BeHealthy Pharmacy

Project Scope

This project aims to create an end-to-end database application to serve as one stop solution for all medical needs. The application aims to provide a smooth user-friendly experience to its customers. The solution offers doorstep delivery of pharmaceuticals in the general and prescribed category from a wide drug range including niche drugs at affordable prices. We provide online doctor consultation from our specialized doctor network covering specialization in various fields.

The application utilizes its customer database to keep track of registered customers and their orders. The inventory database keeps record of available drugs in usable state and its specifications. The doctor database manages registered doctors and their past patients. The supplier database stores data regarding drugs supplied by a supplier. The invoice database keeps track of invoice generated for successful orders with the prescription (if any) related to the invoice and refund/replacement requested with respect to an invoice.

Tech Stack

- Front End
  - HTML
  - CSS
  - JavaScript
- Back End
  - MySQL
  - Python

Functional Requirement

- Customer registers on the application and enters personal information including name, dob, contact number which is stored in the customer database. After registration a unique customer id is assigned to each customer.

- The application keeps track of medicine stock in inventory and generates supplier order report at the end of the day. Based on sale records of a medicine, estimated quantity is added to the supplier order report.

- The application keeps track of drugs expiring within next one month and incentivize it for stock clearance. Entry for drugs which have reached their expiry are automatically removed from the inventory.

- The application provides list of medicines sold in last given number of days which are sorted based on their sold quantity. This would ensure that more frequently sold medicines have sufficient stock.

- List of invoices raised by a customer over last one week/month should be available for viewing both by customer and administrator.

- Get all medicines having a specific pattern in name to search for medicine for which order has to be placed.

- Support filter option to allow faster and efficient search, for instance get all medicines having similar chemical composition to a given medicine (related medicine), this can be used to auto-supply related medicine if ordered medicine is short/out-of-stock.

- While generating invoice drug which is about to expire earlier would be picked if there are multiple batches for it with different expiry date.

- While generating invoice indicate if it is cash on delivery or payment has already been done.

- Generate invoice for given set of medicines to be ordered and record prescription if required. Invoice will track customer mobile, address, medicine and its quantity along with total amount payable including delivery charges.

- The application will provide end of day validation report to the administrator. This would verify drug name and quantity sold as per invoices generated during the day which should match with the corresponding quantity sold on that day as reflected in the inventory database.

- To help book appointment with doctor of given specialization application will provide information about available slots for a given doctor during selected week, and also slots with other doctors of same specialization. There would also be flexibility to query which doctor is available during given time duration on specific day of given specialization.
- On confirmed booking of appointment, application will book that slot, generate invoice and setup reminder. There would also be feature to reschedule or cancel appointment at a minimum charge.

Technical Requirement

Access constraint

- Customers are restricted from accessing the inventory or other customer data. They can only view their own purchase history but not for other customers. This is also true for prescription where access is restricted to their own prescription.
- Access to inventory and customer data is permitted to authorized personnel from the organization.
- Registered doctors are allowed limited access to past patient records and denied from accessing the inventory.
- Supplier information is not visible to anyone except for authorized personnel in the purchase department.

Customer constraint

- 2 customers can't have same mobile number or Aadhar id – this would be used to generate unique id
- For a registered customer, dob given at the time of registration cannot be changed

Inventory constraint

- Sold quantity should be less than inventory quantity
- All expired medicine should have zero quantity in inventory

Invoice constraint

- Invoice shouldn't have any expired medicine
- Invoice ordered quantity should be <= medicine sold quantity

Supplier constraint

- While placing order to a supplier, the corresponding medicine should be in the supplier inventory
- While placing order to a supplier, supplier with min. price is picked to place the order

Appointment constraint

- No appointment should be generated for doctor while he/she is on leave
- When doctor is on leave, all slots during that duration for that doctor would be pre-booked so that no appointment can be generated for him
- No appointment should fall for time duration when doctor is not available

Entities in the system

- Customer
- Medicine inventory
- Invoice (along with its prescription)

- Supplier (along with its inventory information)
- Doctor
- Appointment