MIT | Academy of Engineering

(An Autonomous Institute Affiliated to Savitribai Phule Pune University)

Software Engineering

Software Requirement Specification

for

Online Medicine ordering System

By

Aadiraj Narayane

Nandini Ghale

Komal Bonde

Aaditya Karpe

Under guidance of

Prof. Santosh Warpe

SCHOOL OF COMPUTER ENGINEERING AND TECHNOLOGY

MIT ACADEMY OF ENGINEERING, ALANDI (D), PUNE-412105

MAHARASHTRA (INDIA)

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Revision History

Name	Date	Description	Version
Ghale Nandini , Karpe Aditya	Dec 15, 2021	Introduction & Description	1.0
Bonde Komal,	Dec 15, 2021	Revision	1.0.1
Narayane A.D	Jan 23, 2022	Requirement specification	1.1
Ghale Nandini , Karpe Aditya , Bonde Komal	Feb 23, 2022	Interfaces	1.2
Ghale Nandini , Bonde Komal , Kapre Aditya, Narayane A.D	Mar 06, 2022	Final Report	1.3

1. Introduction

1.1 Purpose

The purpose of this document is to deliver a detailed description of the Online Medicine Ordering System. lt will explain the function and characteristics of the system, the boundaries, and purpose tit the system, and all the external environment restrictions under which the system must operate and react successfully. Both the investors and the developers of the system will use this document for understanding and approval, respectively.

This software system, an Online Medicine Ordering System will be designed for an ordering purpose. The purpose of this systems is the combine all the previous knowledge about different medicines in a single database, which will manipulate and update frequently. lt will maintain records tit the counter sales, purchases, and recorder levels. lt will help users to search for medicines, price, and their availability at retail shops.

More specifically, this designed system will allow registered users to search for specific drugs and order online. Online payment option alum with ‘cash on delivery’ is available to users. The users can track their orders with the medicine details. This system will help minimize the time and resources. lt will help patients to get medicines without visiting stores.

1.2 Document Conventions

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 the course of this system development.

Table 1: abbreviations used in the SRS document

Abbreviation	Full form
SRS	Software Requirement specifications
SMS	Safety Management Specialist
BCSP	Board of Certified Safety Professionals
APA	American Psychological Association
OMOS	Online Medicine Ordering System
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 Id	Name	Intended Audience	Relevance
2	Description	Developer	Gives Overview of specification, 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	Gives a top-level overview of requirements for features that the Online Medicine Ordering System will have
5	Other Non Functional Requirements	Developer	How the product will look Our the user
6	Other Requirements	Dcvclopcr	Other requirements ntit covered elsewhere in the SRS including database requirements, legal requirements, reuse objectives for the project
Appendix B	Glossary	Customer	Defines words the reader may not know
Appendix B:	Analysis Models	Developer	Gives description of system and design model such as OR diagram, data flow diagram etc.

1.4 Product Scope

This system product is created to allow the admin to manage the record of the drugs so that he can easily update the stock details according to the drugs available in store if a new drug is added or any existing drug is deleted from the stock. The users can search and select medicines by their names The system will allow customers to register themselves by entering their essential credentials like name, e-mail address, postal address, and contact number to view the medicines in stock and to place an order.

This project is being undertaken in order for customers to receive decent service from this place at an affordable cost. Our project's major goal is to please our consumers.

Benefits of this web application:

1. Due to the difficulty for them to go to a local medical shop, online pharmacies provide a convenient way to buy medicine for the elderly, physically disabled, and working professionals.
2. It helps to save time by eliminating the need to travel to your local pharmacy and wait in line for medication.
3. Because the medicine in an online pharmacy originates directly from the company, there is no need for a third party, the cost of medicine obtained from an E-pharmacy is less than that of a local medical shop.
4. User can buy oxygen cylinder easily.
5. User can get the medicine at any time in anywhere.
6. For online payment users security will be maintained.
7. The product quality will be best.

1.5 References

- **Shami, P. F. (2020, February 11).** ***Online Medicine Ordering System Project in PHP or ASP.NET SRS Document.*** **Retrieved from https://t4tutorials.comi:https://t4tutorials.comionline-medicine-ordering-system-project-in-php-orasp-net-srs-cloouTicptM**
- **Sireefkerk., R. (2020, November 6). APA** ***format for academic papers and essays.*** **Retrieved** from scribbr.corn: **https://www.scribbr.comiapa-styleiformat/**

2. Overall Description:

2.1 Product Perspective

The software product being developed 1s a web-based system which functions 1s to buy and sell medicines The product 1s created with the intention to provide ease to customers for buying medicines without visiting the shops The product works with other databases to extract and store medicines information.

Following are the main features that are included in the Online Medicine Ordering System:

- **Databases:** The system is linked with local databases where record of medicines that were sold, expired, and returned is maintained.
- **User account:** The system allows the user to register their accounts in the system and avail the features of updating and viewing profiles.
- **Search:** It is simply a local search engine based on drug/medicine name.
- **Purchase:** Only the registered users can order medicines.
- **Record:** The previous record of registered users can be stored for future use.
- **Administration:** It maintains database records, sales, and purchases and maintains the whole system.

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 dnigs, 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 buy an Order verification and confirmation must be made for each or placed. The order tracking must be available to for the users.

