1.   Requirements

Req#	Requirement	Discription	Priority
R_01	The system must allow the user to login and register.	Logging in or creating an account by verifying the entered credentials should be done by the system.	1
R_02	User must be able to log in through an email and a password they have provided during registry.		1
R_03	The system must offer different views and options for different user levels.	Based on the user level the webpage will present different views/options.	1
R_04	All user levels must be able to search through the product list.	The webpage should have an input field, preferably a search bar, where the user can look up a product. This should be accessible even for logged off/anonymous users.	1
R_05	System should allow logged in customers to leave comments and reviews on products.		2
R_06	System should save the purchase data of an account.	Customers should have the option to check their purchase history, for products they may have purchased when they were logged in.	3

Req#	Requirement	Discription	Priority
R_07	System must offer multiple payment options to customers.	Customers should be allowed to use credit card, debit cards, and crypto cards to make an online purchase.	1
R_08	Logged in customers, should be allowed to save certain products in their Wishlist.		3
R_09	Logged in customers should have the option to view their wish list.		3
R_10	Clerk and Manager users must be allowed to add products in the database.	It is expected that logged in managers and clerks will have an option available, where they can add new products into the database. The new products should be available to all user levels.	1
R_11	Clerk and Manager users must be allowed to make any additional changes to existing products of the database.	It is expected that logged in managers and clerks will have an option to edit a products information.	1
R_12	The system should be able to provide a daily sales report to Managers and Admins/Owners.	This option should be available only for these two user levels.	2
R_13	The system must allow Managers to access the full list of products located in the database.	Managers should be able to view all products, even those who have been flagged as out of stock.	2

Req#	Requirement	Discription	Priority
R_14	The system must be able to provide a monthly report to Managers and Admins/Owners.	This option should be available only for these two user levels.	1
R_15	Admins/Owners should have an option available that allows them to edit the websites main blog.		3
R_16	Admins/Owners must have an option available that allow them to create discount codes.	Admins/Owners should be able to create discount codes and declare their active period.	1
R_17	Admins/Owners should have an option to flag a product as the product of the day.		3
R_18	Managers should be able to check products purchased by specific customers.	The user info accessible by the manager should only be the customers username, email and order information.	2
R_19	Managers should be able to check a list of buyers for a specific product.		2
R_20	The system should be able to customize a customer's recommendations based on their searched products.		2
R_21	The system should allow the customer to flag a unavailable product.	This way the user can be notified when that product is back in stock.	2

Req#	Requirement	Discription	Priority
R_22	The system should send a notification to a customer when a flagged product has been restocked.		2
R_23	The system should provide an order tracking option.	The customer should be able to see the status of their order	3
R_24	The system should have an option that allows a customer, logged in or logged out, to compare two products side by side on the screen.		3
R_25	There should be an option available on each product page, where the user can share the product in other social platforms.		3
R_26	An option should be available to all user levels, where they can report certain bugs or issues they seem to be facing.	There should be a form filled out, where the user describes the problem, they seem to be facing. The problem can be related to the backend or the frontend issues.	1
R_27	The system should have an AI option, where the user can ask general questions regarding a product or on how to do an action.		3

Req#	Requirement	Discription	Priority
R_28	The system should provide customized product recommendations based on the customer's purchase history or search history.		2
R_29	The system should support multiple payment options, including credit cards, debit cards, and digital wallets, to accommodate customers' preferences.		1
R_30	The system should include a blog management feature where the owner can add and remove offers, choose the product of the day, and display available discounts.		1
R_31	The system should allow the manager to check the products purchased by a specific user, with only the username displayed for privacy reasons.		3
R_32	The system should allow the manager to check the list of buyers for a specific product, with only the username displayed for privacy reasons.		3

Req#	Requirement	Discription	Priority
R_33	The system should provide a referral program where customers can refer their friends to the store and receive rewards for each successful referral.		2
R_34	The system should implement a chatbot feature to provide customers with instant support and assistance.		2
R_35	The system should integrate with social media platforms to allow customers to share their favorite products or promotions with their friends and followers.		2
R_36	The system should include a store locator feature that shows customers the nearest physical store location based on their current location.		2
R_37	The system should provide real-time updates on the status of customer orders, including shipping updates and estimated delivery dates.		1

