.
2. **Access Control:** Role-based access control is implemented to limit system access to authorized personnel only. This ensures that patient data is only accessible to individuals with a legitimate need to access it.
3. **Encryption:** Data encryption is applied to protect information both in transit and at rest. This safeguards patient data from unauthorized access or interception.
4. **Audit Trails:** The system maintains detailed audit trails to record user activities, ensuring accountability and traceability. In the event of unauthorized access or data breaches, audit logs can provide critical information for investigations.
5. **Business Associate Agreements (BAAs):** The project involves third-party service providers, such as cloud hosting or software vendors. BAAs are established with these entities to ensure they also comply with HIPAA regulations and safeguard patient data.
6. **Training and Awareness:** Staff members are provided with HIPAA training and awareness programs to educate them on the importance of patient privacy and data security. This includes guidelines for handling, storing, and sharing patient information.

7. Patient Consent and Data Sharing

The project acknowledges the importance of patient consent and data sharing in compliance with HIPAA. Patients are informed about how their data will be used, and their explicit consent is obtained for sharing information with relevant healthcare providers and stakeholders involved in their care.

8. Continuous Compliance Monitoring

Compliance with HIPAA is an ongoing process. The Hospital Management System project includes continuous monitoring and assessment of security measures to identify and rectify potential vulnerabilities. Regular audits are conducted to ensure that the system aligns with evolving HIPAA requirements.

NEW VENTURE IDEAS

Telehealth Service:

We propose an innovative expansion into telehealth services in the New Venture chapter of the U of U Health - Hospital Management System project. This strategic move aims to harness the potential of digital technology to deliver health-related services and information, thereby elevating patient care—especially in response to the global shift towards remote work and social distancing.

To facilitate this initiative, we have introduced two new tables into our database: TelehealthAppointments and TelehealthFeedback.

The TelehealthAppointments table is designed for the meticulous management of all telehealth appointments. It encompasses fields for the appointment ID, patient ID, Doctor ID, appointment date and time, appointment status, the platform used for the telehealth session, meeting URL, and hospital ID. Notably, the patient ID, Doctor ID, and hospital ID fields are foreign keys referencing the Patients, Doctors, and Hospital tables, respectively. This design ensures data integrity and establishes transparent relationships between entities within our database.

Complementing this, the second table, TelehealthFeedback, is tailored to enhance the quality of our telehealth services. It includes fields for feedback ID, telehealth appointment ID (referencing the TelehealthAppointments table), rating, and comments. This table serves as a valuable conduit for patients to provide feedback on their telehealth experience, which, in turn, will be instrumental in continually refining and customizing the hospital services to meet the unique needs of patients.

By seamlessly integrating these tables into our existing hospital management system, we position ourselves to manage telehealth appointments and glean insights from patient feedback effectively. This strategic initiative broadens our service offerings and positions U of U Health as a forward-thinking institution ready to adapt to the dynamic landscape of healthcare delivery.

Teleradiology with the use of AI -

Tele-radiology refers to the practice of transmitting radiological images, such as X-rays, CT scans, MRIs, and other medical images, from one location to another for the purpose of interpretation and diagnosis by a radiologist or medical specialist who is not physically present at the original imaging facility. This enables the remote interpretation of medical images, often

in real-time, by experts located at a different site, which can be in the same hospital, a different city, or even a different country.

Key features of tele-radiology include:

1. **Image Transmission:** Radiological images are transmitted digitally from the imaging facility (e.g., a hospital, clinic, or imaging center) to the remote radiologist's location via secure and high-speed internet connections.

2. **Remote Interpretation:** The remote radiologist reviews and analyzes the images on specialized computer workstations, providing diagnostic reports and recommendations for patient care.

3. **Real-time or Delayed Interpretation:** Tele-radiology can be used for real-time interpretations in emergency situations or for routine interpretations with a delayed turnaround time.

4. **Improving Access to Radiology Services:** Tele-radiology helps address issues related to the shortage of radiologists in certain areas, enabling patients in underserved regions to access timely radiological diagnosis and care.

5. **Quality Control:** Tele-radiology services often include quality control measures to ensure the accuracy and reliability of image interpretation.

6. **Integration with Healthcare Systems:** Tele-radiology solutions are often integrated into hospital and healthcare information systems for seamless workflow management.

7. **Privacy and Security:** Given the sensitivity of medical images, tele-radiology systems prioritize data privacy and security to protect patient information.

Advantages:

Teleradiology offers several advantages that contribute to improved healthcare delivery and patient outcomes. Here are some of the key benefits of teleradiology:

1. **Timely Access to Radiological Expertise:** Teleradiology allows healthcare facilities to access specialized radiologists and their expertise, even in remote or underserved areas. This ensures that patients receive timely and accurate interpretations of their medical images.

2. **Emergency Care:** In emergency situations, where immediate diagnosis is crucial, teleradiology enables rapid image transfer and expert interpretation, helping healthcare providers make quick and informed decisions.

3. **Extended Coverage:** Teleradiology can provide 24/7 coverage, allowing healthcare facilities to have access to radiological services during non-working hours, weekends, and holidays, reducing delays in patient care.

4. **Reduced Geographic Barriers:** Patients in rural or remote locations can receive the same level of radiological care as those in urban areas, eliminating geographic barriers to healthcare access.

5. **Optimized Workflow:** Teleradiology can streamline the radiology workflow by distributing image interpretation tasks efficiently. This can lead to faster turnaround times for diagnostic reports and better resource allocation.

6. **Cost-Efficiency:** Teleradiology can be cost-effective for healthcare facilities, as they can avoid the expense of hiring and retaining full-time, on-site radiologists while still providing high-quality radiological services.

7. **Improved Quality Control:** Teleradiology services often include quality control measures, ensuring that interpretations are accurate and consistent across different facilities and radiologists.

8. **Access to Subspecialists:** Teleradiology networks can connect facilities with subspecialist radiologists who have expertise in specific areas such as neuroradiology, musculoskeletal radiology, or pediatric radiology, enhancing the accuracy of diagnoses.

9. **Reduction in Patient Transfers:** By obtaining remote radiological expertise, healthcare facilities can reduce the need to transfer patients to other facilities for specialized care, saving time and reducing patient stress.

10. **Enhanced Educational Opportunities:** Teleradiology can facilitate collaboration and learning opportunities among radiologists and medical professionals, promoting ongoing education and skill development.

11. **Privacy and Security:** Teleradiology services prioritize data privacy and security, ensuring that patient information and medical images are protected.

12. **Scalability:** Teleradiology services can easily scale up or down to meet the demands of healthcare facilities, making it adaptable to changing patient loads and needs.

