Software Requirements Specification (SRS)

For

< Online Medical System >

Prepared By

ICM104219- Arunalu Bamunusinghe

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1.Introduction

1.1 Purpose

The purpose of the Online Medicine System is to revolutionize the process of obtaining pharmaceutical products by providing a user-friendly and efficient digital platform. This system aims to enhance accessibility, streamline medication management, and improve overall healthcare experiences for users.

By offering a comprehensive range of features such as secure user authentication, detailed product catalogs, order management, and prescription upload capabilities, the Online Medicine System strives to make healthcare services more convenient, accurate, and accessible, ultimately contributing to better health outcomes for individuals across diverse demographics.

1.2 Document Convention

This document follows the APA 7th edition Format. Sub-headings and emphasized parts are written in bold text. The words enlisted in glossary are highlighted throughout the document and italicized text is used to label diagrams and for figure and table captions.

This document provides relevant information to stakeholders and creates an appropriate mean for dialogue and aids in advanced information on the project concept(s) according to the context. The report also provides a window for stakeholders to better understand the project. This document aims at providing user-friendly and

accessible system information available to stakeholders during this system development.

Abbreviation	Full Form
SRS	Software Requirements Specification
SQL	Structured Query Language

1.3 Intended Audience and Reading Suggestions

The document is intended to be read by developers, researchers, patients, students, doctors, marketing personnel, investors, and documentation writers. This document contains relevant information and requirements for the developers, investors, and customers with different parts intended for a different purpose. It guides through the necessary knowledge required for the understanding of the purpose and the functionality of the software. These requirements are consolidated precisely in a single document in the order of increasing specificity i.e., the initial overview is intended for marketing personnel and investors while the later topics are more relevant to the developers.

Section	Section Name	Intended For	Relevance
2	Overall Description	Customer and Developer	Gives overview of specifications, the Online Medicine Ordering System will provide to users.

3	External Interface Requirements	Developer	Lists all types of interactions that the product must support
4	System Features	Customer and Developer	Lists all types of interactions that the product must support. Gives a top-level overview of requirements for features that the Online Medicine System will have
5	Other Nonfunctional Requirements	Developer	How the product will look for the user
6	Other Requirements	Developer	Other requirements not covered elsewhere in the SRS include database requirements, legal requirements, reuse objectives for the project, and so on
Appendix B:	Glossary	Customer	Defines words the reader may not know
Appendix B:	Analysis Models	Developer	Gives a description of the system and design model such as an ER diagram, data flow diagram, etc.

1.4 Product Scope

1.4.1 Overview

The product scope of the Online Medical System encompasses the range of features and capabilities that will be included in the system. This section defines the boundaries and limitations of the system to provide a clear understanding of what functionalities are within and outside its scope.

1.4.2 In-Scope Features

1.4.2.1 User Registration and Authentication

Description: The system will allow users to register by providing necessary personal and health information. Authentication mechanisms will be implemented to ensure secure access.

1.4.2.2 Appointment Management

Description: Users can schedule medical appointments with healthcare professionals based on availability. The system will provide features for appointment reminders to minimize no-shows.

1.4.2.3 Health Record Management

Description: The system will store and organize users' health records securely, including medical history, test results, and prescriptions.

1.4.2.4 Communication

Description: Users can engage in secure messaging with healthcare professionals for remote consultations and inquiries. The system will also send notifications for important updates and appointment confirmations.

1.4.2.5 Medication Reminders

Description: The system will provide features for medication reminders and dosage information based on user prescriptions.

1.4.3 Out-of-Scope Features

1.4.3.1 Emergency Services

Description: Emergency medical services and crisis interventions are outside the scope of this system. Users will be directed to contact emergency services for immediate assistance.

1.4.3.2 Prescription Dispensation

Description: The system will not handle the physical dispensation of medications. Users will need to visit pharmacies to collect prescribed medications.

1.4.3.3 Payment Processing

Description: Financial transactions related to healthcare services, such as consultation fees or medication costs, are not within the scope of this system.

1.4.4 Constraints

Regulatory Compliance: The system will adhere to relevant healthcare regulations and standards to ensure data privacy and security.

Integration Limitations: Integration with external systems, such as insurance databases or electronic health record systems, is beyond the current scope.

1.4.5 Assumptions

Users have reliable internet access for system usage.

Users are responsible for maintaining the accuracy of their health information.

1.4.6 Dependencies

The system is dependent on secure communication protocols to ensure the confidentiality of user data.

1.4.7 Conclusion

The product scope of the Online Medical System is defined by the outlined features, functionalities, and limitations. This section provides a clear delineation of what users can expect from the system and sets expectations regarding functionalities that are not included in the current scope. This definition will guide the development team and ensure alignment with stakeholder expectations.

1.5 Reference

2023.Year 1 Semester 2 Group Project (I Am Join in Team)
SPM module in SLIIT LMS

2.Overall Description

2.1 Product Perspective

The online medical portal enables patients to access healthcare services remotely, including telemedicine, online pharmacy, and laboratory services. To get started, patients and healthcare providers can register for the portal by creating a user account. Patients can upload their medical records, which will be securely stored in the system. Healthcare providers can create a professional account, which allows them to manage their appointments and provide medical services through the portal. For telemedicine services, patients can schedule appointments with healthcare providers through the portal's scheduling system. During the appointment, healthcare providers can review the patient's medical history, diagnose illnesses, and prescribe medication. The portal also allows for real-time communication between patients and healthcare providers using video conferencing, instant messaging, or phone calls. For online pharmacy services, patients can order prescription drugs through the portal and have them delivered to their doorstep. The portal maintains a database of prescription drugs, and

patients can search for and select the medication they need. The portal will then verify the prescription and process the order. Once the order is processed, patients can track the status of their delivery through the portal. For laboratory services, patients can schedule appointments for laboratory tests through the portal's scheduling system. Patients can select the type of test they need and choose a convenient location for the test. Once the test is complete, patients can view their test results through the portal and consult with healthcare providers about their medical reports. The portal also ensures the security and privacy of patient data by encrypting and storing the data securely.