Req#	Requirement	Discription	Priority
R_38	The system should allow customers to compare products side-by-side based on features, price, and other factors.		2
R_39	The system should send notifications to customers when products they have shown interest in are back in stock or available for purchase.		2
R_40	The system should offer a personalized shopping experience. Based on the customer's preferences, browsing history, and previous purchases, the system should provide personalized product recommendations, customized promotions, and tailored content to enhance the overall shopping experience.		1

Non-Functional Requirements

User interface requirements

The user interface of PharmaLine will be tailored to accommodate different user roles, ensuring a smooth and user-friendly experience. It will be divided into three main categories based on the user's role: customer, clerk, and manager/business owner. Below is an overview of the key features of each interface:

Logged-in Interface:

• This interface will be available to all user roles.
• Users will input their login credentials, such as their username and password, in the designated fields.
• A login button will be provided to authenticate users and grant access to the application's main pages.

Customer Interface:

- The customer interface will provide a user-friendly experience for customers.
- The home page will display three categories, represented by icons and labels, allowing customers to navigate to different pages with various functionalities.
- A navigation bar will be placed at the top for quick access to different sections of the app.
- In the product browsing and ordering section, customers can search for products and place orders with a simple click.
- Customers will have the ability to leave comments and rate products based on their experience.
- A profile page will display the customer's purchase history, including a list of items ordered.
- Multiple payment options, such as credit cards, debit cards, and digital wallets, will be available to accommodate different customer preferences.
- Customers can create a wishlist to order products in advance that are currently out of stock or unavailable.
- The communication section will provide a chat icon for customers to communicate with dermatologists or support staff for assistance.

Clerk Interface:

- The clerk interface will primarily focus on inventory management and order processing.
- Clerks will have the option to add and remove products from the inventory.
- They will be responsible for confirming orders placed by customers.
- Additionally, clerks will have access to daily sales records to monitor and manage sales data effectively.

- **<u>Manager/Business Owner Interface:</u>**
- The manager/business owner interface will provide comprehensive tools for managing the business operations.
- Managers and owners can check the list of products displayed on the app, view the number of products per category, and track the current availability of products.
- Monthly sales reports will be accessible to both managers and owners for performance analysis.
- The interface will allow managers and owners to manage the blog section, including adding and removing offers, selecting the favorite product of the day, and showcasing available discounts.
- Managers can view the products purchased by specific customers (with only the username displayed for privacy reasons) and check the list of buyers for a specific product.
- The system will provide customized recommendations based on customer purchase history or search history.
- Customers will receive product availability notifications when items they have shown interest in are back in stock or available for purchase.
- The order tracking feature will provide real-time updates on the status of customer orders, including shipment details and estimated delivery dates.
- Customers will have the ability to compare products side-by-side based on features, price, and other factors.
- The system will include a store locator feature that shows customers the nearest physical store location based on their current location.
- Integration with social media platforms will enable customers to share their favorite products or promotions with friends and followers.
- Integration with chatbots will provide instant support and assistance to customers.
- Multiple payment options, including credit cards, debit cards, and digital wallets, will be supported to accommodate customer preferences.
- A referral program can be implemented where customers can refer friends to the store and receive rewards for successful referrals.

By considering these user interface requirements, PharmaLine can provide a user-friendly and efficient experience for customers, clerks, managers, and business owners.

Usability

Usability is a crucial aspect of the PharmaLine application, ensuring that it is user-friendly and efficient for both customers and staff. The following key indicators contribute to the usability of the application:

Accessibility:

PharmaLine must be accessible remotely and available at all times since both customers and dermatologists will use the app on their devices. Users should be able to access the application easily, regardless of their location or time.

Responsiveness:

The design and database of the app should be highly responsive. This means that the user interface should provide a smooth and seamless experience, with fast loading times and minimal lag. Data transactions, such as searching for products and placing orders, should be efficient and completed in a timely manner.

Flexibility:

The application should be designed with flexibility in mind, allowing for easy updates and adaptations to meet evolving requirements. This ensures that new features can be added, existing functionalities can be improved, and the application can keep up with changing user needs and industry standards.

Fault Detection and Handling:

To maintain a high level of usability, the application should be designed to detect and handle faults promptly. Error handling mechanisms should be in place to provide users with clear and meaningful error messages when they encounter issues. The application should also have robust error tracking and logging capabilities to facilitate efficient debugging and problem resolution.