Tele-radiology has become an essential component of modern healthcare, facilitating timely and accurate diagnosis and treatment decisions, particularly in situations where on-site radiologists are not available or during off-hours. It helps bridge geographic and time gaps, making specialized radiological expertise more accessible and improving patient care.

CONCLUSION

The U of U Health Hospital Management System is a well-integrated tool designed to enhance healthcare delivery and operational efficiency. It combines real-time data access, administrative efficiency, and improved patient-doctor interactions. This system is not limited to the current needs but extends its applicability to future demands, particularly in the realm of telemedicine, making healthcare both a physical and digital experience.

Our adherence to HIPAA protocols underscores our serious commitment to patient privacy and data security. It's not merely about compliance but about setting up a foundation of trust and integrity for both patients and medical professionals.

We've gathered valuable insights into the demographics using the University of Utah Healthcare, and we have analyzed the range of medical procedures and the effectiveness of appointment scheduling and billing systems.

The design and functionalities of this system aren't exclusive to the University of Utah Health System. Its adaptability means it can be customized to fit the needs of different hospitals and universities across various states. The intended outcome is a smoother operation for medical staff, clearer processes for administrators, and enhanced care for patients, ensuring they receive the proper treatments and medications prompt and efficiently.

The project's strict adherence to HIPAA protocol is a testament to its commitment to safeguarding patient privacy and ensuring data security. By integrating HIPAA-compliant practices into the system's design, development, and operational phases, the Hospital Management System aims to uphold the highest standards of healthcare data protection while supplying quality services to patients at the University of Utah Health.

This section emphasizes the project's commitment to HIPAA compliance, highlighting key considerations and practices to ensure the confidentiality and security of patient information in line with healthcare regulations.

REFERENCES

Logo: U of U Health. (n.d.). Healthcare.utah.edu. [Reference](#)

History & Achievements of U of U Health. (2022, August 1). University of Utah Health | University of Utah Health. [Reference](#)

Quick Facts. (2022, September 14). Huntsman Cancer Institute | University of Utah Health. [Reference](#)

SQL Data Generator: [Reference](#)

HIPPA Compliance: [Reference](#)

APPENDIX

TEAM MEMBER	HOURS SPENT	DESCRIPTION OF WORK	ADDITIONAL COMMENTS
Scott Silverstein	20	Data Generation with Mockaroo syncing with sql table creation, Report	
Rajasekhar Madabattula	20	Database Creation and Insertion of Values, Data Cleaning, Tableau Charts	
Michael Tetteh	20	Conceptual Design, Logical Design, and Physical Model	
Kunal Kodam	20	Data Cleaning, Report, Presentation	

SQL STATEMENTS

-- Drop tables if they exist

```
DROP TABLE IF EXISTS hospital cascade;
DROP TABLE IF EXISTS patient cascade;
DROP TABLE IF EXISTS department cascade;
DROP TABLE IF EXISTS doctor cascade;
DROP TABLE IF EXISTS appointment cascade;
DROP TABLE IF EXISTS room cascade;
DROP TABLE IF EXISTS user_table cascade;
DROP TABLE IF EXISTS lab_test cascade;
DROP TABLE IF EXISTS lab_result cascade;
DROP TABLE IF EXISTS diagnosis cascade;
DROP TABLE IF EXISTS billing cascade;
DROP TABLE IF EXISTS medical_record cascade;
DROP TABLE IF EXISTS pharmacy cascade;
DROP TABLE IF EXISTS telehealth_appointment cascade;
DROP TABLE IF EXISTS telehealth_feedback cascade;
```

-- Creating tables needed for creating the database.

-- Hospital Table

```
CREATE TABLE hospital (
hospital_id INT PRIMARY KEY,
hospital_name VARCHAR (255),
hospital_address VARCHAR (255),
city VARCHAR (255),
state VARCHAR (255)
);
```

-- Patient Table

```
CREATE TABLE patient (
patient_id INT PRIMARY KEY,
first_name VARCHAR (255),
last_name VARCHAR (255),
date_of_birth DATE,
gender VARCHAR (10),
contact_number VARCHAR (20),
email VARCHAR (255),
address VARCHAR (255),
```

```
state VARCHAR (255),
insurance_info VARCHAR (255),
is_student BOOLEAN,
is_telehealth BOOLEAN,
hospital_id INT,
FOREIGN KEY (hospital_id) REFERENCES hospital(hospital_id)
);
```

-- Department Table

```
CREATE TABLE department (
department_id INT PRIMARY KEY,
department_name VARCHAR (255),
hospital_id INT,
FOREIGN KEY (hospital_id) REFERENCES hospital(hospital_id)
);
```

-- Doctor Table

```
CREATE TABLE doctor (
doctor_id INT PRIMARY KEY,
first_name VARCHAR (255),
last_name VARCHAR (255),
specialization VARCHAR (255),
contact_number VARCHAR (20),
email VARCHAR (255),
department_id INT,
hospital_id INT,
FOREIGN KEY (department_id) REFERENCES department(department_id),
FOREIGN KEY (hospital_id) REFERENCES hospital(hospital_id)
);
```

-- Appointment Table

```
CREATE TABLE appointment (
appointment_id INT PRIMARY KEY,
patient_id INT,
doctor_id INT,
appointment_date_time DATE,
status VARCHAR (20),
FOREIGN KEY (patient_id) REFERENCES patient(patient_id),
FOREIGN KEY (doctor_id) REFERENCES doctor(doctor_id)
```

```
);
```

-- Room Table

```
CREATE TABLE room (  
room_no INT PRIMARY KEY,  
room_type VARCHAR (255),  
room_location VARCHAR (255),  
department_id INT,  
hospital_id INT,  
FOREIGN KEY (department_id) REFERENCES department(department_id),  
FOREIGN KEY (hospital_id) REFERENCES hospital(hospital_id)  
);
```

-- User (User Management) Table

```
CREATE TABLE user_table (  
user_id INT PRIMARY KEY,  
username VARCHAR (50),  
password_hash VARCHAR (255),  
role VARCHAR (50),  
hospital_id INT,  
FOREIGN KEY (hospital_id) REFERENCES hospital(hospital_id)  
);
```

-- LabTest Table

```
CREATE TABLE lab_test (  
test_id INT PRIMARY KEY,  
test_name VARCHAR (255),  
description TEXT,  
price DECIMAL (10, 2),  
doctor_id INT,  
patient_id INT,  
hospital_id INT,  
FOREIGN KEY (doctor_id) REFERENCES doctor(doctor_id),  
FOREIGN KEY (patient_id) REFERENCES patient(patient_id),  
FOREIGN KEY (hospital_id) REFERENCES hospital(hospital_id)  
);
```