2.2. Product Functions

The major functions that the product performs are:

1)Database management

Administrator should have permission to update the record of the drugs, delete or add new drugs, change the password of the login, or to communicate with the customers. System document must be available for the users to know how to handle the product.

2) Stock management

Operation manager will keep the stock of medicines updated by ordering new medicines every time the store runs out of them. He will manage the stock of the medicines.

3)User-management module

The product will allow customers to register themselves. Customers should be provided with restricted access to the product with the facility to view drugs available, their expiry dates, prices, and detailed information. Effective searching should be facilitated by a user-friendly interface.

4)Handling billing

The product will generate a bill receipt for both the operation manager and the buyer. Order verification and confirmation must be made for each order placed. The order tracking must be available to for the users.

2.3. **Requirement Analysis**

2.3.1 Main Requirements

1.1. Functional Requirements

Main functions of the website take place between the users and the system is described by functional requirements. Five users are using Online medical portal. User, Doctor, Hospital, Admin, Pharmacist. They can access the system in different ways.

1.Unregister user and register User

User requirements

- An unregistered patient can check out our services.
- For unregistered patients, being able to check who is the doctor and pharmacy.
- associated with us.
- After getting the necessary information, a patient who is not yet registered will be able.
- to register.
- A registered patient can book an appointment with a doctor.
- A registered patient can cancel an appointment.
- Ability to cancel Prescription.

- Ability to pay a registered patient.
- Registered patients can edit their own account details**.**

System requirements

- The system should provide a public-facing website or landing page where unregistered.
- patients can access information about the services offered.
- The website should clearly display details about the associated doctors and pharmacies, including their names, specialties, and any relevant credentials.
- The system should have a registration process that allows unregistered patients to create an account.
- The registration form should collect necessary patient information, such as name, contact details, and any required demographic information.
- The system should validate the registration data to ensure accuracy and completeness.
- Registered patients should be able to access the system's appointment-booking functionality.
- The system should provide a user interface where registered patients can search for
- available doctors, view their schedules, and book appointments based on availability.
- The system should display availability updates to prevent double bookings.
- Registered patients should be able to cancel their scheduled appointments through the system.
- The system should allow patients to view their upcoming appointments and easily cancel them if needed.
- The system should send notifications to the relevant doctor and patient when an appointment is canceled.
- The system should have online pharmacy or medication ordering functionality for registered patients.
- The system should provide a catalog of available medications with relevant details,
- such as names, dosages, and prices.
- Registered patients should have the ability to cancel their medication orders.
- The system should handle order cancellations and initiate any required refunds or adjustments.
- The system should provide a platform for registered patients to access their prescriptions and receive medical advice.
- Registered patients should be able to view and download their prescriptions from the system.
- The system should enable registered patients to communicate with doctors or healthcare providers for medical advice or follow-up queries.

- The system should support online payment processing for registered patients.
- The system should ensure payment information and handle payment validation and confirmation.
- Registered patients should have the ability to edit their account details.
- The system should provide a user profile management interface where registered.
- patients can update their personal information, contact details, or any other relevant account details.

2.Hospital

User requirements

- Hospital can manage prescriptions.
- Hospital can update/delete patient details.
- Hospital can verify patient information.

System requirements

- System should approve appointments when hospitals approve appointments.
- System should provide additional information when patient requests additional.
- information.
- System should show patients old, uploaded prescriptions when necessary.
- System should update/delete patient details when hospital update/delete patient details.
- System should generate verification message when hospital verify patient details.

3. Pharmacist

User Requirements

- Pharmacists sign into the website using login credentials.
- Pharmacist can view and delete prescriptions.
- Pharmacist can update prescription status to the portal.
- Pharmacist can add or remove medicine from medication inventory.
- Pharmacist can generate invoice.

System Requirements

- System should validate user login credentials.
- If pharmacist delete prescription, system should delete prescription details from
- database.
- If pharmacist remove medication from medication inventory, system should remove.
- medication details from database.
- When pharmacist update medicine inventory, system should validate and update.
- medicine inventory details to the system.
- When pharmacist generate invoice, system should update invoice details to the system.

4. Doctor

User Requirements

- Doctor signs to the web using user credentials.
- Doctor can reschedule, remove appointments using portal.
- Doctor can access patient reports and patient details.
- Doctor can prescribe medication receipt.

System Requirements

- To make sure that only authorized doctors can access patient information and carry
- out pertinent duties
- Doctors should be granted appropriate access rights and privileges to examine and
- amend patient information, write prescriptions, make appointments, and carry out
- other pertinent tasks.
- The system should encrypt data sent between the doctor's device and the portal server.
- The medical portal system needs a strong infrastructure. To prevent data loss or
- service interruptions, it should be able to handle several concurrent logins, have rapid
- response times, and have backups and redundancy procedures in place.

5.Admin

User Requirements

- Admin signs to the website using login credentials.
- Admin can add, update, and remove staff (doctor, patient, pharmacist, hospital)
- Admin can view, modify and cancel appointments.
- Admin can view Doctor information.
- Admin can view payment records.