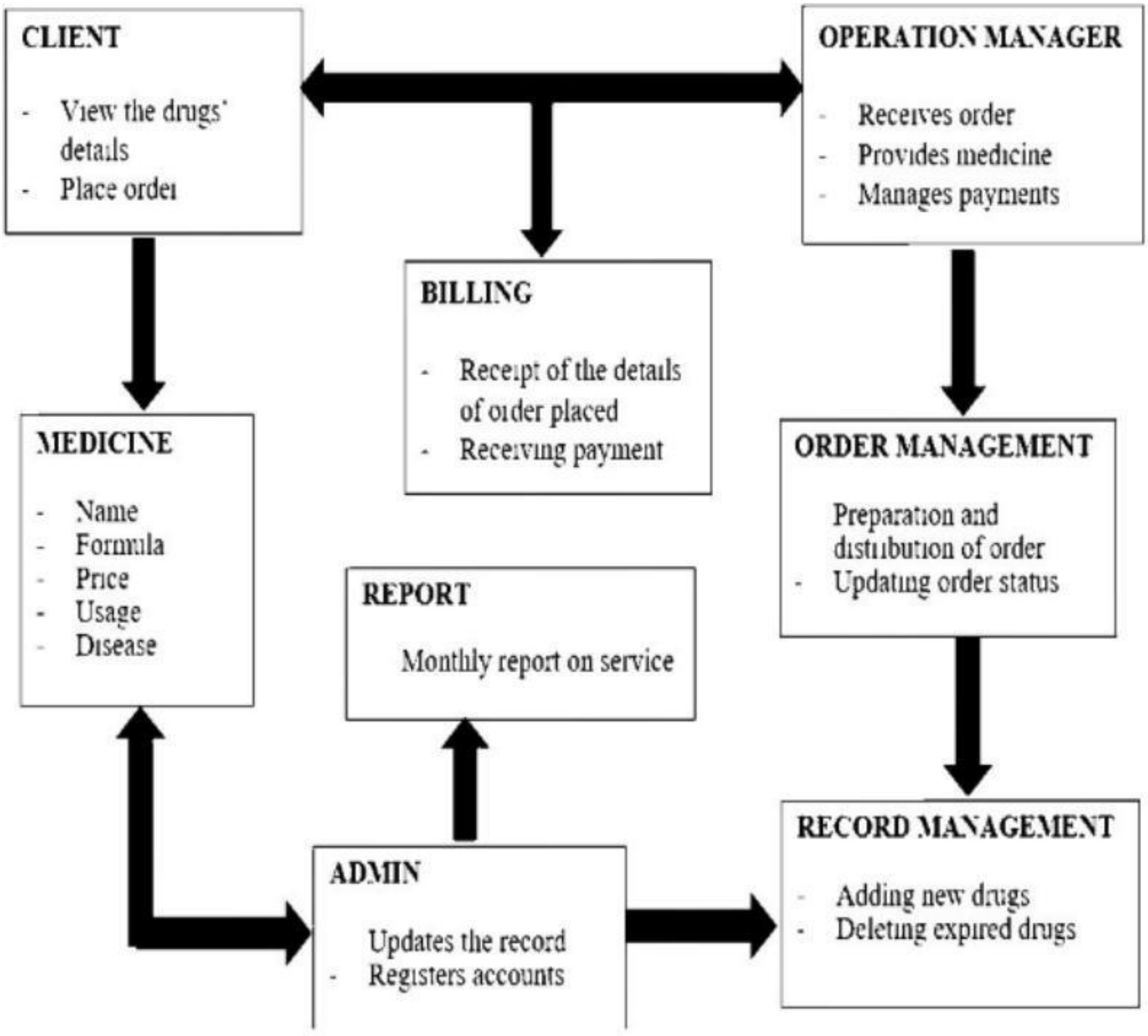


Figure 2 *An Object Case Diagram showing major groups, their relation, and respective requirements*

2.3 User Classes and Characteristics

Users of the system should have detailed knowledge of software, there are four main types of users as shown below

Table 3 *Different user classes and their characteristics*

S.no.	USER	CHARACTERISTICs	DESCRIPTION
1	**Admin**	• ID • Name • Login ID • Email ID • Address • Contact no • Gender	The **Admin** user class interacts with the system on an administrative level Admin will login in to the system and will register the account of patients, operation manager and delivery boy Admin also manages and maintains the medicine record and database
2	**Patient**	• Name • Login ID • Email ID • Address • Contact no	The **Patient** user class has limited access to the system Patient will register his or her account and will place an order and after receiving the order will pay the bill and give feed back to the system
3	**Operation Manager**	• ID • Name • Login ID • Email ID • Address • Contact no • Gender	The **Operation manager** user class has a management role Operation manager will receive order from the patient and will provide medicine to the delivery boy Provides bill to the patient through online receipt He also keeps the record of quantity and availability of medicines
4	**Delivery Boy**	• ID • Name • Login ID • Email ID • Address • Contact no • Gender • Vehicle no	The **Delivery boy** user class has a limited access to the system Delivery boy gets the address and other related contact information of the patient He delivers the order and receives the payment and then sends a confirmation message to the system
5	**Medicines Record**	• Name • Company • Price • Expiry date • Stock • SKU • Category • Form	In **Medicines record** contain the information about medicine such as expiry date, price per tablet, company, category, and SKU number

2.4 Operating Environment

The software will operate with any operating system (Windows IP, 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 ma 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, changing in record and data can only be done by the authorized and permitted users. No unauthorized access to OIL! system will be permitted.

2.6 User Documentation

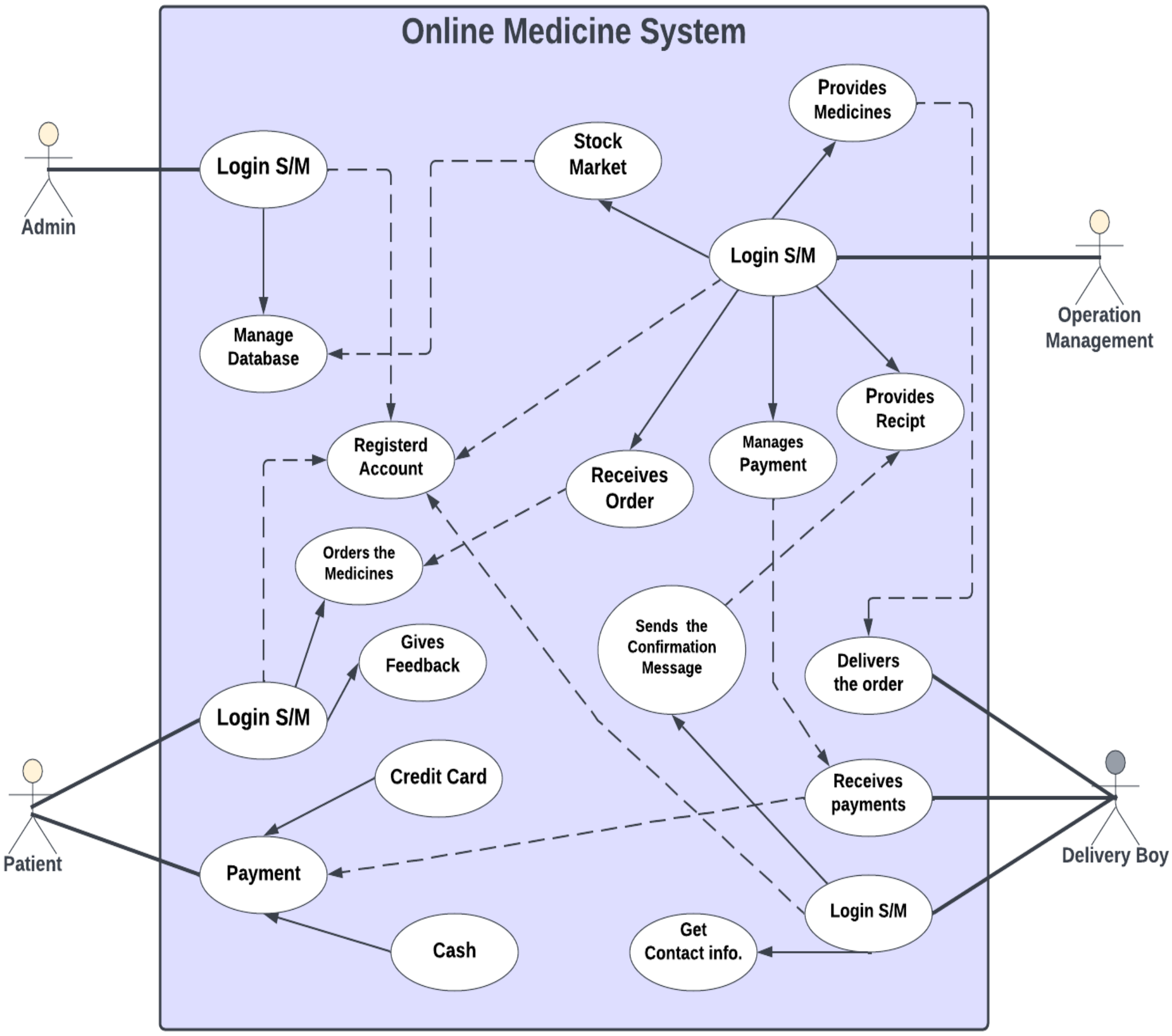
This software product will include a quick start guideline user manual covering complete overview of the product, configuration of SQL server along with other tools, technical details, and backup procedures. On-line help at www.medicineorderingsystem.com can be accessed and further detail at contact 051-******* can also be availed. The tutorials and manual covering step by step guidance to the product will be delivered along with the software and will also be available at www.medicineorderingsystem.com.pk

