

# ***Databases Documentation:***

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## **1 About the Project**

The project is about a pharmacy system. The system stores data about medicines, every sale, and also maintains an inventory of medicines available. The project is divided into 3-tiers:

1. The Front-End
2. Request Handling Scripts
3. SQL Database

## **2 SQL Database**

Database sever used for the backend is a MySQL Server. A database was created with the following tables:

1. Suppliers

2. Medicines
3. Inventory
4. Patient
5. Patient Contact
6. Sales
7. Medicines Sold
8. Employees
9. Employee Contact
10. etc...

In addition to this we also created a "user" database to store usernames and passwords of all users. The users are linked with the Employee Database.

The passwords are stored using Industry Standard encryption algorithms. The password is hashed using the *SHA256* hashing algorithm (one of the most secure hashing algorithm) and salted using a randomly generated string encoded into 64-bits. The hashed and salted password along with the username and salt are stored in the users database.

### **3 Request Handling Scripts**

All of this section of code is written in PHP. Functions are used to interact with the MySQL database. All SQL are prepared and sanitised before their sending and execution. Hence SQL- Injection attacks are vastly mitigated this way. Different functions are used for INSERT and UPDATE so that User level tasks can easily be seperated from admin level tasks. This allows us for seperation of concerns.

### **4 Front-End**

Front-End is developed using simple HTML5, JavaScript and occasionally, PHP. The front-end simply displays the database in tabular format. CRUD operations are possible on that table which directly get updated. There are seperate conrols for general users and admins. Access is granted only to authorised users via the login system.