System Requirements

- System should validate the user login credentials.
- When admin Delete appointments, system should delete appointments from the
- database.
- When Admin update User details (Hospital, Pharmacy, Doctor, Patient), system
- should update from the database.
- When Admin Add Users (Doctor, Hospital, Pharmacy) to the system, the system
- should add them into the system.
- When patient make an appointment, system should display appointments on admin
- dashboard.
- When admin update doctor schedules, the system should update in system database.

2.3.2 Non-Functional Requirements

Non-functional requirements are essential elements that affect the system's overall functioning and user experience. The online doctor channeling and medication ordering system cannot succeed without them even if they may not be expressly requested.

User-friendliness:

- The system should have a user-friendly interface, making it easy for patients to navigate and use.
- Users should be able to access different features and functionalities of the system effortlessly.

Speed:

- The system should respond to user requests promptly, ensuring minimal waiting times.
- It should be optimized to perform efficiently and handle multiple user interactions simultaneously.
- Lagging or delays in the system's response should be minimized to provide a smooth user experience.

Security:

- Only authorized and registered users should be able to access the system.
- The system should implement robust user authentication mechanisms, requiring a username and password for login.
- Data privacy and protection should be ensured to safeguard sensitive user information and
- maintain confidentiality.

Quality:

- The system should adhere to high standards of quality in terms of performance, reliability, and accuracy.
- It should be thoroughly tested and validated to ensure that it functions as intended errors or glitches.

Scalability:

- The system should have the capability to handle increased workloads during peak times without performance degradation.
- Provision for scaling the system's infrastructure and resources should be in place to support increased demand.

2.4 Operating Environment

The software will operate with any operating system (Windows XP, Windows Vista, and Mac OS.) and browsers like Chrome, Mozilla Firefox, Internet Explorer with full support for network connectivity. It is web-based so it will require a client and server GUI.

2.5 Design and Implementation Constraints

- The constraints related to design and implementation of this software are specified by the programming language used for implementation, the software engineering environment, the programming methodology used, and the availability of supporting tools for automatic system analysis to keep the patent functions in distinct modules.
- The interface of the software is designed to support only English language as it is well understood nationwide.
- User-friendly software interface will be designed. Moreover, the designed software can be implemented in any operating system and user will not have to do any additional installation to run this software on his PC. This software requires PCs to have only basic features installed to run this software.
- The system can store data up to 4 terabytes but when the system is busy user may have to wait for one to two minutes for the pages to load otherwise the medicine ordering system will work smoothly.

- This software system allows more than one user to login and use it at a time. It has no limitations for the number of users using it. The online medicine ordering system will operate 24 hours on all weekdays.
- Only the developer will be able to view and edit its source code. Moreover, changings in record and data can only be done by the authorized and permitted users. No unauthorized access to the system will be permitted.

2.6 User Documentation

This software product will include a quick start guideline user manual covering complete overview of the product, configuration of SQL server along with other tools, technical details, and backup procedures. On-line help at www.medicineorderingsystem.com can be accessed and further detail at contact 091. ******* can also be availed. The tutorials and manual covering step by step guidance to the product.

2.7 Assumptions and Dependencies

The accuracy of the information provided by the software regarding the related diseases, medicines specifications, usages, dosages depend upon the authenticity of primary data sources. The primary sources need to be independently verified for them to be reliable. There may arise a need to incorporate a doctor or physician's approval or a health care facility to prescribe some medications. The medicines available for purchase need to be provided by a pharmacist with identity verification and having a license of the medical store. Besides, it is not feasible for doctors and health care professionals to receive information regarding potential drug interaction problems as they prescribe drugs to patients who already are consuming other medication that may result in their harmful cross action.

3. Requirement specification

3.1 Data Requirements

Hospital

- **hosp_phone**
- **hosp_name**
- **hosp_id**
- **city**
- **Street**

Registered patient

- **P_ ID**
- **F_name**
- **L_name**
- **House no**
- **Street**
- **Postal code**
- **City**
- **Country**
- **DOB**
- **Phone no**

Doctor

- **Doctor_ID**
- **Medical_License_No**
- **NIC_No**
- **Email**
- **Phone no**
- **Specialization**
- **Doctor_FName**
- **Doctor_LName**

Administrator

- **City**
- **Street**
- **DOB**
- **Phone_No**
- **F_name**
- **L_name**
- **Admin_ID**
- **E-Mail**

Appointment

- **Patient Name**
- **Appo_ID**
- **P_ID**
- **app_date**

Invoice

- **I_ID**
- **Cost**
- **P_ID**

Pharmacist

- **E-Mail**
- **Phone Number**
- **First Name**
- **Last Name**
- **Ph_ID**
- **DOB**
- **Medicine**
- **Expiration Date**
- **M_Code**
- **Price**

- **Company Name**

Payment

- **Amount**
- **Pay_ID**
- **Payment date**
- **P_ID**

Account details

- **F_name**
- **L_name**
- **Phone Number**
- **DOB**
- **City**
- **House_No**
- **Country**
- **Street**
- **Postal code**

