The user will install the software on their respective devices. When the executable file will run on the device, the software will display the welcome page. The welcome page will hold options for sign up/ registration, sign in and account recovery. These activities related to accessing the system fall under the category of authentication.

(Registration: data entry)

The owner will register himself/ herself as the administrator of the system. The information he has to enter at the time of registration includes: full name, username, contact number, e-mail, present address, password, backup questions and their corresponding answers. The administrator/owner has the sole authority to register salespersons and shareholders in the system. To enlist a salesperson to the system, the following data must be provided: full name, username, password, address, contact number, e-mail, date of recruitment, salary, National ID number, date of birth, present and permanent addresses. The following information must be given when registering a shareholder: full name, username, contact number, e-mail, National ID number, investment/share amount. It must be noted that the owner himself/herself will fixate the username and password for a shareholder/salesperson at the time of registration.

(Registration: validity checking and storing information)

At the time of data entry, there would be a validity check going on at the backend of the system. The password must contain minimum 8 characters including 1 number. Regex will be used for checking the validity of email address and contact number. Confirmation codes will be sent to valid phone numbers and e-mail addresses. Before confirming registration, the system will ask for the codes. Correct entry of code will result in account creation. The registration information of the individual will be stored in the database. Upon entering username and password, user will be able to access the system.

(Sign in)

The user will click on the “sign in” button and will be directed to the login page. He/she will enter his/her respective username and password. The entered data will be matched with the corresponding data stored in database. If there both fields match, the user will gain access to the system. The first login time of a salesperson will be recorded on a regular basis.

(Account recovery)

In case the user fails to recall his/her password, the “forgot password” option will be clicked. In case of owner, the system will present him/her of previously saved backup questions. If the answers to the backup questions match the answers stored in database, the owner’s account will be unlocked. Now he/she will be able to change the password. The others users, salespersons and shareholders will be asked to enter their contact numbers. If contact number matches the number in database, the system will send the password to that number.

(Sign out)

When a user attempts to logout, system will prompt user for unsaved data. If user chooses to save state, data will be saved. Otherwise, the unsaved data will be discarded. If the user is salesperson, the last logout time will be recorded regularly.

(HR Management)

The system supports 3 kinds of users: Owner, Salesperson and Shareholder. Besides these individuals, every pharmacy has suppliers who provide them with products on demand. The owner being the administrator and supreme power of a small scale pharmacy business exercise the power to include or exclude individuals involved. When adding salespersons, shareholders and suppliers to the system, the details of the individuals will be stored. These details include full name, address, e-mail, contact number, Joining data, investment (for shareholder only).All these data are entered by the owner. When owner removes anyone, information will be removed from database and their access to the system will be denied onwards.

(Stock Management)

The stock of a pharmacy includes drugs, first aid products, hygiene products and minimal medical tools. The following attributes of products will be stored in database: product name, product type, component, company name, cost price, manufactured date, expiry date, discount, sale frequency. Products can be searched by the product name, company name and customer name. One of the most important issues in pharmacy management is to keep record of expiry dates of products. It is not unusual to have a carton of products whose expiry date will come in four month and at the same time another carton of the same product whose expiry date comes in a year. In order to reduce wastage, the pharmacy will try to sell off the products whose expiry dates are nearer. For this reason, the software enables to display products by their expiry dates when product is searched.

(Stock Management: Stock reserve and Transaction Update)

At the beginning, the owner will perform the task of updating the stock reserve. After salespersons are added to the system, they will update the stock upon receiving the products delivered by the supplier. The salesperson also updates the stock information after every sale. After every update, system will show pop-up for successful update.

(Stock Management: Product renewal and exception)

Products can also go missing due to accidents, political conflicts, extortion, theft, natural disasters. The drop in stock will also be recorded in database by salesperson. Again due to less demands and sales, expiry dates of the products in the stock may pass. In these circumstances, the salesperson will update the decrement. Sometimes, supplier allows the return of expired products and provides fresh products in return or even may give products for free. The salesperson will update stock for these grants.

(Financial management)

The most critical task of a business is managing its finances. The business of a pharmacy starts with an initial investment. The first financial task in the system is to enter the principal. This is done by the owner. The database will record this sum of money. The daily transactions are handled by the salesperson. When a customer pays for a product, the salesperson will update the cash. Besides, Salesperson has the responsibility of paying dues to suppliers on behalf of the owner. He/she pays off the dues with the cash in the shop and performs the update in the system. The expenditure is thus recorded in the database.

An owner can withdraw money and give the salespersons their salaries. The database will record the amount for salesperson salaries. Besides salaries, there are maintenance expenditures, for example, shop rents, electric bill. For these cases, owner will enter the subject of expenditure into the system. Database will update the cash deducting the amount.

The owner or shareholders may desire to increment/decrement their shares in the business or withdraw their profits. The owner can withdraw cash and update the system anytime. However, the shareholder depends on the owner for the task. During profit withdrawal, share increment/decrement, the sum of money to be deducted/ added is entered. Then, the database will update the cash.

Sometimes, loss is incurred from political clashes, extortions, accidents, natural disaster. The owner keeps record of the amount of the losses in the database with the date of the incident.

(Information System)

A practically impossible task on part of a salesperson is to remember all the products that need to be delivered, which products have their expiry dates knocking at the door, which supplier to contact for which product, how many products have gone missing due to unavoidable circumstances. Also, a salesperson lacks the authority to help a customer by selling a product with due and purchasing a product from a person who is not a supplier who has a deal/contract with the owner. The information management system will assist salesperson will aid the salesperson in overcoming the problem of recalling everything.

The number of products in the stock decreases naturally after every sale. The salesperson updates the stock regularly after the purchase. When the products will reach a certain number (determined by owner), the database will generate a low stock alert and ping the salesperson. The salesperson will send request to definite supplier for fresh products. The system will show whether the request has been sent successfully or not.

As stated before, database keeps record of expiry date of products. The owner sets a definite time period before expiry date for each product. When a product reaches that date, the database will send “expiry date alert” notifications to the salesperson.

Sometimes customers are unable to give full payment of purchased products. In these circumstances, a salesperson will enter customer data including: customer name, phone no, National ID number, address and send a notification to owner for the product sold with pending due. The database will store the customer details.

At times, individuals/customers want to sell products purchased from another pharmacy. The salesperson will seek the owner’s permission by sending a request over the software. If owner grants the permission, pharmacy purchases the product checking the expiry date and updates the stock.

There are cases when a customer may be in need of a product that is unavailable at the respective pharmacy and neighboring ones as well. For such incidents, the salesperson will send message to the owner over the software about the customer and the product in need. The Owner will grant/deny the request.

The pharmacy can also fall victim to extortion, accidents. The salesperson will send messages of the products lost in these cases.