Faculty of Science and Information Technology

Department of Software Engineering SWE-431

Project/thesis Project Documentation

Easy Vaccination System (Vaxily)

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This Project report has been submitted in fulfilment of the requirements for the Degree Bachelor of Science in Software Engineering.

APPROVAL

This thesis titled on **"Easy Vaccination System (Vaxily)"**, submitted by **Md.Mahfuzur Rahman ID(152-35-1249)** to the Department of Software Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of Bachelor of Science in Software Engineering and approval as to its style and contents.

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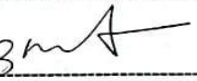

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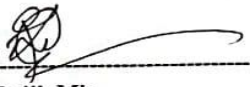

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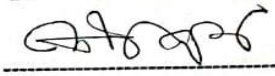

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DECLARATION

I hereby declare that I have done this project under the supervisor of **Md.Rajib Mia, Lecturer(Senior Scale)**,Department of Software Engineering, Daffodil International University. I also declare that this project is my original work for the degree of B.Sc. in Software Engineering and neither the whole work nor any part of this project has been submitted for another degree in this or any other university.

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ACKNOWLEDGEMENT

The modern age is a competitive environment. They must advance in a race for survival if they are to succeed. My project, "Vaxily," acts as a bridge connecting theory and practice. This project was a lot of fun to work on. I want to begin by thanking Allah Ta'ala for keeping me healthy and guiding me to do the right things so that I can finish the job. Without Allah's blessing, the undertaking would not have been feasible. I want to thank my parents for lovingly supporting me to this point and for their unwavering support from the beginning of my journey.

I am pleased to share my thoughts on the opportunity to pursue studies in software engineering at Daffodil International University.I would like to express my sincere gratitude to Prof. Dr. Imran Mahmud, who is the head of the software engineering department. I thank and remember all of my teachers who enjoyed sharing their knowledge with me in a way that was interesting and easy to understand. I am grateful that they crossed my path.

Under the constant guidance of Md. Rajib Mia, who helped and supervised me by providing me with the information I required and providing feedback on the project, I have a special obligation to Daffodil International University to assist me.

“Finally, I extend my heartfelt thanks to my classmates and university club members whose encouragement and support greatly contributed to the completion of this work.”.

Table of Contents

Chapter 1

Introduction

Sometimes, if someone wants to know about his vaccination history, it can be difficult for him to find his record book using the old method. Because they are dispersed throughout the world, they sometimes lose it or can't access their information. From birth to death, VAXFIX offers vaccination schedule guidance. People can also guard against being misinformed about illnesses, viruses, and faulty vaccine versions. This makes it a more reliable, trustworthy, accessible, and user-friendly comprehensive immunization system solution.

1.1 Project Summary

This Software Needs Specification (SRS) lists every requirement for Vaxily.
Using a range of techniques, such as use cases, interviews, brainstorming and idea reduction, and prototyping, we have determined, analyzed, and enhanced the requirements. Therefore, this document's objective is to clearly state the system's high-level requirements,including constraints, non-functional needs, and functional requirements. This document's detail structure is set up as follows:

In Section 2, this paper presents an overview of the domain supported by the proposed SIS software. It includes a description of the product, details about the users, the main constraints, and the assumptions behind the system.In contrast, Section 5 gives a brief explanation of the assumptions and dependencies, while Section 3 contains all design and implementation limitations. Section 6 contains the system features along with all of the functional requirements and their explanations. Section 7 provides a detailed description of the external interface requirements. Section 9 concludes with a list of the remaining non-functional needs.

1.2 Project Purpose

The Vaxily system is designed to make vaccination record keeping easier and more reliable. Its main goal is to create a simple digital platform where a person's vaccine history can be safely stored and easily checked at any stage of life.Vaxily tries to solve some of the common problems in managing vaccination information.

Accessibility: People can view their vaccine records anytime and from anywhere. This is especially helpful for those who can stay in various locations . Their health data will always be available.

Record Management: Vaxily keeps all vaccine records in one secure and organized place. This makes it much easier to track and update vaccination history instead of paper.

Avoiding Confusion: VAXILY helps make sure there's no mix-up about your vaccination status. With accurate, up-to-date digital records, you can be sure about which vaccines you've received.

Staying Safe from Unverified Records: VAXILY protects you from unreliable or questionable vaccination data . By keeping your immunization information secure and trustworthy.

Easy to Use: Your vaccination history shouldn't be complicated to manage. VAXILY's simple interface makes it easy for anyone to keep track record. Everyone to stay on top of their health.

Reliable and Trustworthy: You can trust VAXILY to keep your records accurate and reliable.Accuracy matters when it comes to your health. So you can trust Vaxily.

In short, VAXILY helps you and your loved ones stay protected throughout your lifetime . It offers a smarter, safer, and simpler way to keep your vaccination records in one place.

1.2.1 Proposed System Model

I developed a model with a user-friendly user interface for this system. Furthermore, this model controls and visualizes the system architecture.

User

- BuyVaccine
- Feedback
- assistant
- Add to Cart

Admin

- Management
- New Add
- Buy List
- orderlist
- Place View
- certificate

Doctor

- Management
- Serve vaccine
- New Add
- Delete Vaccine

CHAPTER-2

System Analysis

2.1 Functional requirements

The following are "VAXILY's" functional requirements:

• Signing up
• Signing in
• Add to Cart
• Add Doctor
• vaccine
• buying list
• New Add
• Delete Vaccine
• Forget Password

2.2 Non-Functional Requirements (NFR)

The way a system satisfies the functional requirements is defined by its non-functional needs. To guarantee the quality, this prerequisite must be fulfilled.
The Non-functional requirements of "**VAXILY"** are-

• Performance.
• Safety.
• Maintenance
• Trustworthy
• Privacy.

CHAPTER-3

SYSTEM ANALYSIS, SPECIFICATION & DESIGN

3.1 Development Model

The software development process is depicted by Software Development Life Cycle (SDLC) models. The quality, budget, schedule, and capacity of a project to satisfy the expectations of its stakeholders. Our approach to project development is based on the iterative enhancement concept. The flaw in the Waterfall paradigm is eliminated by this paradigm.