Medicine

- **Expiration Date**
- **M_Code**
- **Price**
- **Company Name**

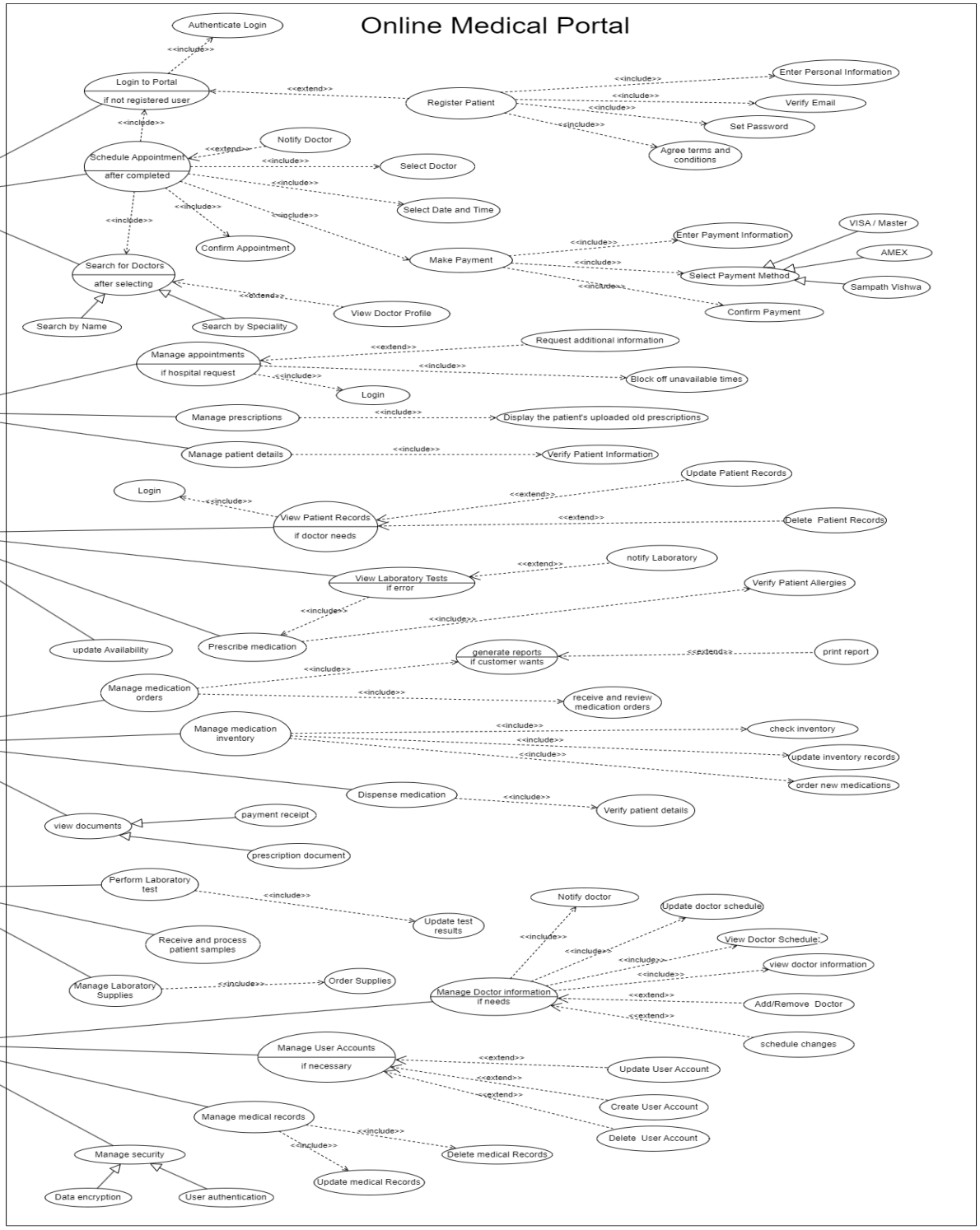
Patient Records

- **Lab_Report_No**
- **Patient_ID**

Prescription

- **Pres_No**
- **Dosage**
- **M_Code**
- **pres_date**

3.2 Use Case Diagram



3.2 Use case Description.

Number	1	
Name	scheduling an appointment	
Summary	Obtaining a medical appointment for the patient	
Priority	5	
Pre-Conditions	The patient must be registered with the medical portal and have a valid account.	
Post-Conditions	The patient's appointment is scheduled and confirmed by the medical portal.	
Primary Actor(s)	Patient	
Trigger	A patient experiencing symptoms searches for a doctor and schedules an appointment using an online medical portal.	
Main Scenario	Step	Action
	1.	The patient logs into the online medical portal and navigates to the appointment scheduling page.
	2.	The patient selects the type of appointment they need and enters their preferred date and time.
	3.	The medical portal displays a list of available physicians who meet the patient's search criteria.
	4.	The patient selects a physician and reviews their availability.
	5.	The patient selects an available appointment time and enters their reason for the appointment.
	6.	The medical portal displays a confirmation screen with the appointment details, including the date, time, and location.
	7.	The patient confirms the appointment and receives a confirmation email or notification.
	8.	The medical portal updates the physician's schedule to reflect the patient's appointment.
	9.	The patient receives a reminder notification before the scheduled appointment.
	10.	The patient arrives at the appointment and checks in with the physician.
Extensions	Step	Action
	1.a	If the patient is not registered with the medical portal, they must create an account before they can schedule an appointment.
	6.a.	If there are no available appointments for the patient's selected date and time, the medical portal suggests alternative dates and times.

	8.a	If the physician cancels the appointment, the medical portal automatically sends a notification to the patient and offers them the option to reschedule.
Open Issues	1.	Privacy and security issues may arise.