Effectiveness:

PharmaLine should be designed to be simple and easy to use for both customers and dermatologists. The user interface should be intuitive, with clear navigation and logical organization of features. This allows users to accomplish tasks without confusion or unnecessary steps, enhancing their overall experience.

Efficiency:

The application should enable users to perform tasks effortlessly and with minimal errors. User interactions, such as browsing for products, placing orders, and managing inventory, should be streamlined and optimized for efficiency. This includes reducing the number of clicks or steps

required to complete actions, providing shortcuts or quick access to frequently used features, and minimizing waiting times for data retrieval or processing.

By prioritizing usability, PharmaLine can deliver a user-friendly experience that maximizes customer satisfaction and efficiency for both customers and staff.

Efficiency

PharmaLine aims to provide users with a highly efficient experience, ensuring that tasks can be completed effortlessly, with minimal errors, and in a short amount of time. The following considerations address the efficiency requirements:

- Real-time operations: Each task should be executed instantly, providing a seamless user experience.
- Easy browsing and ordering: Customers can effortlessly search for products and place orders with a simple click, eliminating the need to visit multiple shops.
- Efficient inventory management: The app provides shop personnel with better tools for inventory management and organized sales data, enabling them to assist clients more effectively.
- User-specific updates: Once users are identified, their main page is updated according to their access level, enhancing efficiency in accessing relevant information.
- Multiple payment options: Customers have the flexibility to choose from various payment methods, accommodating their preferences and streamlining the purchasing process.
- Advanced ordering: Users can order products in advance, even if they are currently out of stock or unavailable, through the Wishlist feature.
- Easy product management: Clerks and managers have the option to add and remove products, simplifying inventory management tasks.
- Sales monitoring: Managers and owners can efficiently check daily sales, as well as monthly reports for a comprehensive overview of performance.
- Product availability notifications: Customers receive timely notifications when products they have shown interest in are back in stock or available for purchase, improving efficiency in making informed buying decisions.
- Real-time order tracking: The system provides customers with real-time updates on order statuses, including shipping progress and estimated delivery dates, ensuring transparency and convenience.

- Product comparison: Customers can compare products side-by-side based on features, price, and other factors, enabling them to make well-informed purchasing decisions efficiently.
- Store locator: The system includes a store locator feature that shows customers the nearest physical store based on their location, facilitating convenience and accessibility.
- Integration with social media: The system integrates with social media platforms, allowing customers to easily share their favorite products or promotions with their friends and followers, expanding reach and engagement.
- Chatbot integration: The system integrates chatbots to provide customers with instant support and assistance, improving response times and overall user satisfaction.
- Referral program: A referral program is implemented, encouraging customers to refer friends and receive rewards, promoting customer engagement and loyalty.

Performance Requirements

The software will be developed as a mobile app for users, and as a web-based application for administrators.

The software application should be designed to support all users with an account at any time they want to access it.

While the app requires an internet connection to fully utilize its functionalities, there should be certain features or functionalities that can be accessed offline, without an internet connection.

Responsiveness

The application should be highly responsive to user input and external interruptions. It should promptly and efficiently respond to user actions, ensuring a smooth and seamless user experience.

In cases where the application is interrupted by another activity or app, it should save its current state and return to the same state or page when the interruption is resolved, providing continuity to the user.

Dependability and Availability

The application may have limited availability or functionality if users do not have an internet network connection. It should provide clear notifications or messaging to users in such

situations, informing them about the limited functionality and the need for an internet connection to access all features.

The application should strive to be available to users at all times, ensuring high uptime and minimal downtime. It should be designed to handle high user traffic and maintain stability and responsiveness under varying load conditions.

While the application aims to provide services to users in any geographical area, it may have limitations in offering certain services to patients who are located abroad. Clear communication should be provided to users regarding the availability and limitations of services based on their geographical location.

Security

- Each user is responsible for their personal data authenticity that is entered during registration.
- User's will be guided to create a good and strong password as a proactive measure to protect themselves.
- User's password will be encrypted and then saved into the database.
- A customer's credit card details won't be saved in the system.
- A customer's address won't be saved in the system, but it will be sent to a third-part shipment company.
- The option to add or edit any existing products in the database should only be accessible to clerks and managers.
- The option to check sale repost should be accessible only by managers and owner.