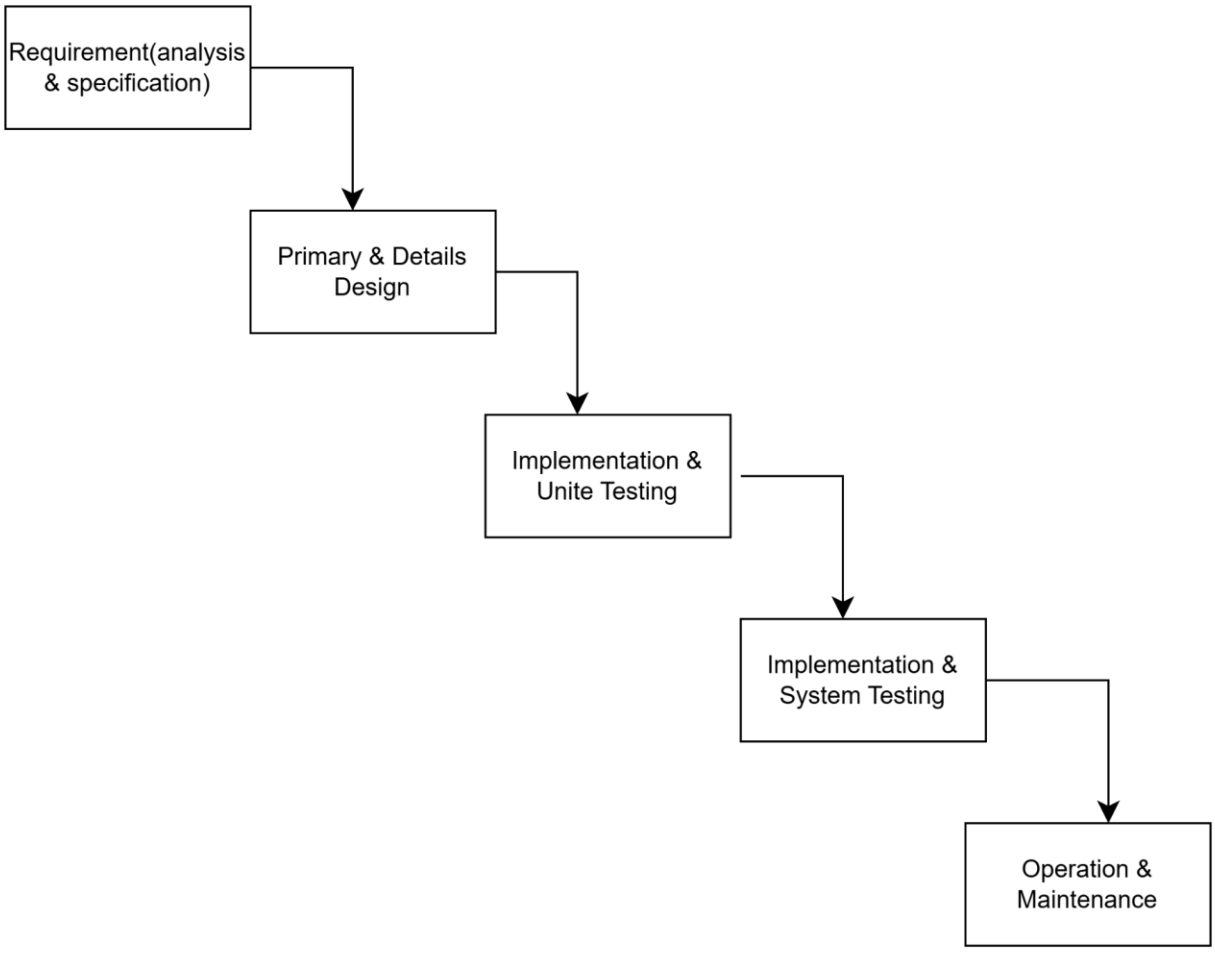
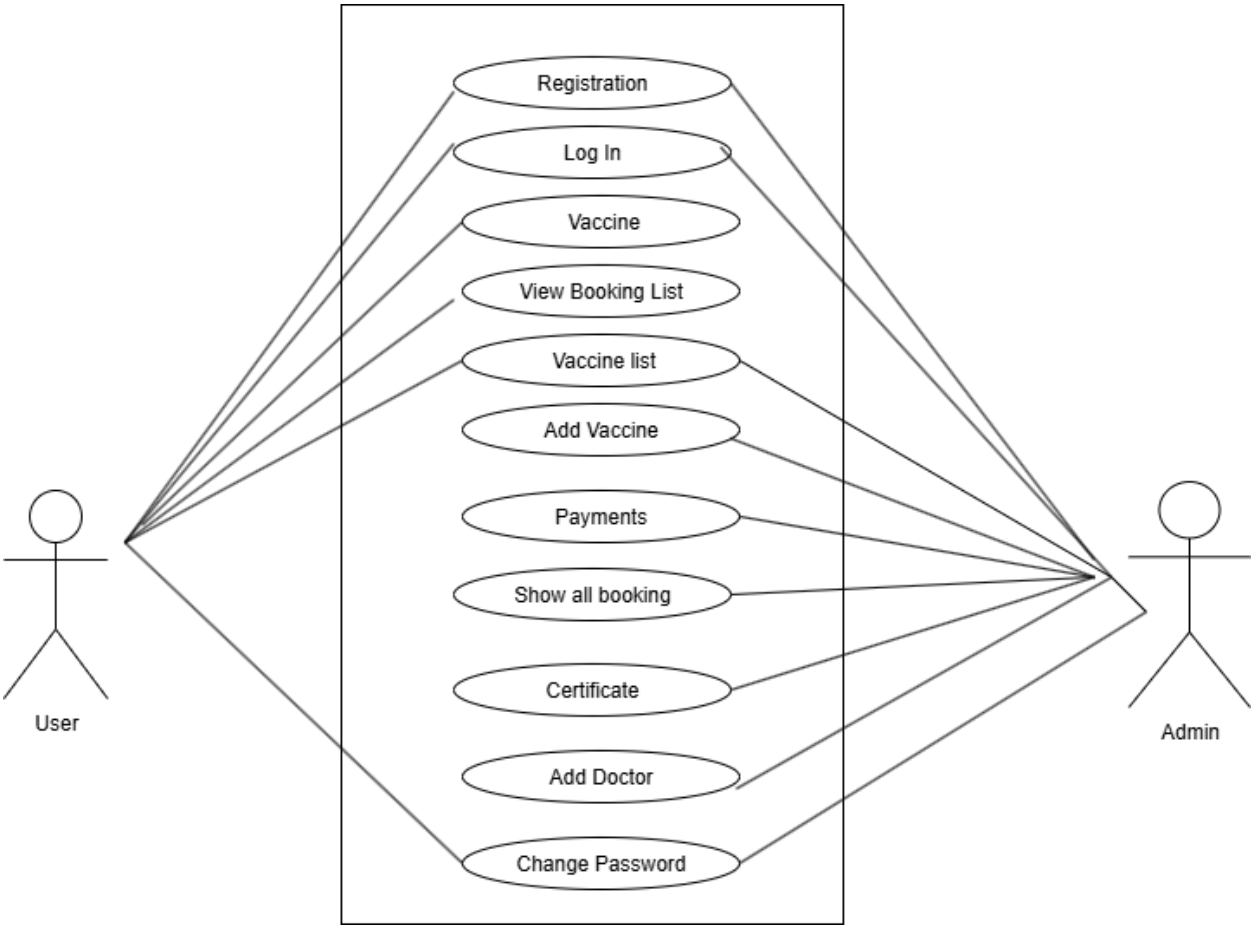