3. Requirement specification

3.1 Use Cases

Table 4: *Different primary actors and their use cases.*

Primary Actor	Use Cases
Admin	1. Login to the system 2. Manages database/ record 3. Registers accounts
Patient	4. Registered account 5. Orders the medicines 6 Pays the bill 7. gives feedback to system
Operational Manager	8. Receives o r d e r 9. Provides medicine 10. Manages payments 11 . Stock management 12. Provides receipt to patient
Delivery Boy	13. Gets contact information 14. Delivers the order 1.5. Receives payment 1 6 Sends confirmation message to operation manager



Use Case Diagram

3.2 Use Case Description:

Table 5.0: *First use case descriptionof Admin.*

Use Case ID:	1		
Us Case Name:	Login to the System		
Created By:	Ghale Nandini	Last Updated By:	Karpe Aditya
Date Created:	December 19, 2021	Date LastUpdated:	December 19, 2021
Actors:	Admin		
Description:	Admin accesses the system by his registered account.		
Normal Flow:	1. Administrator logins to the system 1. Administrator opens the system. 2. System displays login page. 3. Administrator enters username and password. 4. System verifies username and password. 5. System displays administrator information.		

Table 5.1: *Second use case description of admin.*

Use Case ID:	2		
Use Case Name:	Manages database record		
Created By:	Ghale Nandini	Last Updated By:	Karpe Aditya
Date Created:	December 19, 2021	Date Last Updated:	December 19, 2021
Actors:	Admin		
Description:	Admin is responsible for the medicinal record management of the database.		
Normal Flow:	2 Administrator manages the databaserecord 1. Administrator receives the updated information from end users. 2. Administrator edits the database records in the system. 3. Administrator saves the new record. 4. Administrator collaborates with the operation manager to order new stock of medicines.		

Table 5.2: *Third use case description of admin.*

Use Case ID:	**3**		
Use Case Name:	Registers account		
Created By:	Bonde Komal	Last Updated By:	Bonde Komal
Date Created:	Jan 20 2022	Date Updated	Jan 20 2022
Actors:	Adiiiiii		
Description	Admin ie istei s accounts for the ii sci s of the iiiedicinc i idci in systems.		
Norical Flows	3.Administrator registers account nf tke users I. Administrator receives the request for account . 2 System displays the credentials entered by the user. 3. System displays the success or fail of the operation.		

Table ILO: ***First use case Description of Patient.***

Use Case ID:	4		
Use Case Name:	Registered account		
Author Name:	Narayane A. D	**Last Updated By:**	Narayne A.D
Date Created:	Jan 20 2022	Last Update Date	Jan 20 2022
Actors/Entity:	Patient		
Description	The patient has already connected to the Online Medicine ordering system. The use case starts when patient registered to the System.		
Normal Flow	**4.0 Patient must be registered in the online medicine ordering system** 1. Before ordering the medicine, patient must be login to system. 2. Before login patent must be registered by the admin. 3. The patients give the personal details and mention the Email and contact number for communication to the system/operator manage. 4. The System uses the send to HTML lag to come up the patient's email and message system. 5. The operations manage adds the Subject line then message and emails. 6. The System generates and sends the registraon confirmation message and email to the patent		

Table 6.1: *Second use case description of Patient.*

Use Case Name :	Orders the medicines		
Author Name:	Karpe Aditya	Last Updated By :	Komal Bonde
Date Created:	Jan 21, 2022	Date Last Updated :	Jan 21, 2022
Actors/Entity:	Patient		
Brief Description:	patients must login to the system to order the medicine from Online Medicine ordering system.		
Normal Flow' :	**5.0 The patient can look up and place an order in online medicine ordering system** 1) Patents can read the description and prescription of medicine before ordering 2) Only reg1stered patients can look up and place an order of the medicines 3) Patient should add items to the cart 4) Patient submit an order and clicks the proceed button for the further processing of the online medicine ordering system 5) Patient can Cred a new order		

Table 6.2: *Third use case description of Patient.*

Use Case Name:	Pays the bill		
Author Name:	Nandini Ghale	Last Updated By	Aditya Karpe
Date Created:	22 Jan 2022	Date Updated:	22 jan 2022
Actors/Entity:	Patient		
Brief Description	Payment of medicine by cash after receiving medicine by credit card while ordering		
Normal Flow:	**6.0 The Patient must select the ways for payment in the online medicine ordering system** 1. Patients can go tor the external payment 01 payment v1a card 2. If the patent chose external payment, he will pay cash after delivery, to delivery boy in turn a preventatives the receipt from the online medicine ordering system. 3. If the patient chooses the payment via a card then the system requests the customer! (0 enter the credit Card information) 4. Receipt with balance detail would be generated before delivery.		

Table 6.3: *Fourth use case description of Patient.*

Use Casc ID:	7		
Use Case Name	Gives feedback to system		
Author Name:	Karpe Aditya	Last Updated By:	Komal Bonde
Date Created:	**22 jan 2022**	Date Last Updated:	**23 jan 2022**
Actors/Entity	Patient		
Description	Patient gives the feedback to online medicine order systems.		
Flow	**7.0 The patient sends feedback to the online medicine ordering system** 1. Patients can give feedback to thesystem. 2 Patient feedback forms are available in the Online Medicine ordering system to improve software and product quality. 3. Patient Identify and clarify the problems he/s he faced while ordering from the Online Medicine order system.		

Use Case ID:	**8**		
Use Case Name:	Receives order		
Created By:	Narayane Aadiraj	Last Update By:	Narayane Aadiraj
Date Created:	24 jan 2022	Date Last Updated:	**24 Jan 2022**
Actor s:	Operations Manager		
Description:	Operations manager manages the payment record of the order		
Description: Normal Flow:	The operations manager receives the order of medicine by user from the corporate **10.0 Operations manager manages the payments of order**		
Normal Flow:	**8.0 Receiving the Order** 1. Operations manager logs in to the system. 2. System displays the user request more a user. 3. Operations manager checks for the order details. 4. System displays the ordered medicine is in stock or not. S. Operations manager validates the order on the basis of availability.		