Number	2	
Name	Manage appointment	
Summary	Finds the doctor's information that the patient needs.	
Priority	5	
Pre-Conditions	Doctors must be available and willing to use the Actor in Hospital online portal to manage their schedules and appointments.	
Post-Conditions	Appointments are scheduled efficiently and accurately, and patients receive confirmation of their appointments.	
Primary Actor(s)	Hospital	
Trigger	patient logs into the Hospital portal and requests an appointment with a doctor	
Main Scenario	Step	Action
	1.	The hospital administrator logs into the Acter in Hospital portal using their credentials.
	2.	The administrator accesses the appointment management system
	3.	The portal displays a list of doctors and their schedules.
	4.	The administrator selects a doctor and views their schedule.
	5.	The administrator selects an available appointment slot and assigns a patient to the appointment.
	6.	The portal sends a notification to the doctor requesting confirmation of the appointment.
	7.	The doctor confirms the appointment and updates their schedule accordingly.
	8.	The portal sends a confirmation message to the patient and the doctor.
	9.	The patient receives a reminder message before the appointment.
	10.	Checking by the hospital whether the patient has come for the appointment
Extensions	Step	Action
	2.a	The portal updates the doctor's schedule and sends a notification to the doctor and the administrator.
	2.b	If the patient needs to reschedule the appointment, they can do so through the portal.
Open Issues	1.	The appointment management system of the Hospital portal has limited availability, which inconveniences patients who need to schedule or cancel appointments outside of operating hours and reduces the system's accessibility and flexibility

Number	3	
Name	Make a Payment	
Summary	Patients make a payment to schedule the appointment	
Priority	5	
Pre-Conditions	The registered patient has logged into the system.	
Post-Conditions	The patient receives the pdf receipt for confirmation the payment	
Primary Actor(s)	Patient	
Trigger	The patient selects the “Make a Payment” option	
Main Scenario	Step	Action
	1.	The patient redirect into payment page that includes the Appointment details
	2.	The system displays total bill amount.
	3.	The patient selects the payment method from the options available such as VISA/Master, Sampath Vishwa, AMEX
	4.	The patient enters necessary payment details
	5.	The system processes the payment request and verify it.
	6.	The system sends a confirmation message regarding the payment.
	7.	The system updates the patient account.
	8.	The system generates the PDF of transaction which includes payment details and corresponding bill amount
Extensions	Step	Action
	4.a	If the payment details provided by the patient is incorrect or incomplete, the system displays the error message and prompt patient to enter correct details.
	5.a.	If the patient cancels request, the system cancels the transaction and returns the patient to previous page.
Open Issues	1.	The system must ensure the security and confidentiality if the patient payment details.

Number	4	
Name	Manage Laboratory Supplies	
Summary	Laboratory technician order supplies	
Priority	4	
Pre-Conditions	The Laboratory technician must have logged into the medical portal	
Post-Conditions	The Inventory of Laboratory supplies in the system is updated.	
Primary Actor(s)	Laboratory technician	
Trigger	The Laboratory technician needs to order necessary Laboratory supplies	
Main Scenario	Step	Action
	1.	The Laboratory technician navigates “Check Availability” section of the medical portal
	2.	System shows the current inventory to the Laboratory technician
	3.	The Laboratory technician request the quantity needs for each item.
	4.	The Laboratory technician review the order and confirm it.
	5.	The system generates the order request and send it to the Supplier.
	6.	The supplier sends the tracking number for track the order.
	7.	The system sends a confirmation to the Laboratory technician via SMS notification about the order status.
	8.	The system updates the inventory with the ordered supplies.
Extensions	Step	Action
	2.a	If the Laboratory technician selects an item in the system that is out of stock, the Laboratory technician can add item to the inventory or cancel the order.
Open Issues	1.	The system must have a notification system to notify the Laboratory technician about the low inventory of critical supplies.

Number	5	
Name	Update user Account	
Summary	System admin updates the user account.	
Priority	5	
Pre-Conditions	The system administrator must authenticate and authorized to manage user accounts and the user account to be updated must already exist in the system.	
Post-Conditions	The user account details are updated in the portal.	
Primary Actor(s)	System Administrator	
Trigger	The system admin selects the" Update User Account" option from the admin dashboard	
Main Scenario	Step	Action
	1.	The system admin navigates to the "Manage user Accounts" section in the online medical portal.
	2.	The system displays the list of existing user accounts, including their personal information.
	3.	The system admin selects the user account to be updated.
	4.	The system displays the user account information of the selected user account.
	5.	The system administrator modifies the user account information.
	6.	The admin saves the changes to the user account.
	7.	The system updates the user account information
	8.	The system notifies the system administrator that the user account has been successfully updated.
Extensions	Step	Action
	2.a	If the System administrator tries to update a non-existent user account, the system displays error message
	7.a.	If the system encounters an error while updating the user account details such as network error or database issues, the system displays an error message and prompt admin to try again
Open Issues	1.	The system should have the password strength validation mechanism to ensure that all passwords mee minimum requirements.