Fig: Waterfall Model

3.2Use case diagram

Use case diagram for “ Vaccination System”.



3.2.1 Description of the Use Case

1. Registration

Description	Requesters can register and submit order requests using the registration feature offered by this system. Actor: User, Admin.

2. Login

Description	Using this module will allow you to register or log in to the immunization list. Actor: User, Admin, Doctor

3. Password forget

Description	With this method, a requester can retrieve their password if they forget it or modify it if they'd like.He or she can use the old password. Actor: User, Admin, Doctor

4. History

Description	His or her vaccination history is available at any moment through this system. Actor: User, Admin, Doctor

5. V List

Description	All of the vaccination lists will be shown by the system. All vaccines can be viewed here. Actor: User, Admin, Doctor.

6.VList

Description	One can view the requested immunizations on this page and confirm the order if he wants to take them for himself. Actor: User, Admin.

7. Verify place

Description	The management requester can see all sent orders and their placement on this page. Later, management can verify and check. Actor: User, Admin,Doctor

8. Add to cart

Description	Vaccines are available for purchase here. Actor: User. .

9. Display booking

Description	All of the orders are displayed here. Actor: Admin, Doctor

10. New Arrival

Description	From here, a new vaccine would be added. Actor: Admin,Doctor

11. Delete Vaccine

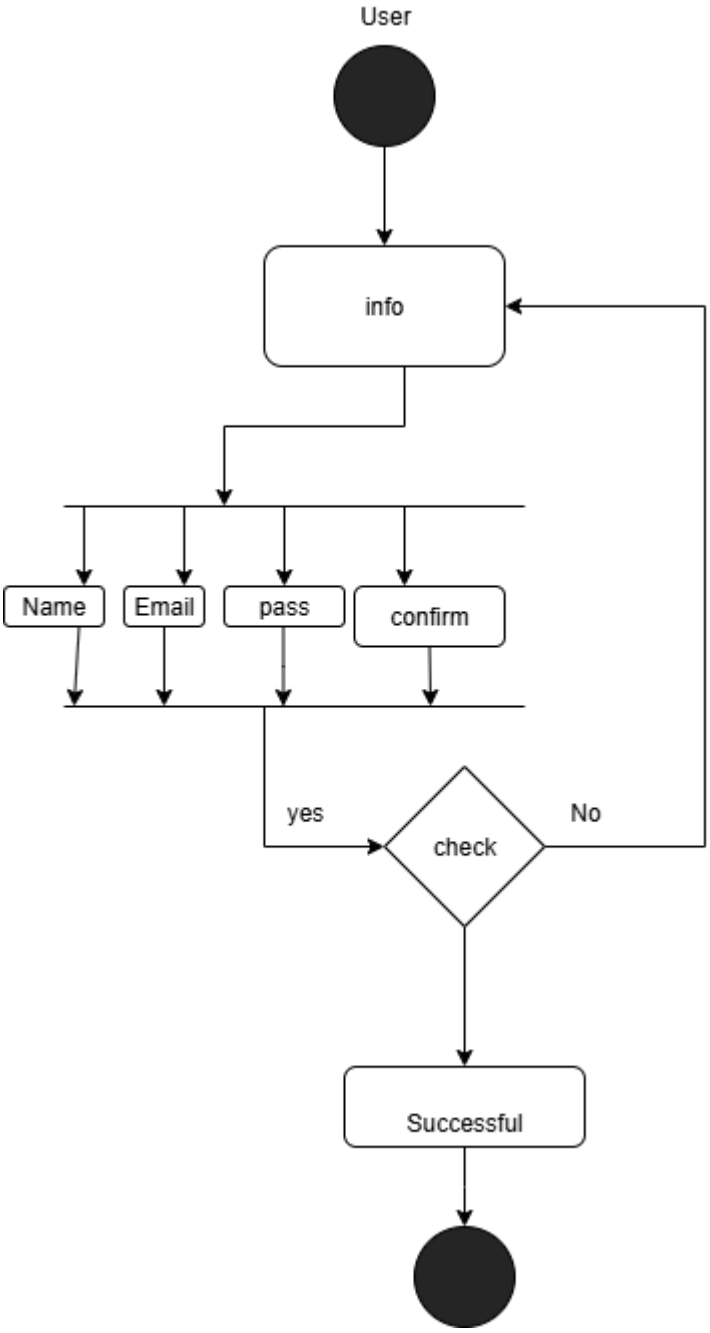
Description	From here, a new vaccine would be removed. Actor: Admin, Doctor