-- LabResult Table

```
CREATE TABLE lab_result (  
result_id INT PRIMARY KEY,  
test_id INT,  
result_data TEXT,  
result_date DATE,  
FOREIGN KEY (test_id) REFERENCES lab_test(test_id)  
);
```

-- Diagnosis Table

```
CREATE TABLE diagnosis (  
diagnosis_id INT PRIMARY KEY,  
condition_name VARCHAR (50),  
patient_id INT,  
FOREIGN KEY (patient_id) REFERENCES patient(patient_id)  
);
```

-- Billing Table

```
CREATE TABLE billing (  
bill_id INT PRIMARY KEY,  
patient_id INT,  
appointment_id INT,  
total_amount DECIMAL (10, 2),  
payment_status VARCHAR (20),  
FOREIGN KEY (patient_id) REFERENCES patient(patient_id),  
FOREIGN KEY (appointment_id) REFERENCES appointment(appointment_id)  
);
```

-- MedicalRecord Table

```
CREATE TABLE medical_record (  
record_id INT PRIMARY KEY,  
patient_id INT,  
doctor_id INT,  
visit_date DATE,  
diagnosis_id INT,  
treatment TEXT,  
prescription TEXT,  
FOREIGN KEY (patient_id) REFERENCES patient(patient_id),  
FOREIGN KEY (doctor_id) REFERENCES doctor(doctor_id),  
FOREIGN KEY (diagnosis_id) REFERENCES diagnosis(diagnosis_id)
```

```
);
```

```
-- Pharmacy Table
```

```
CREATE TABLE pharmacy (  
  medication_id INT PRIMARY KEY,  
  medication_name VARCHAR (255),  
  description TEXT,  
  price DECIMAL (10, 2),  
  stock_quantity INT,  
  patient_id INT,  
  diagnosis_id INT,  
  hospital_id INT,  
  FOREIGN KEY (patient_id) REFERENCES patient(patient_id),  
  FOREIGN KEY (diagnosis_id) REFERENCES diagnosis(diagnosis_id),  
  FOREIGN KEY (hospital_id) REFERENCES hospital(hospital_id)  
);
```

```
-- TelehealthAppointment Table
```

```
CREATE TABLE telehealth_appointment (  
  telehealth_appointment_id INT PRIMARY KEY,  
  appointment_date_time DATE,  
  status VARCHAR (20),  
  platform VARCHAR (50),  
  meeting_url VARCHAR (255),  
  patient_id INT,  
  doctor_id INT,  
  hospitalid INT  
);
```

```
-- TelehealthFeedback Table
```

```
CREATE TABLE telehealth_feedback (  
  feedback_id INT PRIMARY KEY,  
  telehealth_appointment_id INT,  
  rating INT,  
  comments TEXT,  
  FOREIGN KEY (telehealth_appointment_id) REFERENCES  
  telehealth_appointment(telehealth_appointment_id)  
);
```

--Inserting Values

-- Insert values into the Hospital table

```
INSERT INTO hospital (hospital_id, hospital_name, hospital_address, city, state)
VALUES
(3459, 'University of Utah Hospital', '20440 Fisk Plaza', 'St. George', 'UT'),
(3109, 'University of Utah Hospital', '99 Brentwood Lane', 'West Valley City', 'UT'),
(6781, 'University of Utah Hospital', '3 Lakewood Gardens Alley', 'South Salt Lake', 'UT'),
(6173, 'University of Utah Hospital', '6 Lotheville Circle', 'Herriman', 'UT'),
(4713, 'University of Utah Hospital', '1 Morningstar Trail', 'Taylorsville', 'UT'),
(9799, 'University of Utah Hospital', '643 Iowa Drive', 'Sandy', 'UT'),
(8111, 'University of Utah Hospital', '1095 Elmside Place', 'Springville', 'UT'),
(4329, 'University of Utah Hospital', '156 Anthes Park', 'Herriman', 'UT'),
(3540, 'University of Utah Hospital', '62121 Farmco Lane', 'West Valley City', 'UT');
```

-- Drop the last two rows from the Hospital table

```
DELETE FROM hospital
WHERE hospital_id IN (
SELECT hospital_id
FROM (
SELECT hospital_id
FROM hospital
ORDER BY hospital_id DESC
LIMIT 2
) AS last_two
);
```

```
INSERT INTO hospital (hospital_id, hospital_name, hospital_address, city, state)
values
(9799, 'University of Utah Hospital', '643 Iowa Drive', 'Sandy', 'UT'),
(8111, 'University of Utah Hospital', '1095 Elmside Place', 'Springville', 'UT'),
(4438, 'University of Utah Hospital', 'Elmside Place', 'North salt lake', 'UT');
```

-- Alter the lab_test table to change the data type of the "price" column to money

```
ALTER TABLE lab_test
ALTER COLUMN price TYPE money;
```

-- Alter the patient table to increase the length of the gender column

ALTER TABLE patient

ALTER COLUMN gender **TYPE** character varying (255);

-- Showing the data from the Table

select * from appointment limit 100;

	appointment_id	patient_id	doctor_id	status	appointment_date
1	4,001	1,001	2,001	confirmed	1/14/12
2	4,002	1,002	2,002	confirmed	3/21/13
3	4,003	1,003	2,003	scheduled	7/13/23
4	4,004	1,004	2,004	scheduled	1/27/23
5	4,005	1,005	2,005	scheduled	3/27/13
6	4,006	1,006	2,006	scheduled	4/13/10
7	4,007	1,007	2,007	scheduled	2/28/22
8	4,008	1,008	2,008	confirmed	11/19/19
9	4,009	1,009	2,009	scheduled	11/25/14
10	4,010	1,010	2,010	scheduled	8/18/21
11	4,011	1,011	2,011	scheduled	2/26/11
12	4,012	1,012	2,012	confirmed	8/12/22
13	4,013	1,013	2,013	scheduled	9/2/17
14	4,014	1,014	2,014	scheduled	1/28/22
15	4,015	1,015	2,015	canceled	1/4/20
16	4,016	1,016	2,016	confirmed	8/10/16
17	4,017	1,017	2,017	scheduled	3/5/14
18	4,018	1,018	2,018	scheduled	9/1/23
19	4,019	1,019	2,019	scheduled	3/9/10
20	4,020	1,020	2,020	confirmed	8/2/23
21	4,021	1,021	2,021	scheduled	12/30/10
22	4,022	1,022	2,022	scheduled	11/25/21
23	4,023	1,023	2,023	scheduled	10/15/14
24	4,024	1,024	2,024	scheduled	3/29/23
25	4,025	1,025	2,025	confirmed	2/21/14
26	4,026	1,026	2,026	scheduled	2/6/22

select * from billing limit 100;