Table 7.1: *Second use case description of operations manager.*

Use Case Name:	Provides medicine		
Created By:	Narayane Aadiraj	Last Updated By:	Ghale Nandini
	27 Jan 2022		**27 Jan 2022**
Description:	Operations manager manages the order by providing medicines to the delivery boy		
	1. Operation manager hands over the ordered medicine to the delivery boy. 2 He updates the system about medicine being 3. System displays the updated status of the order.		

Table 7.2: *Third use case description of operations manager.*

Use Case ID:	**10**		
Use Case Name:	Manages payments		
Created By:	Komal Bonde	Last Updated By:	Komal bonde
Date Created	**29 Jan 2022**	Date Last Updated:	**29 Jan 2022**
Acttns:	Operations Manager		
Description:	Operations manager manages the payment record of the order.		
Normal Flow:	**10.0 Operations manager manages the payments of order** 1. Operation manager receives notification on payment of order by the patient. 2 He updates the system about payment being made by that patient. 3. System displays the status of order as completed. 4. System displays the user profile with all dues cleared.		

Table 7.3: Fourth use case description of operations manager.

Use Case ID:	**11**		
Use Case Name:	Stock management		
Created By:	Aditya karpe	Last Updated By:	Nandini ghale
Date Created:	Jan 31 2022	Date Last Updated:	Jan 31 2022
Actors:	Operations Manager		
Description:	Operations manager deals the handling and management of medicine stock.		
Normal Flow:	**11.0 Operationsmanagermanagesthemedicinalst** k 1. Operation manager collaborates with supplier and the database management domain of admin for stock management. 2. The database management domain will inform him about out of stock medicines. 3. Operations manager will contact supplier to order new stock of medicines.		

Table 7.4: *Fifth use case description of operations manager.*

Use Case ID:	**12**		
Use Case Name:	Provides receipt to patient		
Created By:	Ghale Nandini	Last Updated By:	Umm E Kalsoom
Date Created:	Feb 12, 2022	Date Last Updated:	Feb 12 2020
Actors:	Operations Manager		
Description:	Operations manager provides receipt to the patient on ordering medicine.		
Normal Flow:	**12.0 Operations manager provides receipt to the patient** 1. After validating order, operations manager generates receipt with order details. 2. The system displays receipt. 3. Operations manager sends receipt to the patient after orders delivered.		

Use Case ID:	**13**		
Use Case Name:	Get Contact Information		
Author Name:	Komal Bonde	Last Updated By:	Komal Bonde
Date Created:	Feb 14 2022	Date Last Updated:	Feb 14 2022
Actors/Entity:			
Brief Description:	Delivery Boy gets the name, address and contact number of the patient from the systems.		
Normal Flow:	11.0 Delivery Boy gets the contact information of patient. 1. Delivery Boy login in to the system. 2. Delivery Boy gets the contact information of the patient from system against a specific patient ID. 3. Contact information includes the name, address and contact number of patients. .		

Table 8.1: *Second use case description of delivery boy.*

Use Case ID:	14		
Use Case Name:	Delivers the order		Nandini Ghale
Author Name:	Nandini Ghale		Feb 16 2022
Date Created	Feb 16 2022		
Actor .	Delivery Boy		
Description	Delivery Boy delivers medicine to the patient.		
Normal Flow:	**14.0 Delivers order to patient.** 1. Delivery boy reaches the appropriate address of the patient. 2. Delivers the desired medicine to the patient.		

Table 8.2: *Third use case description of delivery boy.*

Use CaseID:	15		
Use Case Name:	Receives pay intent		
Author Name:	Nandini Ghale	Last Updated By.	Nandini Ghale
	Feb 16 2022		Feb 16 2022
Actors:	Delivery Boy		
Bitel‘ Description	Delivery Boy collects the payment from the patient.		
Normal Flow	**15.0 Delivery Boy** 1. Delivery Boy takes the payment of medicine from the patient 2. Delivery Boy signed a receipt from patient.		

Table 8.3: *Fourth use case description of delivery boy.*

Um CaseID:	16		
Use Case Name-	Sends confirmation message to operation manager		
Author Name:	Aditya Karpe	Last Uptlat etl By:	Aditya Karpe
	Feb 18 2022		Feb 18 2022
Actors:	Delivery Boy		
Description	Sends confirmation message to operation manager confirming the delivery of medicine and collection of payment.		
Flow	IN.0 Sends confirmation message 1. Delivery boy again login to the system. 2. Sends a confirmation message to the operation manager through the system. 3. Confirmation message assures the delivery of medicine and receipt of money.		