14. Log off

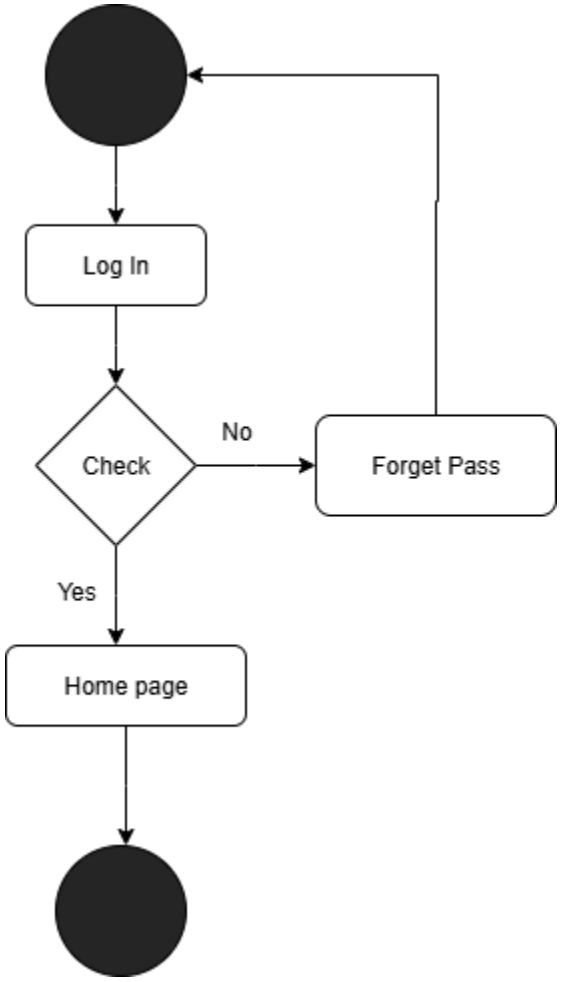
Description	You can log out and shut down the system with this module. Actor: User, Admin, Doctor.