Number	6	
Name	Manage patient details	
Summary	Obtaining the details of a patient	
priority	5	
Pre - conditions	Patient enters the personal information	
Post - conditions	Patient's personal information is verified by the medical portal	
Primary Actor(s)	hospital	
Trigger	Requesting and Verification of patient details by the hospital	
Main Scenario	Step	Action
	1.	patient log into the website through credentials
	2.	System verifies the patient credentials
	3.	Allow user to log into the medical portal
	4.	System generates a form for the the patient to enter details.
	5.	Patient enters the personal details
	6.	Verification of personal details of the patient
	7.	System shows a confirmation message
	8.	Allows patient to update their information
	9.	Access patient status
	10.	Directing the patient to obtain the relevant services from the medical portal
Extensions	Step	Action
	1.a	Shows an error message if the login credentials of the patient is invalid
	5.b	System asking to re-enter the details If the personal details entered by the patient is invalid
Open issues	Patient safety issues	

Number	7	
Name	manage prescriptions	
Summary	obtaining the prescription of the patient	
priority	5	
Pre - conditions	Searching for the relevant prescriptions	
Post - conditions	Providing the necessary prescriptions	
Primary Actor(s)	hospital	
Trigger	Checking the availability of the prescriptions and providing them for the patients	
Main Scenario	Step	Action
	1.	Input prescriber details and patient details
	2.	Searching for the relevant prescriptions
	3.	Checking the availability of the prescriptions
	4.	Allowing patient to select appropriate drug, brand and quantity
	5.	Review expiry instructions of the medicine
	6.	Verification of prescription details
	7.	Shows a confirmation message
	8.	Give information, instructions, and warnings
Extensions	Step	Action
	1.a	System asking to enter the details again if the prescriber details and patient details are invalid
	3.b	Shows an error message if prescriptions are not available
Open issues	Drug shortages	

Number	8	
Name	View Laboratory Test Report	
Summary	Examine test reports of patient	
Priority	3	
Pre-Conditions	Physician need to log into medical portal system.	
Post-Conditions	Doctor may assign for medication procedures or clinical facilities through the system	
Primary Actor(s)	Doctor	
Trigger	Select the view Reports of Patient diagnosis details through medical portal	
Main Scenario	Step	Action
	1.	Select the patient medical records from patient's diagnosis profile
	2.	Select the medical report to examine diagnosis
	3.	Date of tested, Patient name, Test type results and special remarks will be displayed from the lab report
	4.	Physician review the following details and note down information for other procedures
	5.	For references, Hard copy of test report may be printed by the physician
Extensions	Step	Action
	2.a	If the testing report were not displayed, a relevant message will be popped up from the portal. If there are multiple reports to select and view
	3.a.	If the results may in abnormal situation, doctor may assign for another testing for further examination
Open Issues	5.a	For the patient's privacy, medical report must be submitted and maintain with privacy perspectives
		Laboratory need to add complex measuring parameters and methods to reconfirm the accuracy of test results

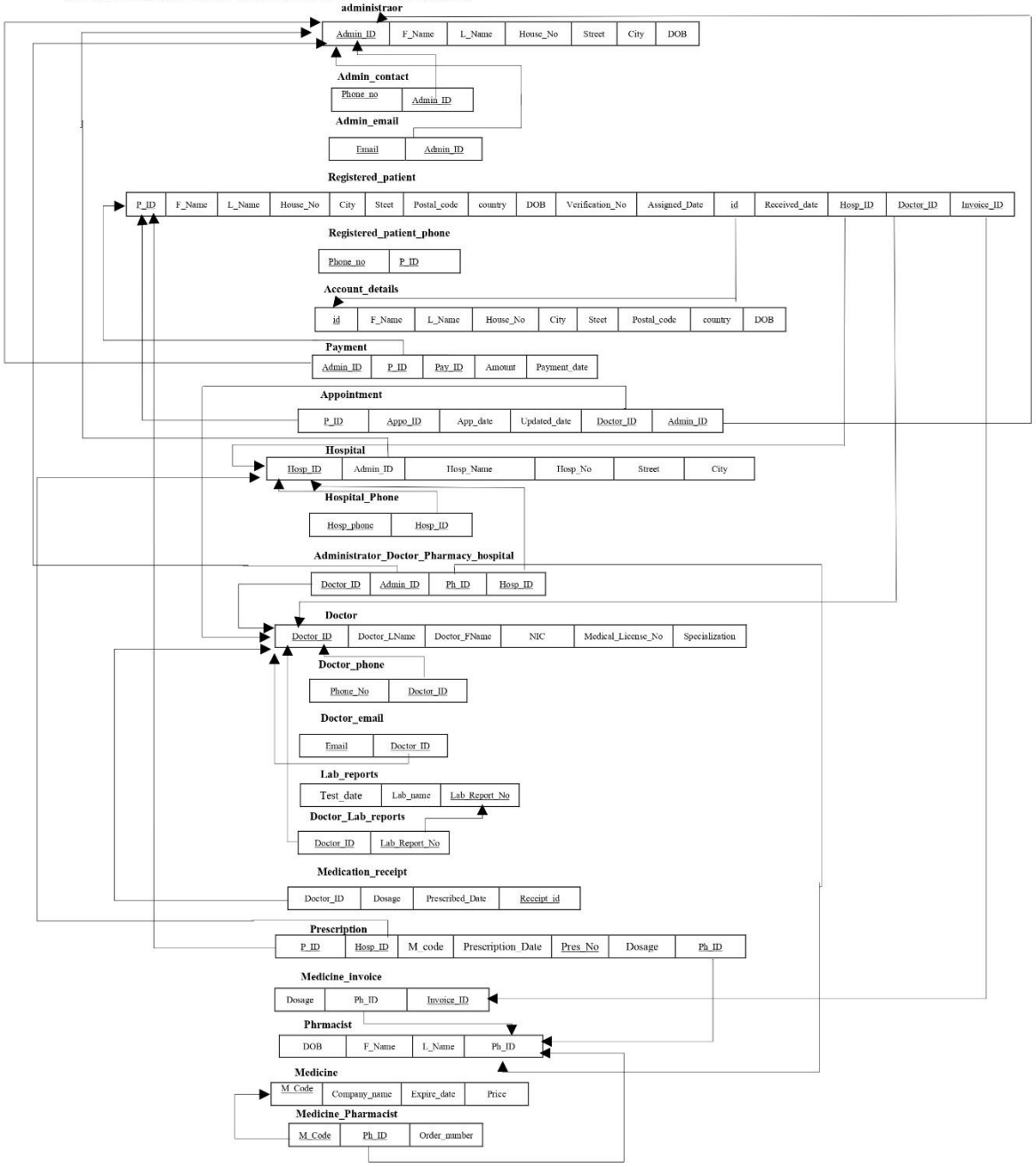
Number	9	
Name	Prescribe Medications	
Summary	Advise for medical medication for the concluded diagnosis	
Priority	2	
Pre-Conditions	Doctor must have the access to hospital inventory to get the list of medication in available	
Post-Conditions	The given medications are displayed in patient profile	
Primary Actor(s)	Doctor	
Trigger	Doctor selects the patient to prescribe medication through the portal	
Main Scenario	Step	Action
	1.	Doctor log in to the system and view patient's medical records
	2.	To figure out the need for medications, physician examine the history of medical records and current situation of the patient via distance channeling facilities of physical meeting
	3.	If there's requirement for medications, doctor select the the available medicines from the list of medications
	4.	Doctor mentions the dosage and frequency of medicines and time duration of use
	5.	To confirm the medications, doctor submit a soft copy of prescription with signature through the portal
	6.	System confirms the prescription submission and review the patient profile with added prescription
	7.	Doctor selects the option to send the prescription to the patient automatically through the portal
Extensions	Step	Action
	2.a	If there's no requirement for the medication, doctor inform the message to the patient with auto generated mail through the system and updating on patient's profile
Open Issues	1.	If the required medications were not available in inventory, Doctor need to inform it to the hospital inventory and patient