3.3 ERD:

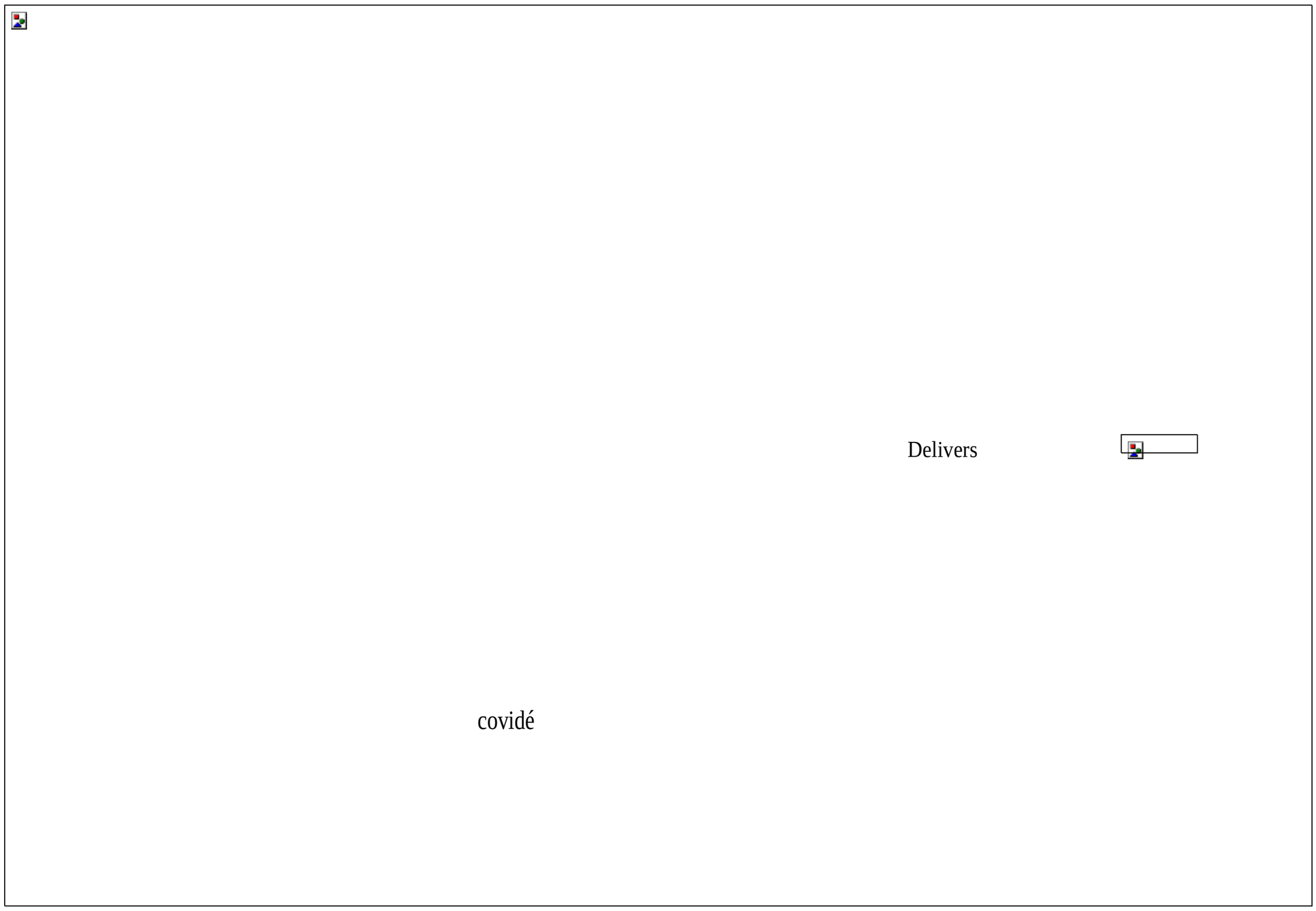


Figure 4: An Entity Relationship Diagram showing major actors, their relation, and characteristics

3.4 Database Schemas:

Gneen=Fore/nk

- Red : Primary key

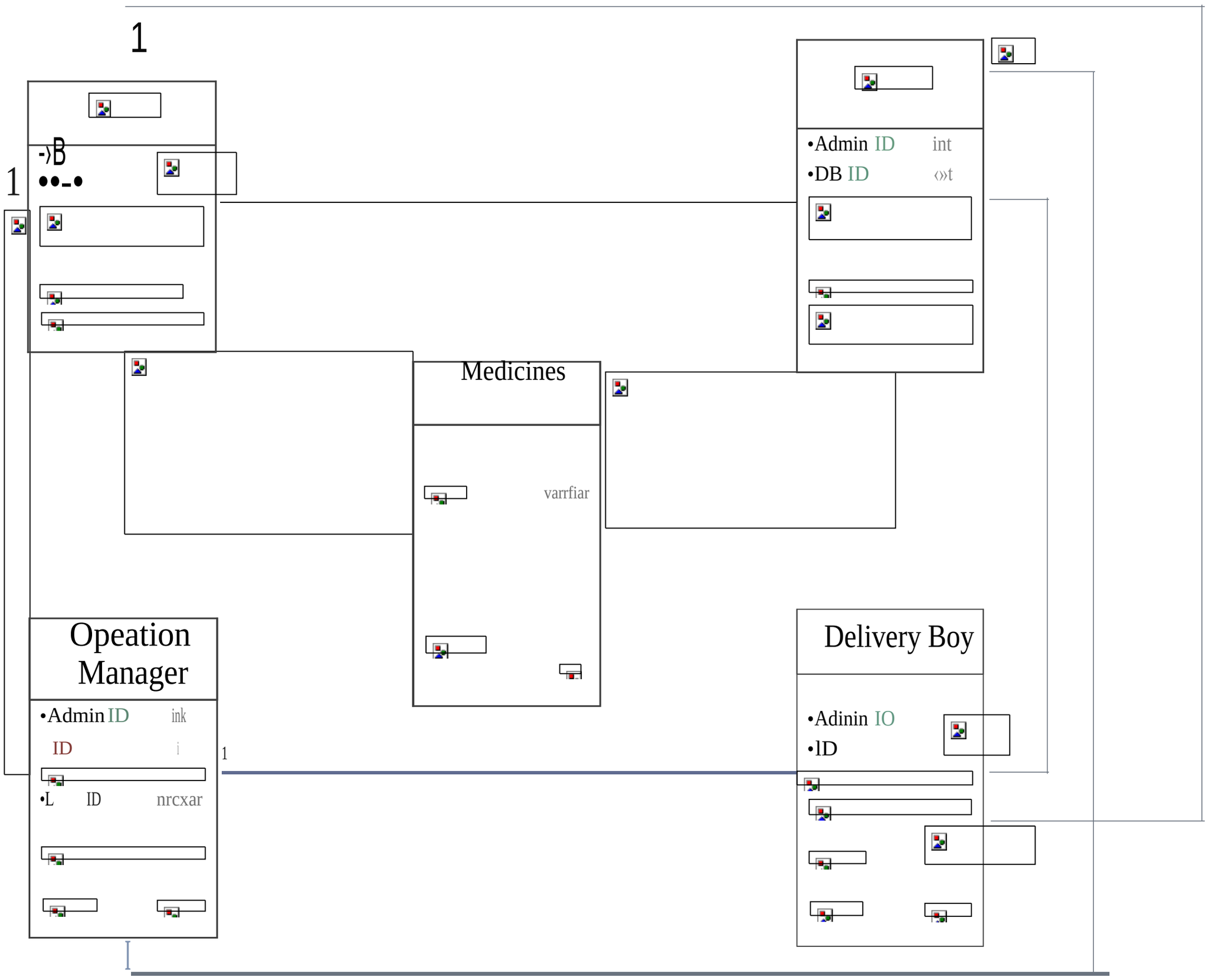


Figure 5: A Database schema showing major actors, their foreign and primary key, characteristics and their data types.