3.3 Activity Diagram

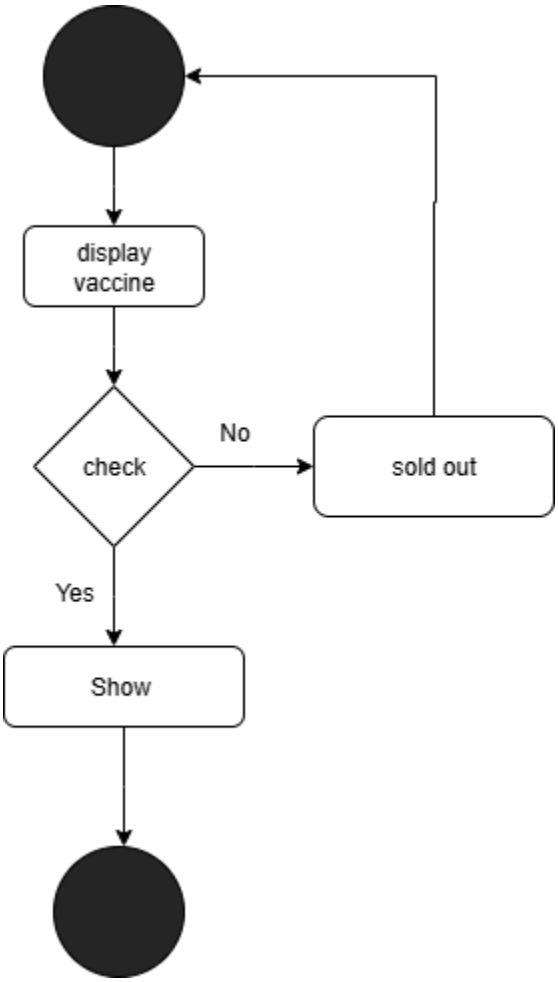
1.Registration



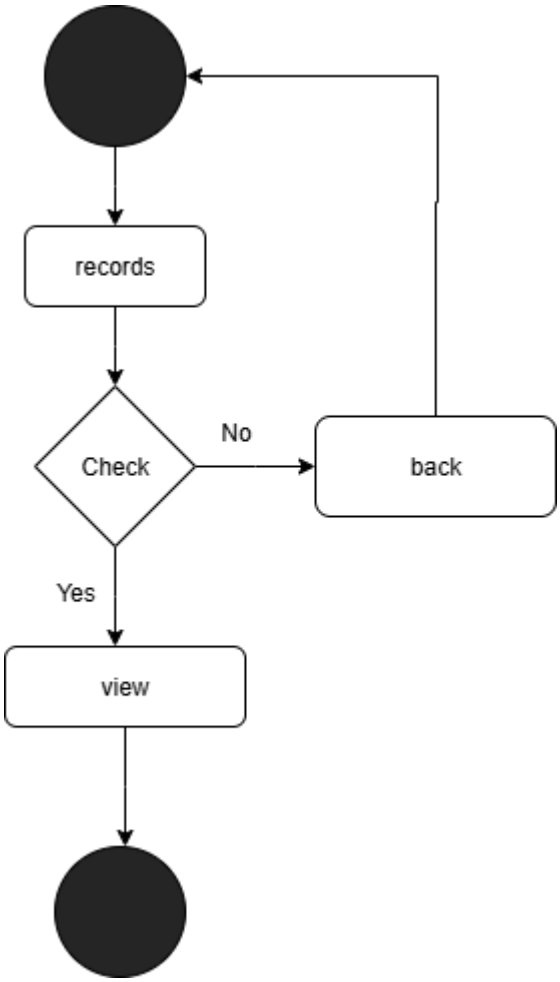
2.Log In



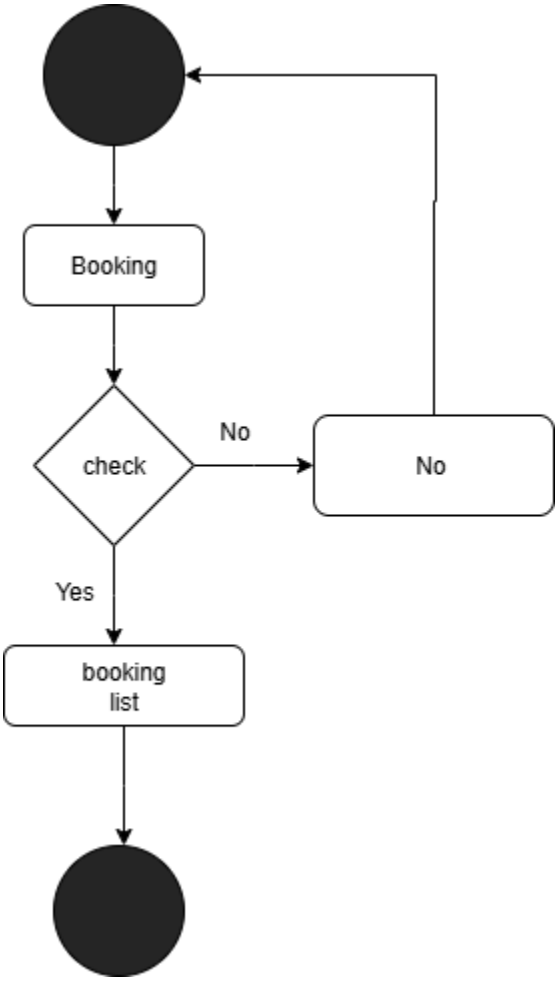
