Database Design

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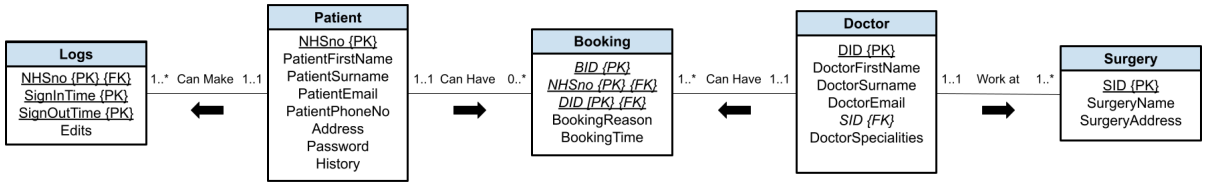
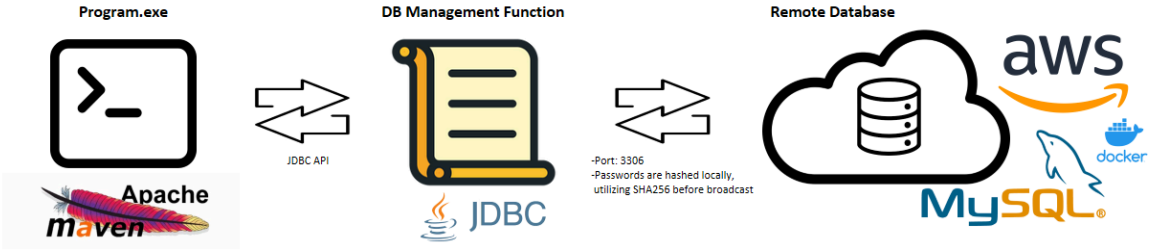
Database Diagrams

Entity Relationship Diagram



Database Connection Diagram



Description

In managing our project data, we've developed a robust system comprising five interconnected tables: surgery, doctor, booking, patient, and logs. Each table has a distinct purpose, streamlining data handling.

The surgery table lists surgical procedures, indicating dates, times, surgeons, and types of surgery.

The doctor table maintains surgeon details, including names, contacts, and specialities.

The booking table records patient appointments, specifying times and assigned doctors.

Patient information, like names, contacts, and medical histories, is in the patient table.

Lastly, the logs table monitors updates to patient records, capturing the timing, user, and nature of edits.

This structure is crucial for accurately tracking doctors' bookings and patient treatments, enhancing overall data management efficiency.

Database Breakdown

Surgery

The Surgery ID (SID) is the primary key in the surgery table, essential for distinguishing surgeries with identical names. Using an SID, we can easily differentiate between surgeries and establish a connection between the surgery and doctor tables, leading to a more streamlined and effective database organisation.

Doctor

The Doctor ID (DID) is the primary key since multiple doctors may have the same name. It is used for creating patient bookings. On the other hand, the Surgery ID (SID) is a foreign key that refers to the Surgery table discussed earlier.

Booking

The Booking ID (BID) acts as a primary key in conjunction with the patient's NHS number (NHSno) and the Doctor ID (DID), which together form a composite key. The NHSno is a foreign key used to associate the booking with a specific patient, while the DID assigns a doctor to the booking.

Patient

The Surgery ID (SID) is the primary key in the surgery database, ensuring the unique identification of surgeries, even with identical names. It facilitates efficient differentiation and linkage between surgeries and doctors, enhancing database organisation and streamlining operations.

Logs

The table's primary key combines three columns: NHSno, SignInTime, and SignOutTime. The NHSno column is also utilised in the patient table as a reference point for any logs. This structure is vital for maintaining the integrity and connectivity of the database, ensuring accurate and efficient data management.