3.5 Context Diagram/ Level 0:

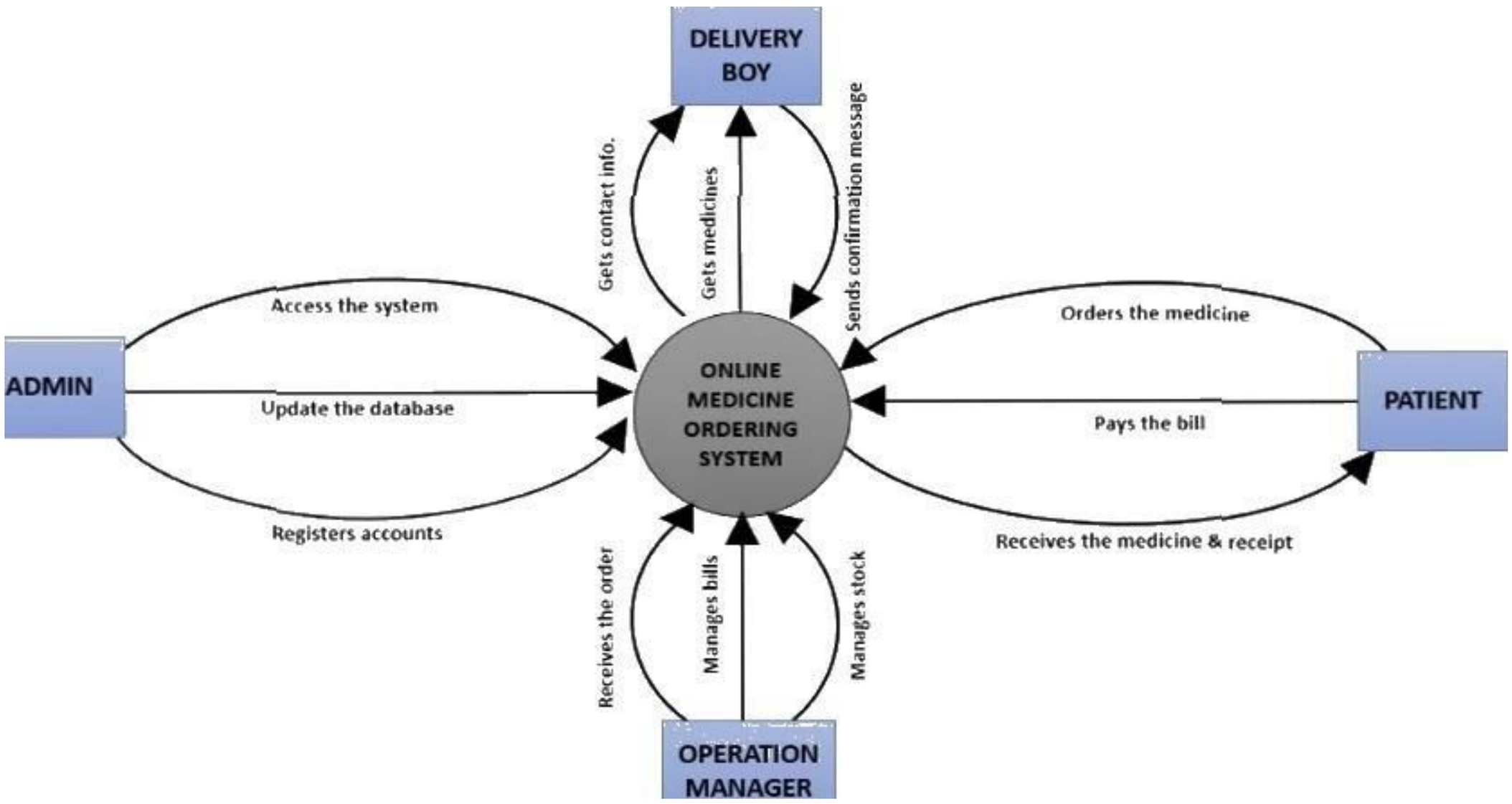
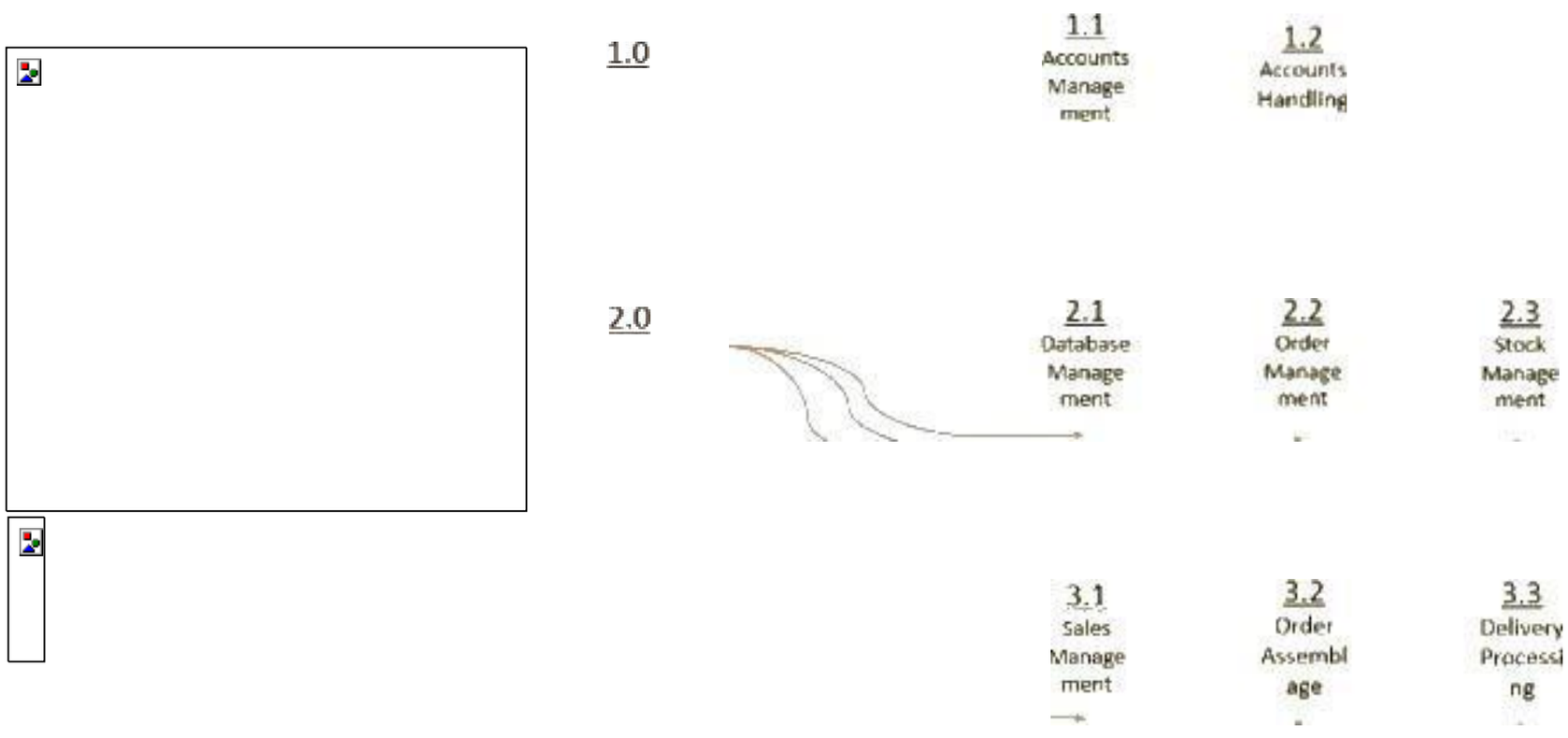


Figure 6: *A Context Diagram (level 0) showing major actors, and* f/tefr re.sJiecf/ve *inputs and outputs.*

3.6 DFD:

A data-flow diagram is a way of representing a flow of data through a process or a system (usually aninformation system). The DFD alsoprovides information about theoutputs andinputsof each entity and the process itself.