Number	10	
Name	Update inventory record.	
Priority	3	
Pre-Conditions	The pharmacist logged into the inventory management system.	
Post-Conditions	The pharmacist received a confirmation message from system. The inventory record for medication has been updated.	
Primary Actor	Pharmacist	
Trigger	The Pharmacist selects the "update inventory record" option from 'Medication inventory' menu.	
Main Scenario	Steps	Action
	1.	The system displays a list of all medications in pharmacy's inventory record.
	2.	Pharmacist search for medication by name or scanning the barcode.
	3.	Pharmacist selects the medication for which they need to update in the inventory record
	4.	The system displays current inventory for selected medication.
	5.	The pharmacist update inventory record by entering new quantities for each medication.
	6.	The pharmacist confirms the update.
	7.	The system update inventory record and display "successful" message to pharmacist.
Extensions	Steps	Action
	2.a.	Pharmacist entered invalid name, system display error message and pharmacist need to enter correct name.
	5.a.	Pharmacist enter invalid quantity (e.g.: negative numbers), system display error message and pharmacist need to enter valid number of quantities.
Open Issues	1.	The system needs to update with the pharmacy's existing inventory management system to ensure accurate tracking of medication stock levels

Number	11	
Name	Order new medications	
Priority	3	
Pre-Conditions	The pharmacy's inventory has been reviewed, and it has been determined that additional medication is needed. The pharmacy has a designated shipping address where the medication can be delivered. The pharmacy has a valid payment method to pay for the ordered medication	
Post-Conditions	The pharmacist receives a confirmation of the order, including the order details and estimated delivery date.	
Primary Actor	Pharmacist	
Trigger	Filling the pharmacy's inventory of a particular medication due to increase demand or lack of stock.	
Main Scenario	Steps	Action
	1.	The pharmacist navigates to the medication ordering page
	2.	Pharmacist search for medication by entering name or entering medication code.
	3.	The system displays available medications and their descriptions.
	4.	The pharmacist selects the medication what pharmacy need and specifies the quantity they need.
	5.	The pharmacist verifies the medication information, include dosage, administration route and any other special instructions.
	6	The pharmacist adds the medications to the shopping cart.
	7.	The pharmacist reviews the shopping cart and make sure the order details, including the medication name, quantity, pricing is correct and confirms the order.
	8.	Pharmacist select preferred shipping method, payment method and place the order.
	9.	Medication supplier accept the order and provides an estimated delivery date
	10.	The pharmacist receives the medication shipment at the designated shipping address and updates the inventory record accordingly.
Extensions	Steps	Action