3. Display Vaccine



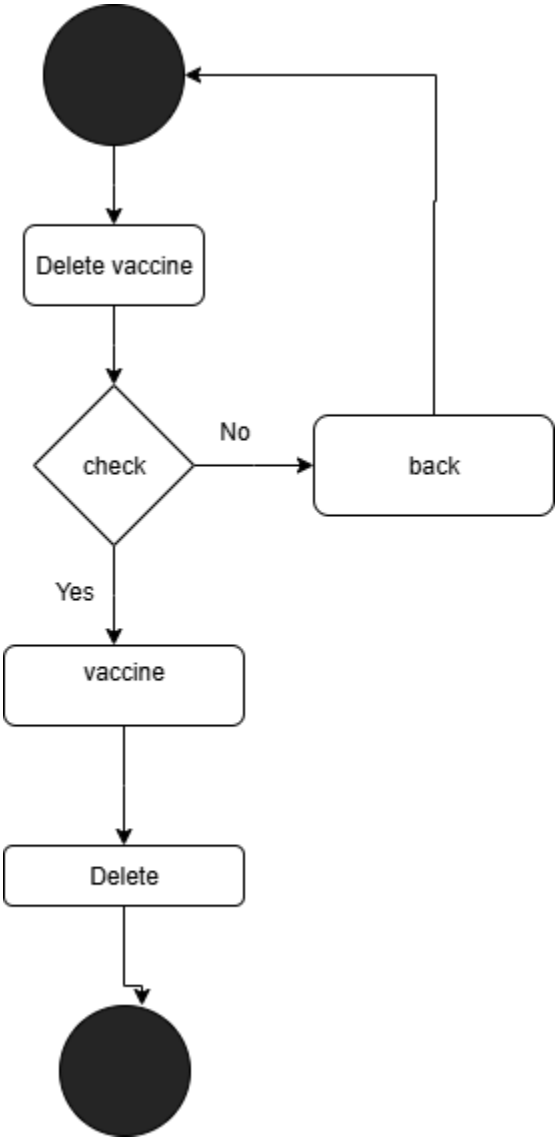
4. Records



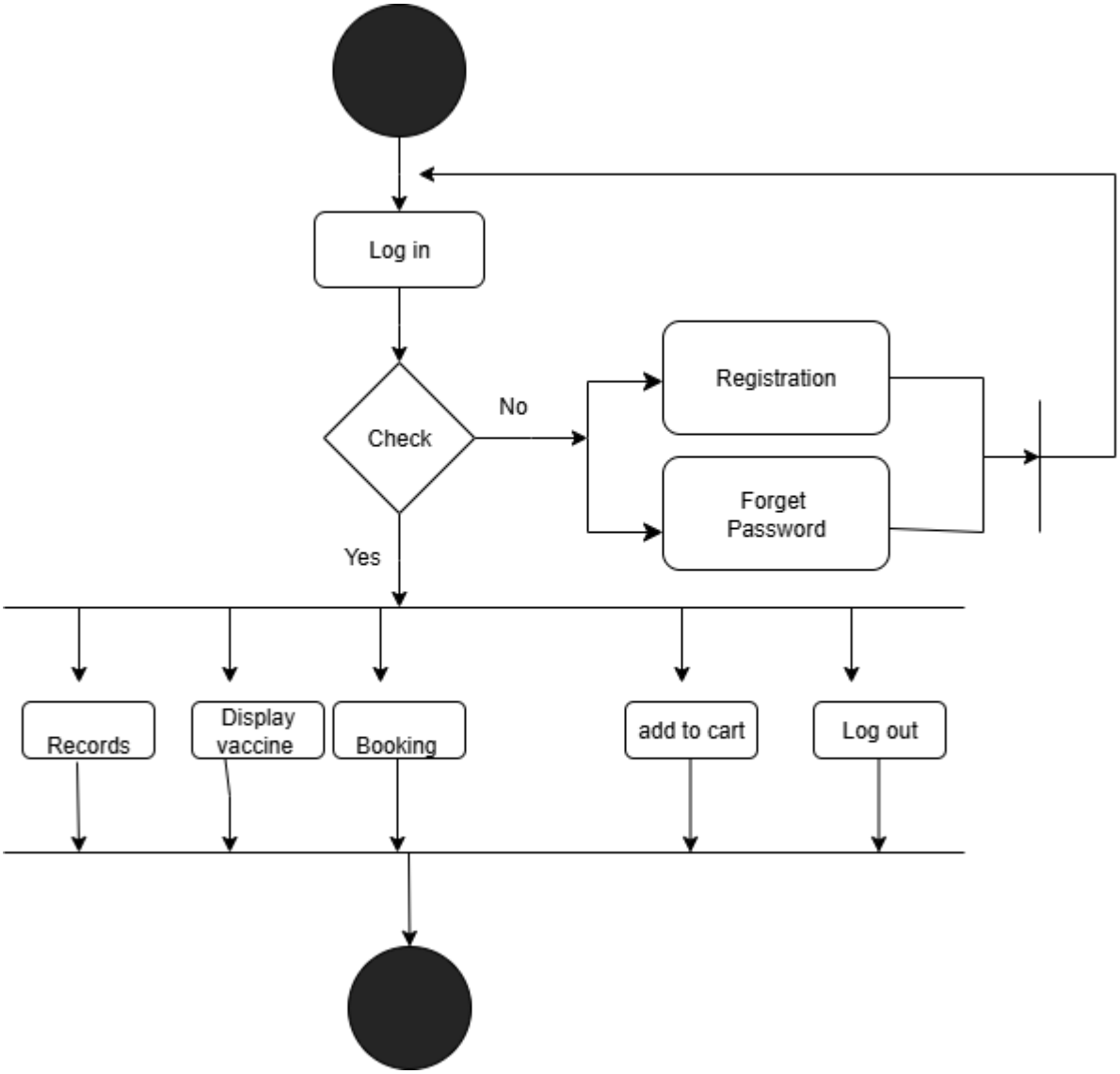
5. Booking List



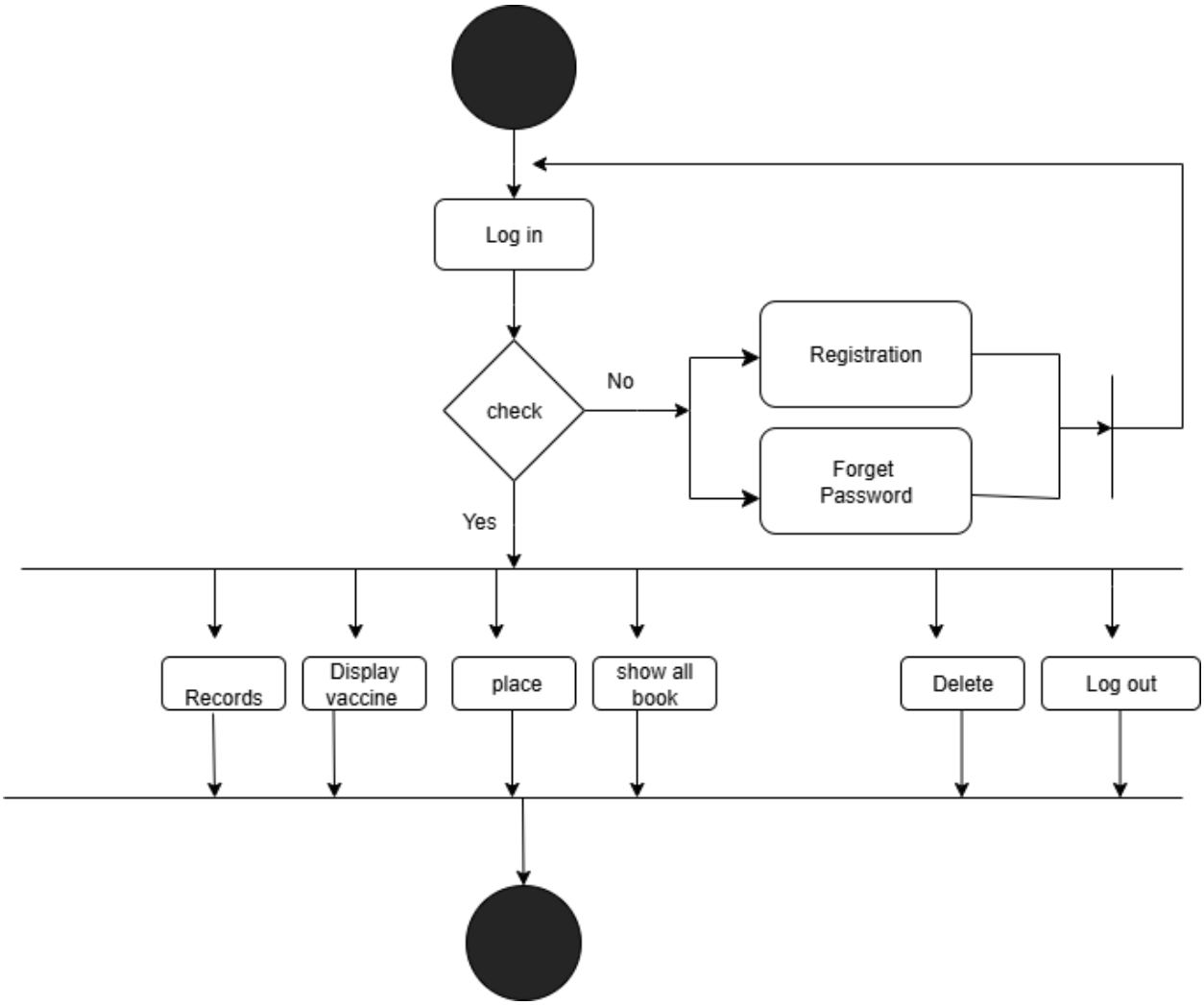