Enter a part of object name here

u1464893 - localhost:5432

Databases

DB PROJECT

Schemas

public

Tables

appointment 280K

billing 216K

department 200K

diagnosis 208K

doctor 328K

hospital 32K

lab_result 248K

lab_test 312K

medical_record 320K

patient 536K

pharmacy 248K

room 152K

telehealth_appointment 192K

telehealth_feedback 240K

user_table 256K

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System Info

Roles

is6420lab2

is6420lab3

is6420 assignment 2

select * from billing b limit 100;

billing 1 X

select * from billing b limit 100 | Enter a SQL expression to filter results (use Ctrl+Space)

Grid	bill_id	patient_id	appointment_id	total_amount	payment_status
1	3,001	1,001	4,001	53,806.67	paid
2	3,002	1,002	4,002	81,865.43	unpaid
3	3,003	1,003	4,003	63,734.27	unpaid
4	3,004	1,004	4,004	47,418.23	paid
5	3,005	1,005	4,005	63,499.74	unpaid
6	3,006	1,006	4,006	86,943.15	cancelled
7	3,007	1,007	4,007	42,406.14	cancelled
8	3,008	1,008	4,008	143,595.02	paid
9	3,009	1,009	4,009	149,424.25	pending
10	3,010	1,010	4,010	102,258.7	paid
11	3,011	1,011	4,011	110,438.64	paid
12	3,012	1,012	4,012	112,610.37	pending
13	3,013	1,013	4,013	119,480.11	unpaid
14	3,014	1,014	4,014	82,643.54	paid
15	3,015	1,015	4,015	83,639.09	cancelled
16	3,016	1,016	4,016	58,682.27	paid
17	3,017	1,017	4,017	13,780.67	unpaid
18	3,018	1,018	4,018	88,426.77	unpaid
19	3,019	1,019	4,019	49,011.46	pending
20	3,020	1,020	4,020	61,994.86	paid
21	3,021	1,021	4,021	131,697.9	paid
22	3,022	1,022	4,022	127,235.89	pending
23	3,023	1,023	4,023	72,559.97	cancelled
24	3,024	1,024	4,024	107,229.64	pending
25	3,025	1,025	4,025	136,019.46	paid
26	3,026	1,026	4,026	116,711.72	unpaid
27	3,027	1,027	4,027	116,711.72	unpaid

Refresh Save Cancel Export data 200 100

select * from department limit 100;

Enter a part of object name here

u1464893 - localhost:5432

Databases

DB PROJECT

Schemas

public

Tables

appointment 280K

billing 216K

department 200K

diagnosis 208K

doctor 328K

hospital 32K

lab_result 248K

lab_test 312K

medical_record 320K

patient 536K

pharmacy 248K

room 152K

telehealth_appointment 192K

telehealth_feedback 240K

user_table 256K

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Storage

System Info

Roles

is6420lab2

is6420lab3

is6420 assignment 2

select * from department d limit 100;

department 1 X

select * from department d limit 100 | Enter a SQL expression to filter results (use Ctrl+Space)

Grid	department_id	department_name	hospital_id
1	7,001	Ophthalmology	4,329
2	7,002	Cardiology	9,799
3	7,003	Cardiology	4,329
4	7,004	Dermatology	4,438
5	7,005	Cardiology	8,111
6	7,006	Neurology	4,713
7	7,007	Dermatology	9,799
8	7,008	Dermatology	3,109
9	7,009	Neurology	6,173
10	7,010	Dermatology	4,438
11	7,011	Cardiology	4,713
12	7,012	Cardiology	3,109
13	7,013	Orthopedics	3,459
14	7,014	Cardiology	8,111
15	7,015	Dermatology	3,109
16	7,016	Dermatology	4,329
17	7,017	Cardiology	3,540
18	7,018	Cardiology	4,438
19	7,019	Cardiology	4,713
20	7,020	Cardiology	3,459
21	7,021	Orthopedics	8,111
22	7,022	Dermatology	4,713
23	7,023	Dermatology	4,438
24	7,024	Cardiology	9,799
25	7,025	Dermatology	6,173
26	7,026	Orthopedics	4,438
27	7,027	Neurology	4,329

Refresh Save Cancel Export data 200 100

select * from diagnosis limit 100;

The screenshot shows a database management interface. On the left, a tree view shows the database structure under 'DB PROJECT' and 'public' schema. The 'diagnosis' table is highlighted. The main window displays the 'diagnosis' table with 100 rows of data. The columns are 'diagnosis_id', 'condition_name', and 'patient_id'. The data includes various medical conditions like Obesity, Rheumatoid Arthritis, Post-Traumatic Stress Disorder (PTSD), Stroke, Hepatitis, Crohn's Disease, Migraine, Endometriosis, Polycystic Ovary Syndrome (PCOS), Glaucoma, Anxiety, Multiple Sclerosis, Alzheimer's Disease, Chronic Obstructive Pulmonary Disease (COPD), HIV/AIDS, Epilepsy, Parkinson's Disease, Fibroids, and Interstitial Cystitis.

diagnosis_id	condition_name	patient_id
1	Obesity	1,001
2	Rheumatoid Arthritis	1,002
3	Post-Traumatic Stress Disorder (PTSD)	1,003
4	Stroke	1,004
5	Hepatitis	1,005
6	Hepatitis	1,006
7	Crohn's Disease	1,007
8	Migraine	1,008
9	Endometriosis	1,009
10	Polycystic Ovary Syndrome (PCOS)	1,010
11	Glaucoma	1,011
12	Anxiety	1,012
13	Post-Traumatic Stress Disorder (PTSD)	1,013
14	Multiple Sclerosis	1,014
15	Alzheimer's Disease	1,015
16	Chronic Obstructive Pulmonary Disease (COPD)	1,016
17	HIV/AIDS	1,017
18	Epilepsy	1,018
19	Multiple Sclerosis	1,019
20	Hepatitis	1,020
21	Endometriosis	1,021
22	Fibroids	1,022
23	Parkinson's Disease	1,023
24	Stroke	1,024
25	Migraine	1,025
26	Interstitial Cystitis	1,026
27	Migraine	1,027

select * from doctor limit 100;

The screenshot shows a database management interface. On the left, a tree view shows the database structure under 'DB PROJECT' and 'public' schema. The 'doctor' table is highlighted. The main window displays the 'doctor' table with 100 rows of data. The columns are 'doctor_id', 'first_name', 'last_name', 'specialization', 'contact_number', and 'email'. The data includes various medical specializations like Pediatrics, Cardiology, Orthopedics, Neurology, Gastroenterology, Hematology, Endocrinology, Ophthalmology, Dermatology, Psychiatry, and Neurology.

