Software Requirements Specification

for

<MediBuy>

Version 1.0

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Table of Contents

Revision History

Name	Date	Reason For Changes	Version

1. Introduction

1.1 Purpose

This document specifies the software requirements for the MediBuy application. MediBuy is designed to facilitate easy and quick access to medicines across Bangladesh, allowing users to order medications online and have them delivered to their doorstep.

1.2 Document Conventions

This SRS follows the IEEE standard for SRS documentation, with priorities assigned to requirements and a clear structure for easy navigation.

1.3 Intended Audience and Reading Suggestions

This document is intended for developers, project managers, testers, and stakeholders involved in the MediBuy project. It provides detailed software requirements, organized by feature and functionality. Readers would start with the introduction and proceed to sections relevant to their role.

1.4 Project Scope

MediBuy is a mobile and web application that allows users to order medicines online. It ensures timely delivery, offers a wide range of medications, and includes features like prescription upload, order tracking, and secure payments. The project aims to revolutionize the accessibility of medicines in Bangladesh.

1.5 References

1. *MediBuy Project Report Link*
2. *Adobe XD Prototype Link*

2. Overall Description

2.1 Product Perspective

MediBuy is a new product aimed at providing an online platform for medicine delivery across Bangladesh. It integrates with local pharmacies to ensure wide coverage and timely service.

2.2 Product Features

1. User-friendly interface
2. Medication catalog with easy search and selection
3. Location-based pharmacy connection
4. Secure payment gateway
5. Real-time order tracking
6. Prescription upload for accurate dispensation

2.3 User Classes and Characteristics

- General Users: Individuals who need to order medicines.
- Pharmacies: Local pharmacies partnered with MediBuy for dispensing medications.
- Healthcare Providers: Doctors and clinics referring patients to MediBuy.
- Administrators: Platform managers ensuring smooth operation and compliance.
- delivery man:

2.4 Operating Environment

MediBuy will operate on mobile devices (iOS, Android) and desktops (Windows, macOS). The application requires internet connectivity and integrates with third-party payment gateways.

2.5 Design and Implementation Constraints

The system will be comply with local pharmaceutical regulations, ensure data security and privacy, and integrate with a variety of pharmacy management systems.

2.6 User Documentation

The following documentation will be provided: User manuals, online help, and tutorials.

2.7 Assumptions and Dependencies

MediBuy assumes the availability of reliable internet connections, partnerships with local pharmacies, and compliance with local healthcare regulations.

3. System Features

3.1 User-friendly Interface

3.1.1 Description and Priority

High priority. The system will offer a simple, intuitive interface for all users to navigate with ease.

3.1.2 Stimulus/Response Sequences

1. User opens the app.
2. The system displays the home page with easy navigation options.
3. User selects the desired feature (e.g., search medicines, view orders).

3.1.3 Functional Requirements

REQ-1: The system shall allow users to navigate through the app using clearly labeled buttons and menus.
REQ-2: The interface shall be designed to support touch and keyboard inputs across platforms (desktop and mobile).

3.2 Medicine Search

3.2.1 Description and Priority

High priority. Users can search for medicines and place orders directly through the app.

3.2.2 Stimulus/Response Sequences

1. User searches for a medicine.
2. System displays search results.
3. User selects a medicine and adds it to the cart.
4. User completes the order process.

3.2.3 Functional Requirements

REQ-1: The system shall allow users to search for medicines by name, category, or condition.
REQ-2: The system shall display medicine details including price, availability, and required prescription status.

3.3 Location-based Services

3.3.1 Description and Priority

High priority. The system will use location-based services to connect users with nearby pharmacies for quick delivery.

3.3.2 Stimulus/Response Sequences

1. User searches for a medicine.
2. System requests the user's location.
3. System provides a list of nearby pharmacies that stock the selected medicine.

3.3.3 Functional Requirements

REQ-1: The system shall use GPS services to detect the user’s location.
REQ-2: The system shall match user location with nearby pharmacies that have the required medications available.

3.4 Secure Payment Gateway

3.4.1 Description and Priority

High priority. Users can make payments securely using integrated payment gateways.

3.4.2 Stimulus/Response Sequences

1. User selects the "Checkout" option.
2. The system presents payment options.
3. User completes the payment.

3.4.3 Functional Requirements

REQ-1: The system shall integrate with secure third-party payment gateways (SSLCommerz).
REQ-2: The system shall encrypt all payment transactions using SSL.

3.5 Order Tracking

3.5.1 Description and Priority

Medium priority. Users can track their orders in real-time.

3.5.2 Stimulus/Response Sequences

1. User places an order.
2. System updates order status in real-time.
3. User views the tracking status of their order.

3.5.3 Functional Requirements

REQ-1: The system shall provide real-time order tracking from pharmacy dispatch to delivery.
REQ-2: The system shall send notifications to the user when the order status changes.