Context Lovel Level 1 Level 2

Figure 7.0: *Decomposition of Online Medicine Ordering S5'stem into Context level, Lnvel 1 nnd Lnvel 2.*

3.7.1 LEVEL 1:

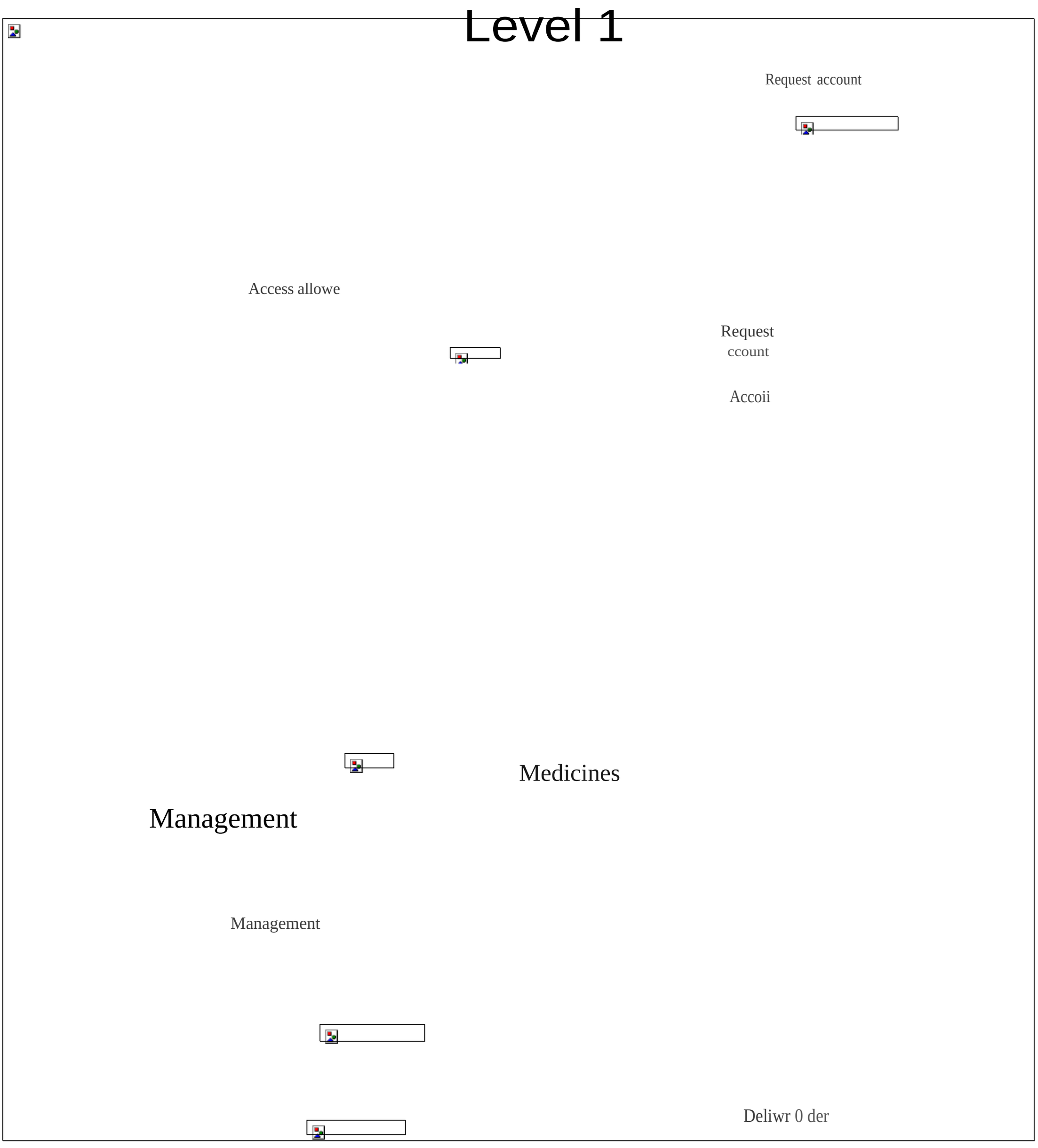


Figure 7.1: *Level 1 of Data Flow Diagram showing major actors, and their respective inputs, outputs along with data stores.*

37.2 LEVEL2

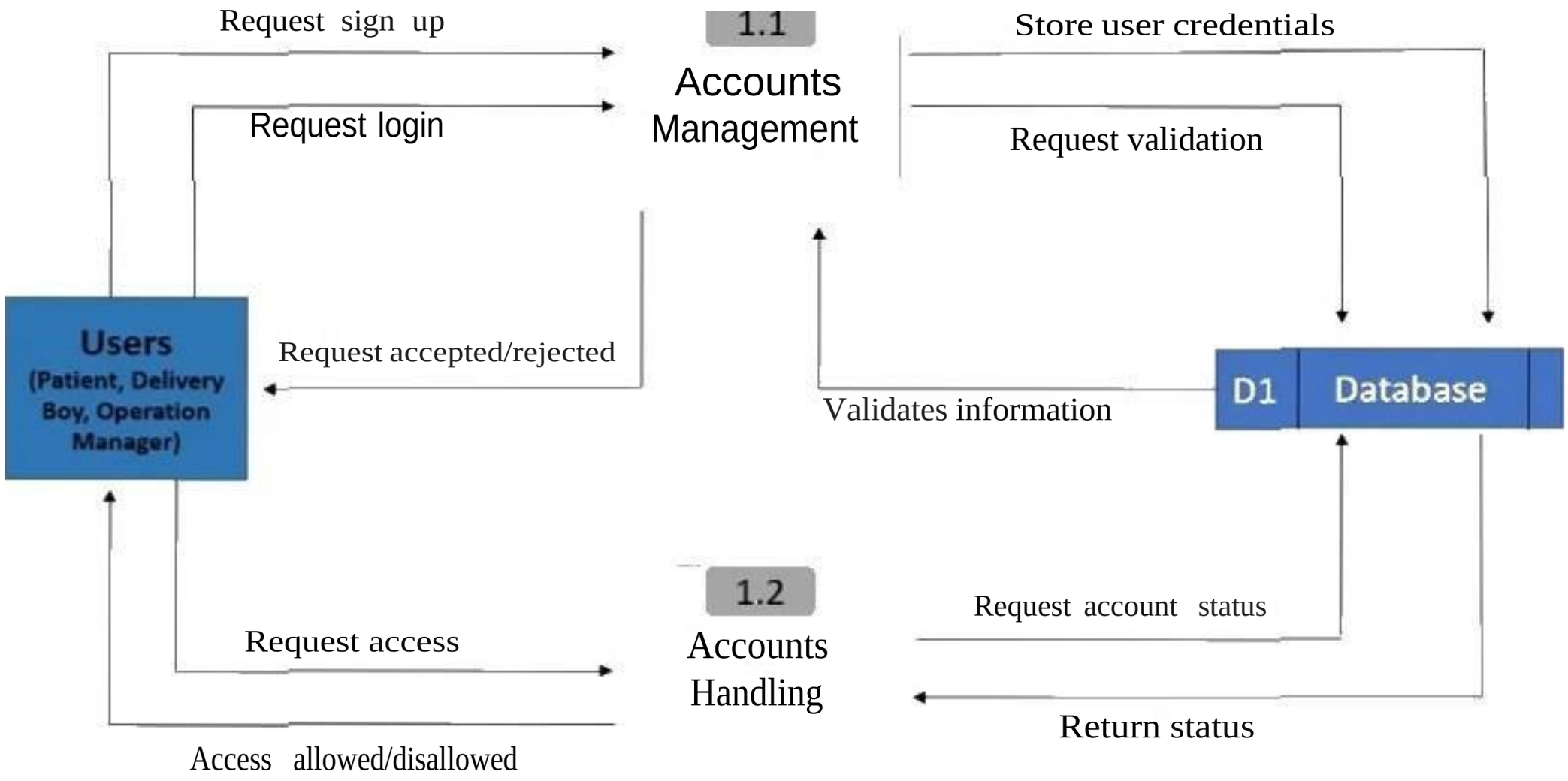


Figure 7.2: *level 2 of Datn Flow Diogrnm showing process 1 i.e., a ‹i'ount.s decomposition,* foro/rRd *d* erect *actors nnd their role.* .