6. Delete Vaccine



7. Requester

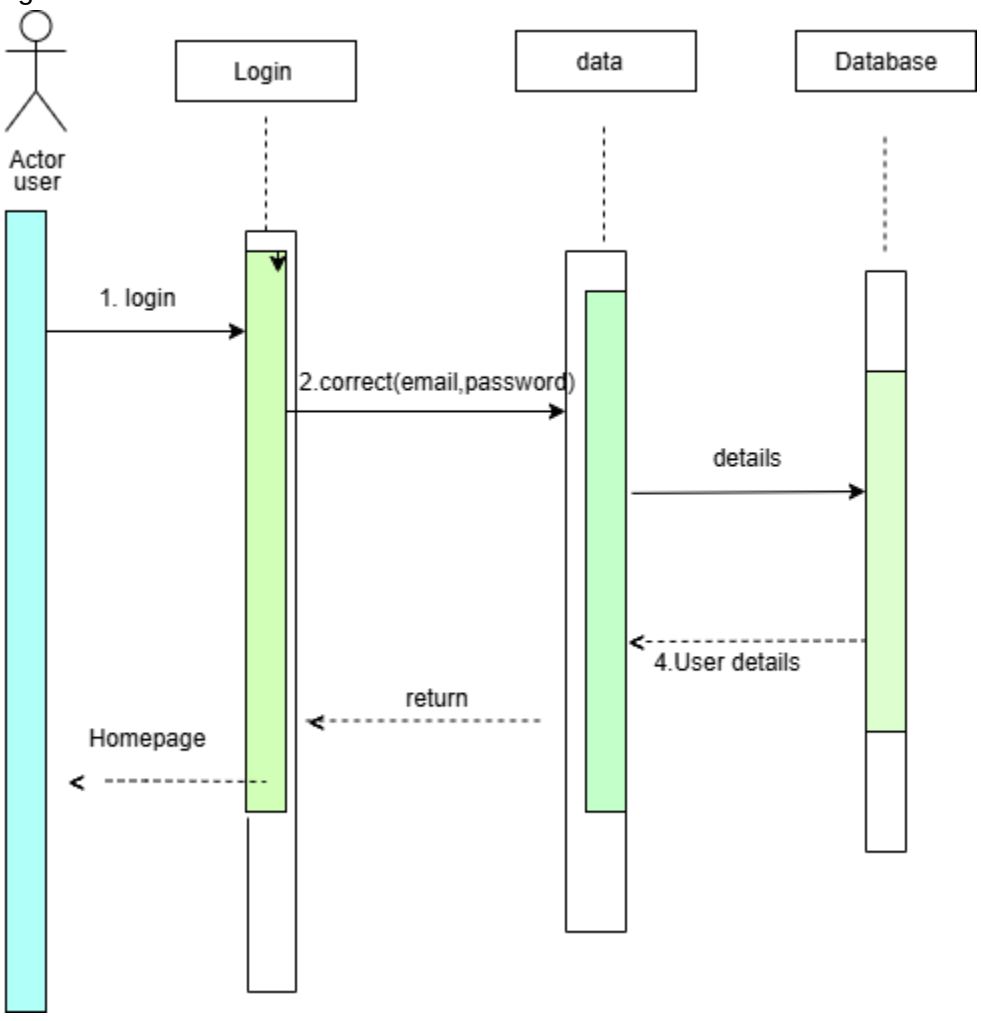


.8. Admin panel

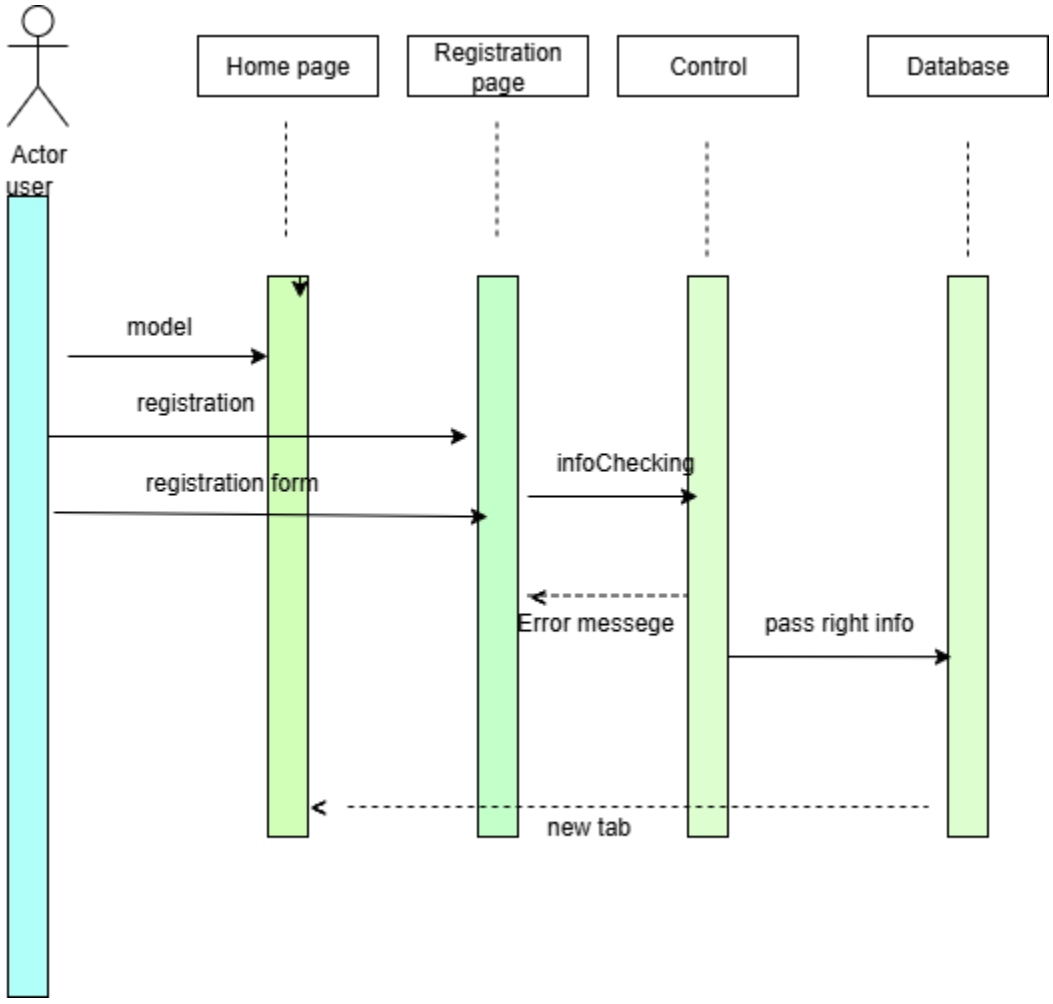