3.6 Prescription Management

3.6.1 Description and Priority

High priority. Users will upload valid prescriptions to order certain medications.

3.6.2 Stimulus/Response Sequences

1. User uploads a prescription.
2. System validates the prescription.
3. Upon approval, the order is processed.

3.6.3 Functional Requirements

REQ-1: The system shall allow users to upload prescriptions in PDF or image formats.
REQ-2: The system shall verify prescription authenticity through integrated checks.

4. External Interface Requirements

4.1 User Interfaces

- *Design: The user interface (UI) will be intuitive, with a consistent layout across all devices (mobile and web). This includes a clean, user-friendly design with easy navigation, appropriate use of colors, fonts, and buttons that are accessible to all users, including those with disabilities.*
- *Screens: Key screens include the home page, search page, product details, cart, checkout, order tracking, and user account management. Each screen will be designed to minimize the number of steps required to complete a task.*
- *Standards: The UI will adhere to the platform-specific guidelines. Error messages will be clear and guide users on how to correct issues.*

4.2 Hardware Interfaces

- *GPS Integration: The app will use the device's GPS to determine the user's location. This allows the app to show nearby pharmacies and calculate delivery times.*
- *Camera: The app will utilize the device's camera for scanning and uploading prescriptions.*
- *Notifications: The app will interface with the device's notification system to send order updates, reminders for prescription refills, and promotional offers.*

4.3 Software Interfaces

- *Payment Gateways: The app will integrate with multiple payment gateways (SSL Commerz, bKash, credit/debit cards) to process payments securely. The integration will handle transaction statuses (Successful, pending, failed) and communicate them to the user.*
- *Pharmacy Systems: The app will connect with pharmacy management systems to retrieve real-time data on medication availability, pricing, and to place orders. This requires APIs (Application Programming Interfaces) that handle queries and transactions efficiently.*
- *Database: The app will interface with a central database to store user data, order history, and inventory information. The database will support quick read/write operations to ensure smooth user experiences.*

4.4 Communications Interfaces

- *Protocols: The app will use secure communication protocols like HTTPS to protect user data during transmission. This is essential for transactions and data exchanges between the app, payment gateways, and pharmacy systems.*
- *Messaging: The app will also use email or SMS to send order confirmations, updates, and promotional messages to users. The communication standards would include encryption for sensitive information.*

- *Push Notifications: The app will utilize push notifications to keep users informed about their orders, special offers, and important updates.*

5. Other Nonfunctional Requirements

5.1 Performance Requirements

- *Response Time: The app would respond to user actions within few seconds. For example, when a user searches for a medicine, the results would be displayed quickly, even with a large database.*

- *Scalability: The app will handle a large number of concurrent users without performance degradation.*
- *Load Time: The app would load fully within few seconds on a standard mobile network. This is crucial for user retention and satisfaction.*

5.2 Safety Requirements

- *Prescription Verification: The app will ensure that only legally prescribed medicines are dispensed. This involves verifying uploaded prescriptions with a licensed pharmacist or through an automated system approved by regulatory authorities.*

- *Data Integrity: All data related to user orders, prescriptions, and payments will be stored securely and would be protected against corruption or loss. Regular backups and data validation checks would be in place.*

5.3 Security Requirements

- *Data Encryption: All sensitive data, such as user personal information, prescriptions, and payment details, will be encrypted both in transit and at rest.*

- *Authentication: The app would use strong authentication methods, including password protection, and possibly multi-factor authentication (MFA) for users accessing sensitive areas like order history and payment methods.*

- *Access Control: Different levels of access will be enforced within the app. For instance, only administrators would have access to modify pharmacy data or manage user accounts.*

5.4 Software Quality Attributes

- *Reliability: The app will be highly reliable, with a target uptime of 99.9%. This ensures that users can access the service whenever they need it, particularly in emergencies.*

- *Usability: The app would be easy to use for people of all ages and technical backgrounds. This includes providing help sections, tooltips, and clear instructions throughout the user journey.*

- *Maintainability: The codebase would be modular and well-documented to allow for easy updates and bug fixes. This also includes having automated testing to ensure new updates do not introduce regressions.*

- *Portability: The app would work seamlessly across various devices and operating systems, including Android, iOS, and web browsers.*

6. Other Requirements

- *Regulatory Compliance: The app will comply with all relevant laws and regulations concerning online sales of medications in Bangladesh.*

- *Localization: The app would support Bengali and English, to cater to a wider user base in Bangladesh.*

- *Legal Requirements: The app would include legal disclaimers regarding the use of online health services and ensure that users agree to terms and conditions before completing a transaction.*

- *Community Engagement: The app would include features to engage with community organizations, allowing them to participate in health campaigns, discounts for underserved populations, and collaboration with local health services.*