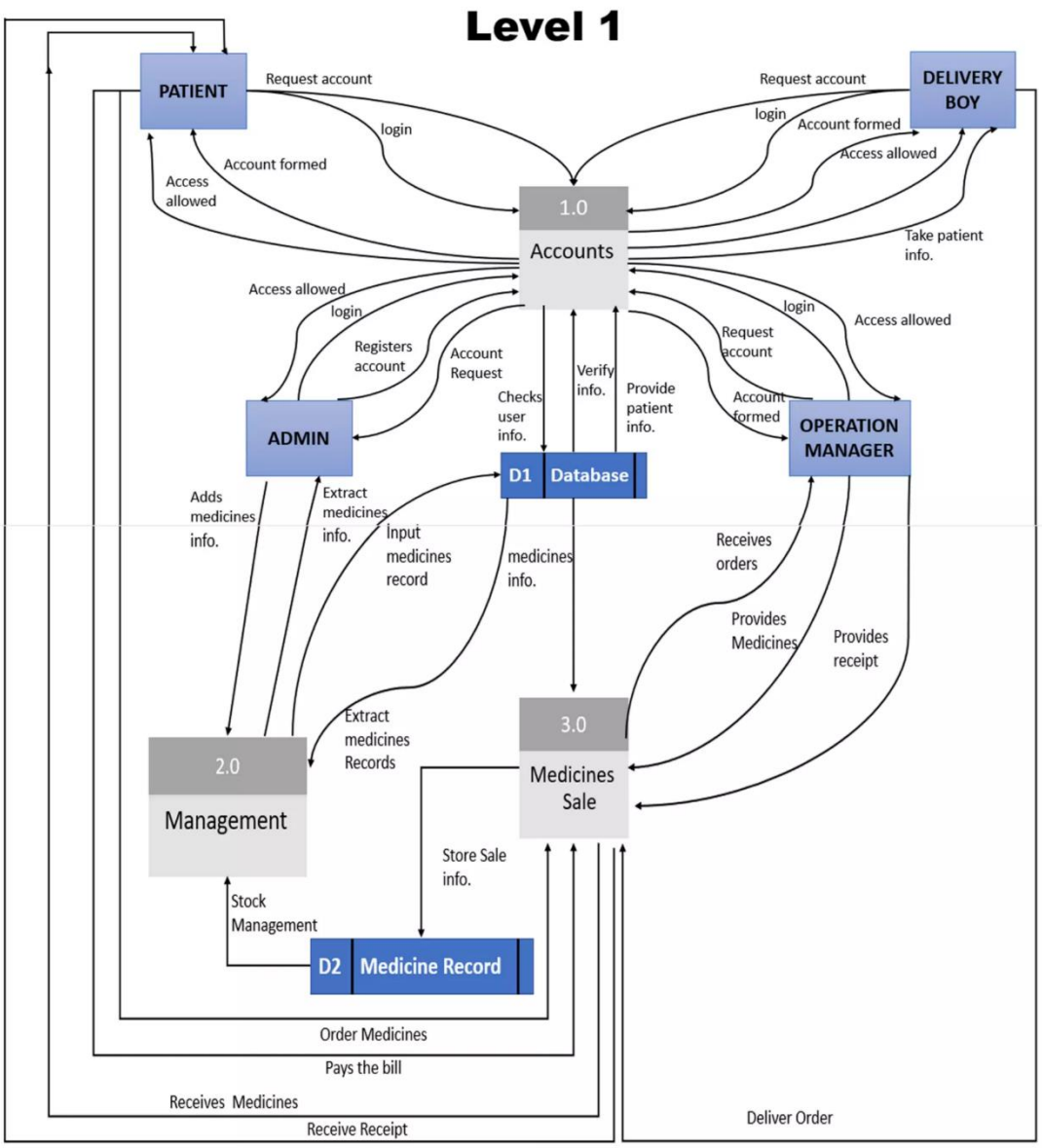
	2.a.	Pharmacist entered wrong name or invalid code, system shows error message and pharmacist need to enter correct name or code.
	6.a.	If the medication not available, the pharmacist will be notified and may choose to order a different medication, place that order with another supplier or cancel order.
	8.a.	If there any issue with the payment method, system display error message and pharmacist may need to recheck payment details or choose different payment method.
	10a	Medication does not arrive on the estimate date, the pharmacist may need to contact medication supplier.
Open Issues	1.	The of the inventory may fluctuate, So that pharmacist needs to monitor the cost to ensure that it is within the budget

3.3. Database Relational Schema

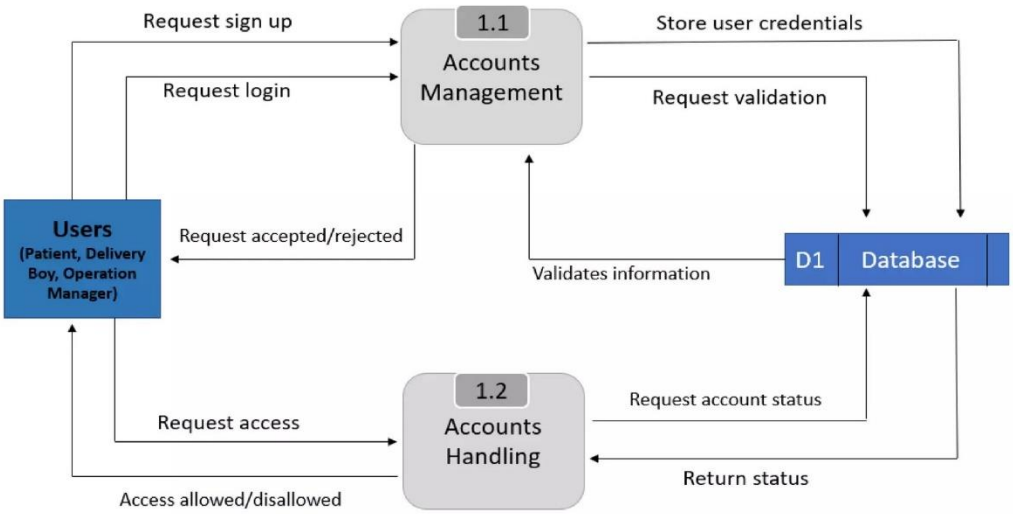


3.4 DFD

LEVEL 01



LEVEL 02


Request sign up
1.1
Accounts Management
Store user credentials
Request login
Request validation
Users
(Patient, Delivery Boy, Operation Manager)
Request accepted/rejected
Validates information
D1
Database
1.2
Accounts Handling
Request account status
Request access
Return status
Access allowed/disallowed