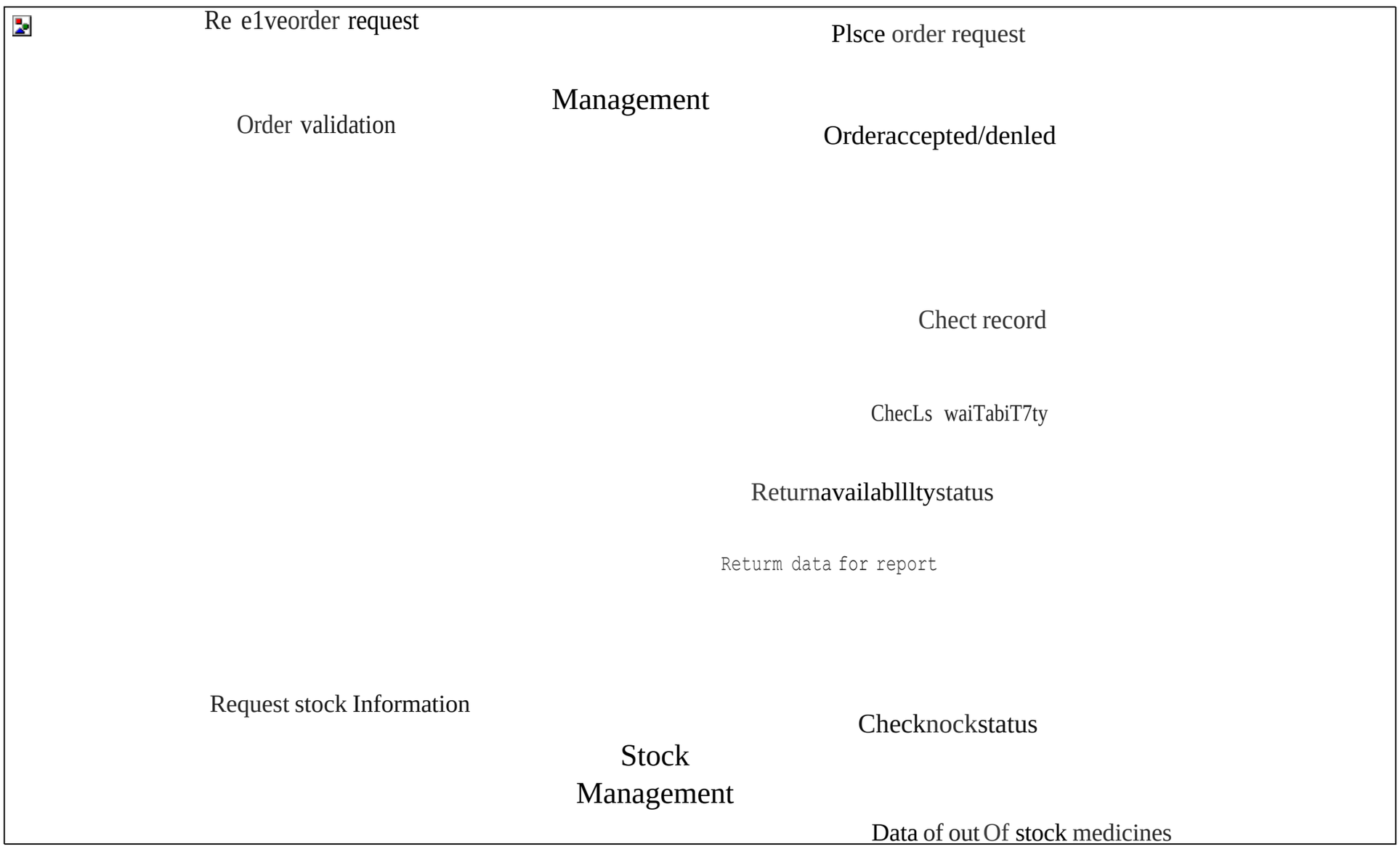


Figure 7.3: Sure/ *2 of Dnta Flow Dingrnm showing j›mce.s.s 2 i.e., management derom Position, involved different nctors mid their mle.s.*

Figure 7.4: *Level 2 of Data Flow Diagram showing process 3 i.e., Sales decomposition , involved*

3.7 Functional Requirements

1. as a user

I want to search a medicine shop at my nearest places. In this covid situation, we can't get outside our home. So, in this emergency situation, whenever we need medicine we can search the nearest medicine shop.

Confirmation

- User has to answer some questions regarding Covid-19 medicine.
- he/she can order online medicine at home .

2. as a user

I can search the medicine at any time. Whenever we need to search our desirable medicine we can do that.

Confirmation

- User has to search medicine at any time.
- User should be able to search medicine generic name.

3. as a user

I can see the medicine price. Because when we buy a medicine we need to know the actual price of medicine.

Confirmation

- User should be able to check medicine price.

4. as a user

I can buy medicine at our nearest medicine shop through online without any hesitation. At the same time I don't have to maintain any queue for medicine. I can buy medicine at my own house to maintain safety.

Confirmation

- User can see the nearest medicine shop.

5. as a user

I can purchase medicine and pay my bill through online. Or if we don't feel safe to online, we can select Cash on Delivery and get my desired medicine.

Confirmation

- User should be able to get the payment procedure through online.
- User also able to pay the bill with cash on delivery.

6. as a user

I want to search similar medicine so that, I can get alternative medicine if prescribed one is not found.

Confirmation

- User should be able to check similar medicine of other company if the same medicine will not found which is prescribed.

7. as a multi-vendor

Any medicine shopkeeper can use this platform to sell this medicine without any hesitation.

- Vendor can see their medicine list that shown the website.
- Vendor can see the buyer information.
- Vendor can see their dashboard to maintain his sell.
- Vendor can create his own admin panel

Confirmation

- User have to put the medicine generic name to search for similar medicine brands.
- User can also search by medicine name.
- User can view the medicine indication.
- User can view the medicine price.

8. as a user

I can create my own profile for future purchasing. And I can also update my profile as I wish.

Confirmation

- User can control his/her profile as their wish.

9. as a vendor

I can see my order history.

Confirmation

- Vendor can control their profile.
- Vendor can see his income and calculate.
- Vendor can check his expenditure.

3.8 Non Functional Requirements

Performance Requirements:

- The system must not accumulate high numbers of users without any fault.
- Response to any kind of interaction must take no longer than 3 seconds to appear on the screen.

Security Requirements:

1. System will use secure database.
2. Normal users can just read or write information but they can’t edit or modify existing information.

Error Handling:

- OS must handle expected or non-expected errors in ways that prevent loss in information and long down time period.

Safety Requirements:

- System use must not cause any harm to human users.