doctor_id	first_name	last_name	specialization	contact_number	email
1	2,001	Kippy Casbourne	Pediatrics	839-548-0765	kcasbourne@technonati.com
2	2,002	Silva Tommasi	Cardiology	986-549-7622	stommasi1@msn.com
3	2,003	Nickie Halkyard	Orthopedics	703-269-6792	nhalkyard2@washington.edu
4	2,004	Olwen Riddall	Neurology	187-342-3458	oriddal13@chicagotribune.com
5	2,005	Riocard Gates	Orthopedics	202-661-0128	rgates4@upenn.edu
6	2,006	Homer Kightly	Pediatrics	567-643-7930	hkightly5@csmonitor.com
7	2,007	Donny Brafferton	Gastroenterology	137-460-5687	dbrafferton6@paypal.com
8	2,008	Bette Sarath	Hematology	738-948-6065	bsarath7@washington.edu
9	2,009	Alameda Hazleton	Hematology	406-879-7520	ahazleton8@exix.com
10	2,010	Adel Diggin	Endocrinology	729-142-9489	adiggin9@forbes.com
11	2,011	Geri Stockell	Ophthalmology	953-337-2366	gstockella@lycos.com
12	2,012	Fancie Gunstone	Endocrinology	831-759-6515	fgunstoneb@parallels.com
13	2,013	Honor Twitley	Neurology	997-996-6442	htwitleyc@macromedia.com
14	2,014	Cristie Packman	Ophthalmology	232-329-8322	cpackmand@jgpsy.com
15	2,015	Carita Shale	Pediatrics	892-222-7576	cshalee@washington.edu
16	2,016	Roswina Rivaland	Ophthalmology	950-330-4357	rrivaland@stumbleupon.com
17	2,017	Alyce Broxup	Pediatrics	836-128-1552	abroxupg@so-net.ne.jp
18	2,018	Guido Chadbourne	Dermatology	550-838-0206	gchadbourneh@open-source.org
19	2,019	Lawrence Jevons	Psychiatry	546-836-8545	ljevonsi@cnbc.com
20	2,020	Philippa Aneley	Neurology	683-341-7624	paneleyj@salon.com
21	2,021	Aanika Feathers	Cardiology	961-681-6737	afeathersk@vinaora.com
22	2,022	Rudy Bretton	Neurology	584-741-1703	rbrettonl@bigcartel.com
23	2,023	Frances Mathew	Endocrinology	372-319-7597	fmathewm@berkeley.edu
24	2,024	Joceline Treadgear	Orthopedics	682-476-9530	jtreadgearn@bluehost.com
25	2,025	Borg Soot	Hematology	741-668-9504	bsootoi@tmail.com
26	2,026	Fair Gittose	Ophthalmology	981-475-5577	fgittosep@com.com

```
select * from hospital;
```

Enter a part of object name here

u1464893 - localhost:5432

Databases

DB PROJECT

Schemas

public

Tables

- appointment 280K
- billing 216K
- department 200K
- diagnosis 208K
- doctor 328K
- hospital 32K
- lab_result 248K
- lab_test 312K
- medical_record 320K
- patient 536K
- pharmacy 248K
- room 152K
- telehealth_appointment 192K
- telehealth_feedback 240K
- user_table 256K

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System Info

Roles

is6420lab2

is6420lab3

hospital 1 X

select * from hospital h limit 100

Enter a SQL expression to filter results (use Ctrl+Space)

	hospital_id	hpc hospital_name	hpc hospital_address	hpc city	hpc state
1	3,459	University of Utah Hospital	20440 Fisk Plaza	St. George	UT
2	3,109	University of Utah Hospital	99 Brentwood Lane	West Valley City	UT
3	6,781	University of Utah Hospital	3 Lakewood Gardens Alley	South Salt Lake	UT
4	6,173	University of Utah Hospital	6 Lotheville Circle	Herriman	UT
5	4,713	University of Utah Hospital	1 Morningstar Trail	Taylorsville	UT
6	4,329	University of Utah Hospital	156 Anthes Park	Herriman	UT
7	3,540	University of Utah Hospital	62121 Farmco Lane	West Valley City	UT
8	9,799	University of Utah Hospital	643 Iowa Drive	Sandy	UT
9	8,111	University of Utah Hospital	1095 Elmside Place	Springville	UT
10	4,438	University of Utah Hospital	Elmside Place	North salt lake	UT

Refresh Save Cancel

```
select * from lab_result limit 100;
```

Enter a part of object name here

u1464893 - localhost:5432

- Databases
 - DB PROJECT
 - Schemas
 - public
 - Tables
 - appointment 280K
 - billing 216K
 - department 200K
 - diagnosis 208K
 - doctor 328K
 - hospital 32K
 - lab_result 248K
 - lab_test 312K
 - medical_record 320K
 - patient 536K
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 - room 152K
 - telehealth_appointment 192K
 - telehealth_feedback 240K
 - user_table 256K
 - Foreign Tables
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 - Aggregate functions
 - Event Triggers
 - Extensions
 - Storage
 - System Info
 - Roles

select * from lab_result limit 100;

lab_result 1 x

select * from lab_result limit 100

Enter a SQL expression to filter results (use Ctrl+)

	result_id	test_id	result_data	result_date
1	8,001	5,001	High	2013-06-21
2	8,002	5,002	Abnormal	2012-05-14
3	8,003	5,003	Inconclusive	2015-11-13
4	8,004	5,004	Inconclusive	2016-12-24
5	8,005	5,005	Low	2016-07-28
6	8,006	5,006	Low	2016-12-16
7	8,007	5,007	Low	2022-11-14
8	8,008	5,008	Abnormal	2013-01-12
9	8,009	5,009	Low	2020-03-04
10	8,010	5,010	High	2015-07-05
11	8,011	5,011	Low	2012-07-17
12	8,012	5,012	High	2013-06-15
13	8,013	5,013	High	2018-04-01
14	8,014	5,014	High	2011-03-06
15	8,015	5,015	Normal	2020-09-21
16	8,016	5,016	Abnormal	2016-02-20
17	8,017	5,017	Low	2017-03-07
18	8,018	5,018	Low	2022-11-20
19	8,019	5,019	High	2023-09-09
20	8,020	5,020	Low	2010-12-29
21	8,021	5,021	Abnormal	2012-07-12
22	8,022	5,022	High	2010-07-31
23	8,023	5,023	Inconclusive	2019-08-17
24	8,024	5,024	Abnormal	2016-03-15
25	8,025	5,025	High	2015-12-30
26	8,026	5,026	Normal	2012-06-17
27	8,027	5,027	Inconclusive	2019-04-01

*select * from lab_test limit 100;*

Enter a part of object name here

ui1464893 - localhost:5432

Databases

DB PROJECT

Schemas

public

Tables

appointment 280K

billing 216K

department 200K

diagnosis 208K

doctor 328K

hospital 32K

lab_result 248K

lab_test 312K

medical_record 320K

patient 536K

pharmacy 248K

room 152K

telehealth_appointment 192K

telehealth_feedback 240K

user_table 256K

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System Info

Roles

select * from lab_test lt limit 100;

lab_test 1 X

select * from lab_test lt limit 100

Enter a SQL expression to filter results (use Ctrl+Space)

	test_id	test_name	price	doctor_id	patient_id	hospital_id
1	5,001	CT scan	\$15.66	2,001	1,001	4,329
2	5,002	MRI	\$34.12	2,002	1,002	9,799
3	5,003	urine test	\$0.98	2,003	1,003	4,329
4	5,004	CT scan	\$4.95	2,004	1,004	4,438
5	5,005	blood test	\$11.42	2,005	1,005	8,111
6	5,006	MRI	\$14.96	2,006	1,006	4,713
7	5,007	urine test	\$22.04	2,007	1,007	9,799
8	5,008	X-ray	\$3.64	2,008	1,008	3,109
9	5,009	CT scan	\$10.04	2,009	1,009	6,173
10	5,010	X-ray	\$8.88	2,010	1,010	4,438
11	5,011	urine test	\$12.28	2,011	1,011	4,713
12	5,012	urine test	\$3.27	2,012	1,012	3,109
13	5,013	MRI	\$0.29	2,013	1,013	3,459
14	5,014	MRI	\$33.17	2,014	1,014	8,111
15	5,015	blood test	\$32.42	2,015	1,015	3,109
16	5,016	CT scan	\$15.34	2,016	1,016	4,329
17	5,017	blood test	\$22.32	2,017	1,017	3,540
18	5,018	MRI	\$31.01	2,018	1,018	4,438
19	5,019	urine test	\$9.74	2,019	1,019	4,713
20	5,020	urine test	\$5.76	2,020	1,020	3,459
21	5,021	blood test	\$21.57	2,021	1,021	8,111
22	5,022	MRI	\$5.11	2,022	1,022	4,713
23	5,023	CT scan	\$15.65	2,023	1,023	4,438
24	5,024	MRI	\$21.14	2,024	1,024	9,799
25	5,025	X-ray	\$22.72	2,025	1,025	6,173

*select * from medical_record limit 100;*

Enter a part of object name here

ui1464893 - localhost:5432

Databases

DB PROJECT

Schemas

public

Tables

appointment 280K

billing 216K

department 200K

diagnosis 208K

doctor 328K

hospital 32K

lab_result 248K

lab_test 312K

medical_record 320K

patient 536K

pharmacy 248K

room 152K

telehealth_appointment 192K

telehealth_feedback 240K

user_table 256K

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System Info

Roles

select * from medical_record mr limit 100;

medical_record 1 X

select * from medical_record mr limit

Enter a SQL expression to filter results (use Ctrl+Space)

	record_id	patient_id	doctor_id	visit_date	treatment	prescription	diagnosis_id
1	40,001	1,001	2,001	2018-09-21	physical therapy	Ibuprofen 200mg	6,001
2	40,002	1,002	2,002	2017-02-23	physical therapy	Lisinopril 10mg	6,002
3	40,003	1,003	2,003	2023-09-17	radiation therapy	Metformin 1000mg	6,003
4	40,004	1,004	2,004	2020-10-30	chemotherapy	Metformin 1000mg	6,004
5	40,005	1,005	2,005	2010-11-02	chemotherapy	Metformin 1000mg	6,005
6	40,006	1,006	2,006	2011-09-02	physical therapy	Lisinopril 10mg	6,006
7	40,007	1,007	2,007	2016-12-21	physical therapy	Lisinopril 10mg	6,007
8	40,008	1,008	2,008	2018-07-26	physical therapy	Simvastatin 20mg	6,008
9	40,009	1,009	2,009	2021-12-07	medication	Amoxicillin 500mg	6,009
10	40,010	1,010	2,010	2021-01-02	medication	Ibuprofen 200mg	6,010
11	40,011	1,011	2,011	2018-10-08	surgery	Simvastatin 20mg	6,011
12	40,012	1,012	2,012	2015-04-16	physical therapy	Amoxicillin 500mg	6,012
13	40,013	1,013	2,013	2016-04-09	surgery	Ibuprofen 200mg	6,013
14	40,014	1,014	2,014	2011-01-13	radiation therapy	Amoxicillin 500mg	6,014
15	40,015	1,015	2,015	2014-02-19	physical therapy	Lisinopril 10mg	6,015
16	40,016	1,016	2,016	2010-02-12	physical therapy	Amoxicillin 500mg	6,016
17	40,017	1,017	2,017	2013-05-20	radiation therapy	Amoxicillin 500mg	6,017
18	40,018	1,018	2,018	2014-02-27	surgery	Amoxicillin 500mg	6,018
19	40,019	1,019	2,019	2020-01-02	physical therapy	Simvastatin 20mg	6,019
20	40,020	1,020	2,020	2010-04-20	radiation therapy	Simvastatin 20mg	6,020
21	40,021	1,021	2,021	2016-01-18	radiation therapy	Simvastatin 20mg	6,021
22	40,022	1,022	2,022	2014-03-13	radiation therapy	Ibuprofen 200mg	6,022
23	40,023	1,023	2,023	2013-07-16	surgery	Ibuprofen 200mg	6,023
24	40,024	1,024	2,024	2023-09-10	chemotherapy	Lisinopril 10mg	6,024
25	40,025	1,025	2,025	2013-10-07	radiation therapy	Lisinopril 10mg	6,025

*select * from patient limit 100;*

Enter a part of object name here

Localhost:5432

Databases

DB PROJECT

Schemas

public

Tables

appointment 280K

billing 216K

department 200K

diagnosis 208K

doctor 328K

hospital 32K

lab_result 248K

lab_test 312K

medical_record 320K

patient 536K

pharmacy 248K

room 152K

telehealth_appointment 192K

telehealth_feedback 240K

user_table 256K

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System info

Roles

patient 1 x

select * from patient p limit 100

Enter a SQL expression to filter results (use Ctrl+Space)

Grid	patient_id	first_name	last_name	date_of_birth	gender	contact_number	email
1	1,001	Lou	Norvell	2004-08-16	Male	674-389-0124	lnorvell@ism.com
2	1,002	Janene	Bunce	1975-08-05	Female	076-789-8800	jbunce1@uiuc.edu
3	1,003	Mattida	MacCheyne	1984-05-24	Female	322-394-5033	mmaccheyne2@ab
4	1,004	Missy	Rosen	1979-10-05	Female	966-850-1804	mrosen3@pweb.cc
5	1,005	Vance	Vassie	1950-03-17	Male	126-367-2000	vvassie4@phrm.co
6	1,006	Arlayne	Panchin	1973-05-04	Female	960-682-6490	apanchin5@consta
7	1,007	Bealle	Rotchell	1965-03-18	Agender	119-435-2812	brotschell6@qq.com
8	1,008	Trev	Fagge	1958-08-30	Male	553-046-3697	tfagge7@elegantth
9	1,009	Matthias	Linder	2002-06-06	Male	251-809-6702	mlinder8@google.e
10	1,010	Morgan	Gorst	1980-04-07	Male	332-885-6556	mgorst9@flavors.m
11	1,011	Viole	Gabey	1969-05-31	Female	533-238-4229	vgabey@barnesan
12	1,012	Eddie	Dincey	1999-02-07	Male	528-736-3161	edinceyb@statcour
13	1,013	Marc	McPhillimey	1984-12-02	Male	522-057-7514	mmcphillimey@jul
14	1,014	Connor	Butte	1958-07-21	Male	380-049-9775	cbutte1@npr.org
15	1,015	Irita	Arter	2005-02-10	Female	302-426-7215	iartere@loc.gov
16	1,016	Goran	Offell	2000-11-16	Male	902-422-9512	goffell@senate.gov
17	1,017	Evelin	Gozzard	1954-07-26	Male	375-723-7757	egozzardg@daily
18	1,018	Aerelia	Stainburn	1980-08-02	Female	531-369-7212	astainburnh@adth
19	1,019	Gabriel	McCroft	1951-04-15	Female	503-885-1401	gmccrofti@sina.co
20	1,020	Wesley	Birds	1993-06-13	Male	883-942-5875	wbirds@amazon.c
21	1,021	Sellie	Coram	1987-09-02	Female	264-378-1161	scoramj@satoday
22	1,022	Kathrine	Hedgecock	1992-09-04	Female	375-408-2910	khedgecockl@spic
23	1,023	Gray	Craney	1988-01-28	Male	118-879-0433	gcraneym@taobao.
24	1,024	Franchot	Wilsher	1977-10-30	Male	095-214-2000	fwilsherm@sbwire.c
25	1,025	Cuvdi	Mahhot	1956-04-14	Female	291-760-0075	cmahhotn@shudnes

*select * from pharmacy limit 100;*

Enter a part of object name here

Localhost:5432

Databases

DB PROJECT

Schemas

public

Tables

appointment 280K

billing 216K

department 200K

diagnosis 208K

doctor 328K

hospital 32K

lab_result 248K

lab_test 312K

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patient 536K

pharmacy 248K

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pharmacy 1 x

select * from pharmacy p limit 100

Enter a SQL expression to filter results (use Ctrl+Space)

Grid	medication_id	medication_name	patient_id	hospital_id	stock quantity	diagnosis_id
1	7,001	Levothyroxine	1,001	4,329	519	6,001
2	7,002	Acetaminophen	1,002	9,799	312	6,002
3	7,003	Metformin	1,003	4,329	952	6,003
4	7,004	Aspirin	1,004	4,438	539	6,004
5	7,005	Acetaminophen	1,005	6,111	177	6,005
6	7,006	Ibuprofen	1,006	4,713	679	6,006
7	7,007	Atorvastatin	1,007	9,799	406	6,007
8	7,008	Simvastatin	1,008	3,109	730	6,008
9	7,009	Metformin	1,009	6,173	692	6,009
10	7,010	Lisinopril	1,010	4,438	379	6,010
11	7,011	Metformin	1,011	4,713	916	6,011
12	7,012	Metformin	1,012	3,109	196	6,012
13	7,013	Acetaminophen	1,013	8,459	906	6,013
14	7,014	Amlodipine	1,014	6,111	157	6,014
15	7,015	Ibuprofen	1,015	3,109	277	6,015
16	7,016	Metformin	1,016	4,329	255	6,016
17	7,017	Atorvastatin	1,017	3,640	138	6,017
18	7,018	Atorvastatin	1,018	4,438	88	6,018
19	7,019	Lisinopril	1,019	4,713	949	6,019
20	7,020	Simvastatin	1,020	8,459	586	6,020
21	7,021	Amlodipine	1,021	6,111	857	6,021
22	7,022	Metoprolol	1,022	4,713	308	6,022
23	7,023	Aspirin	1,023	4,438	616	6,023
24	7,024	Amlodipine	1,024	9,799	336	6,024
25	7,025	Metoprolol	1,025	6,173	447	6,025

*select * from room limit 100;*

Enter a part of object name here

u1464893 - localhost:5432

Databases

DB PROJECT

Schemas

public

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- appointment 280K
- billing 216K
- department 200K
- diagnosis 208K
- doctor 328K
- hospital 32K
- lab_result 248K
- lab_test 312K
- medical_record 320K
- patient 536K
- pharmacy 248K
- room 152K
- telehealth_appointment 192K
- telehealth_feedback 240K
- user_table 256K

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Roles

select * from room r limit 100;

room 1 X

select * from room r limit 100 | Enter a SQL expression to filter results (use Ctrl+Space)

	room_no	room_type	room_location	department_id	hospital_id
1	9,001	Radiology	Room E	7,001	4,329
2	9,002	Laboratory	Room E	7,002	9,799
3	9,003	Pharmacy	Room C	7,003	4,329
4	9,004	Emergency Room	Room C	7,004	4,438
5	9,005	Radiology	Room A	7,005	8,111
6	9,006	Emergency Room	Room D	7,006	4,713
7	9,007	Pharmacy	Room A	7,007	9,799
8	9,008	Emergency Room	Room D	7,008	3,109
9	9,009	Operating Room	Room D	7,009	6,173
10	9,010	Radiology	Room D	7,010	4,438
11	9,011	Pharmacy	Room C	7,011	4,713
12	9,012	Pharmacy	Room B	7,012	3,109
13	9,013	Radiology	Room E	7,013	3,459
14	9,014	Patient Room	Room D	7,014	8,111
15	9,015	Emergency Room	Room D	7,015	3,109
16	9,016	Radiology	Room C	7,016	4,329
17	9,017	Pharmacy	Room B	7,017	3,540
18	9,018	Pharmacy	Room E	7,018	4,438
19	9,019	Operating Room	Room C	7,019	4,713
20	9,020	Patient Room	Room A	7,020	3,459
21	9,021	Pharmacy	Room B	7,021	8,111
22	9,022	Laboratory	Room A	7,022	4,713
23	9,023	Patient Room	Room B	7,023	4,438
24	9,024	Operating Room	Room D	7,024	9,799
25	9,025	Laboratory	Room B	7,025	6,173

select * from telehealth_appointment limit 100;

Enter a part of object name here

ui1464893 - localhost:5432

Databases

DB PROJECT

Schemas

public

Tables

appointment 280K

billing 216K

department 200K

diagnosis 208K

doctor 328K

hospital 32K

lab_result 248K

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patient 536K

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System info

Oracle

select * from telehealth_appointment limit 100;

telehealth_appointment 1 X

select * from telehealth_appointment

Grid	telehealth_appointment_id	appointment_date_time	status	platform	meeting_url	patient_id
1	8,002	2023-03-11	confirmed	LiveHealth Online	https://www.temporary-url.com/	8,001
2	8,003	2023-05-09	confirmed	PushCare	https://www.temporary-url.com/	8,002
3	8,005	2022-11-09	confirmed	Amwell	https://www.temporary-url.com/	8,003
4	8,005	2023-08-01	confirmed	LiveHealth Online	https://www.temporary-url.com/	8,004
5	8,007	2023-05-18	confirmed	Doctor On Demand	https://www.temporary-url.com/	8,005
6	8,009	2023-03-18	confirmed	LiveHealth Online	https://www.temporary-url.com/	8,006
7	8,010	2023-01-31	confirmed	Amwell	https://www.temporary-url.com/	8,007
8	8,011	2023-01-03	confirmed	Teladoc	https://www.temporary-url.com/	8,008
9	8,012	2023-02-01	confirmed	Doctor On Demand	https://www.temporary-url.com/	8,009
10	8,013	2023-01-21	confirmed	MDLive	https://www.temporary-url.com/	8,010
11	8,014	2023-03-05	confirmed	PushCare	https://www.temporary-url.com/	8,011
12	8,016	2023-07-31	confirmed	MDLive	https://www.temporary-url.com/	8,012
13	8,019	2023-01-31	confirmed	Amwell	https://www.temporary-url.com/	8,013
14	8,021	2023-02-04	confirmed	MDLive	https://www.temporary-url.com/	8,014
15	8,022	2023-06-26	confirmed	LiveHealth Online	https://www.temporary-url.com/	8,015
16	8,024	2023-05-08	confirmed	PushCare	https://www.temporary-url.com/	8,016
17	8,025	2023-01-29	confirmed	Teladoc	https://www.temporary-url.com/	8,017
18	8,026	2023-01-17	confirmed	Amwell	https://www.temporary-url.com/	8,018
19	8,028	2023-03-17	confirmed	Amwell	https://www.temporary-url.com/	8,019
20	8,033	2023-10-07	confirmed	Amwell	https://www.temporary-url.com/	8,020
21	8,034	2022-12-15	confirmed	LiveHealth Online	https://www.temporary-url.com/	8,021
22	8,038	2023-08-12	confirmed	PushCare	https://www.temporary-url.com/	8,022
23	8,039	2023-07-07	confirmed	Doctor On Demand	https://www.temporary-url.com/	8,023
24	8,040	2023-06-08	confirmed	Amwell	https://www.temporary-url.com/	8,024
25	8,043	2023-03-25	confirmed	MHI Inc	https://www.temporary-url.com/	8,025

select * from telehealth_feedback limit 100;

Enter a part of object name here

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Databases

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public

Tables

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billing 216K

department 200K

diagnosis 208K

doctor 328K

hospital 32K

lab_result 248K

lab_test 312K

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patient 536K

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user_table 256K

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select * from telehealth_feedback limit 100;

telehealth_feedback 1 X

select * from telehealth_feedback

Grid	feedback_id	telehealth_appointment_id	rating	comments	telehealth_appointment_id
1	50,001	3,579	8	Could have been better.	8,001
2	50,002	5,381	5	Satisfied with the telehealth experience.	8,002
3	50,003	9,161	8	Not happy with the service.	8,003
4	50,004	2,122	7	Could have been better.	8,004
5	50,005	2,461	9	Great appointment!	8,005
6	50,006	6,585	5	Not happy with the service.	8,006
7	50,007	8,752	4	Great appointment!	8,007
8	50,008	5,809	2	Satisfied with the telehealth experience.	8,008
9	50,009	6,422	10	Great appointment!	8,009
10	50,010	5,806	6	Not happy with the service.	8,010
11	50,011	6,594	6	Satisfied with the telehealth experience.	8,011
12	50,012	1,980	3	Great appointment!	8,012
13	50,013	2,985	9	Very helpful doctor.	8,013
14	50,014	6,658	8	Not happy with the service.	8,014
15	50,015	1,770	9	Could have been better.	8,015
16	50,016	9,425	8	Could have been better.	8,016
17	50,017	7,875	8	Satisfied with the telehealth experience.	8,017
18	50,018	7,784	9	Very helpful doctor.	8,018
19	50,019	5,536	10	Great appointment!	8,019
20	50,020	9,106	2	Satisfied with the telehealth experience.	8,020
21	50,021	1,722	3	Satisfied with the telehealth experience.	8,021
22	50,022	6,945	2	Satisfied with the telehealth experience.	8,022
23	50,023	4,465	10	Satisfied with the telehealth experience.	8,023
24	50,024	8,470	8	Satisfied with the telehealth experience.	8,024
25	50,025	7,660	5	Great appointment!	8,025

select * from user_table limit 100;

Enter a part of object name here

ui1464893 - localhost:5432

Databases

DB PROJECT

Schemas

public

Tables

appointment 280K

billing 216K

department 200K

diagnosis 208K

doctor 328K

hospital 32K

lab_result 248K

lab_test 312K

medical_record 320K

patient 536K

pharmacy 248K

room 152K

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user_table 256K

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System info

Oracle

select * from user_table limit 100;

user_table 1 X

select * from user_table

Grid	user_id	role	hospital_id
1	20,001	patient	4,329
2	20,002	pharmacist	9,799
3	20,003	nurse	4,329
4	20,004	therapist	4,438
5	20,005	pharmacist	8,111
6	20,006	therapist	4,713
7	20,007	pharmacist	9,799
8	20,008	nurse	3,109
9	20,009	pharmacist	6,173
10	20,010	pharmacist	4,438
11	20,011	nurse	4,713
12	20,012	doctor	3,109
13	20,013	pharmacist	3,459
14	20,014	nurse	8,111
15	20,015	doctor	3,109
16	20,016	pharmacist	4,329
17	20,017	therapist	3,540
18	20,018	doctor	4,438
19	20,019	therapist	4,713
20	20,020	doctor	3,459
21	20,021	pharmacist	8,111
22	20,022	therapist	4,713
23	20,023	nurse	4,438
24	20,024	nurse	9,799
25	20,025	therapist	6,173