3.4 Sequence Diagram

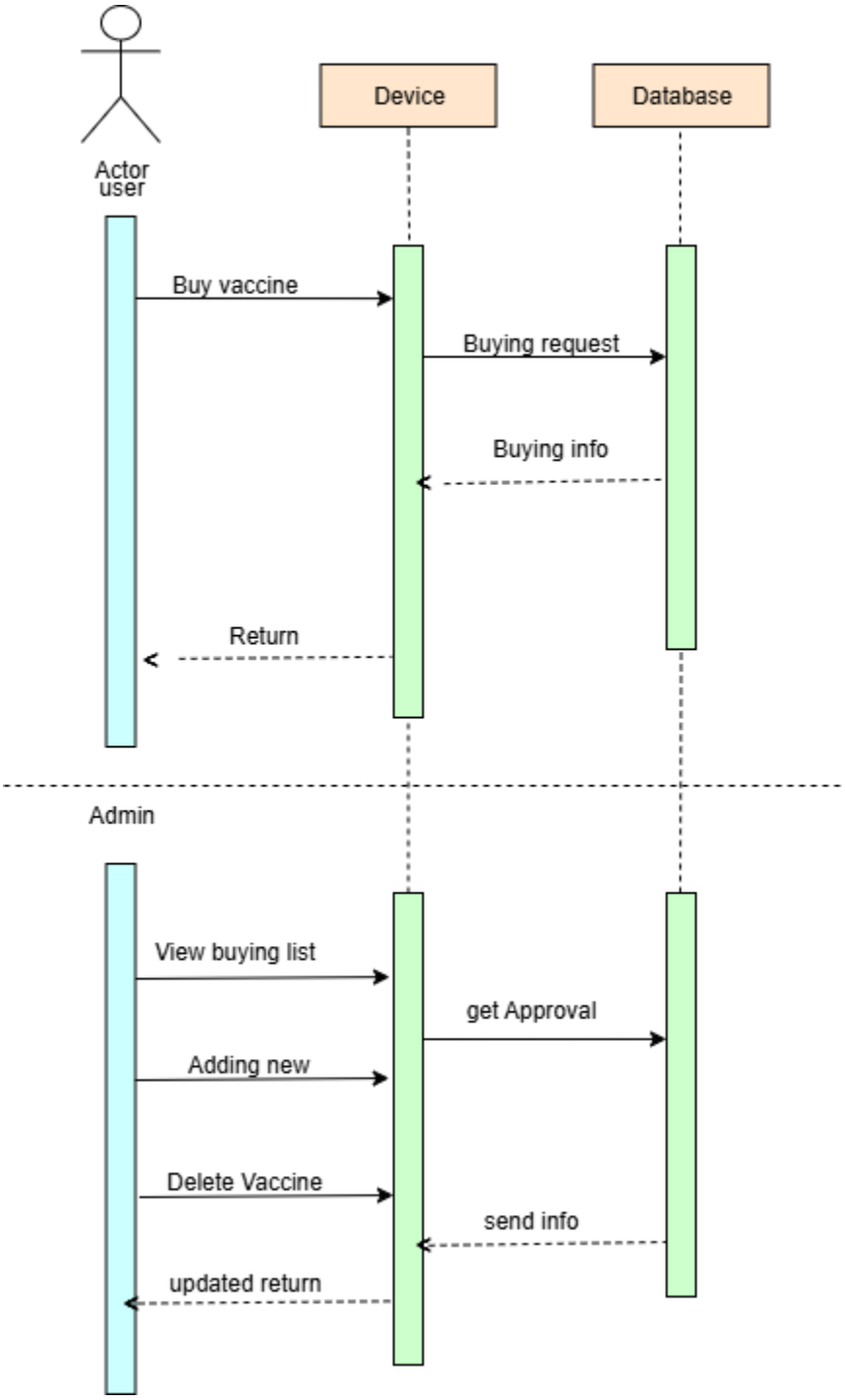
1. Login



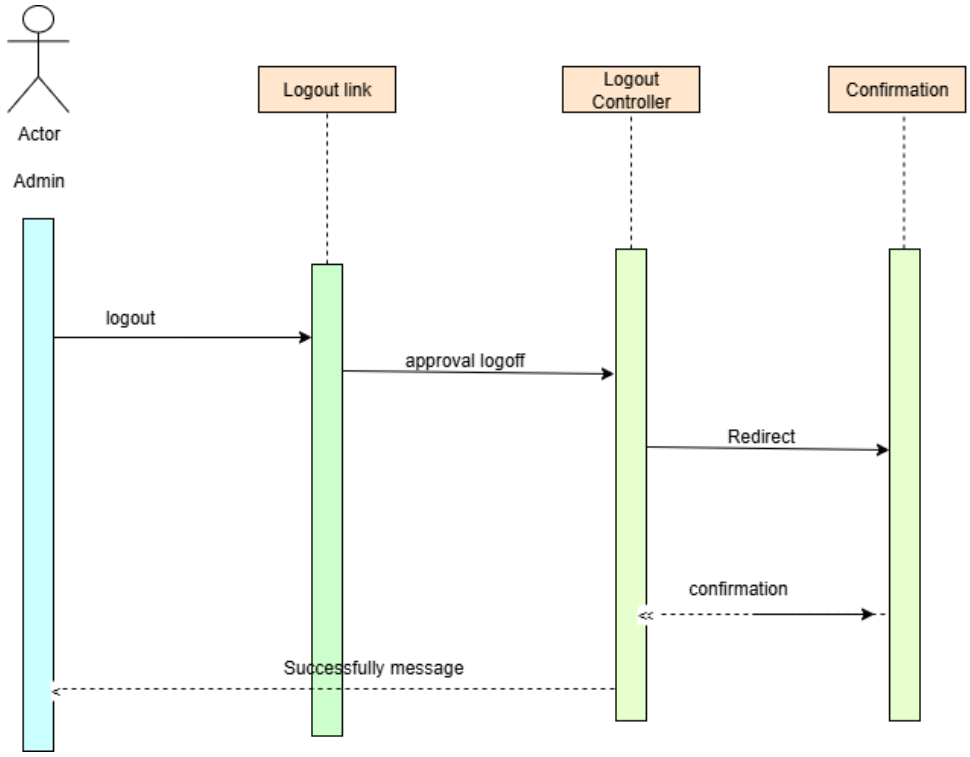
2. Registration



3. Buy



5. Log Out



3.5 ER Diagram

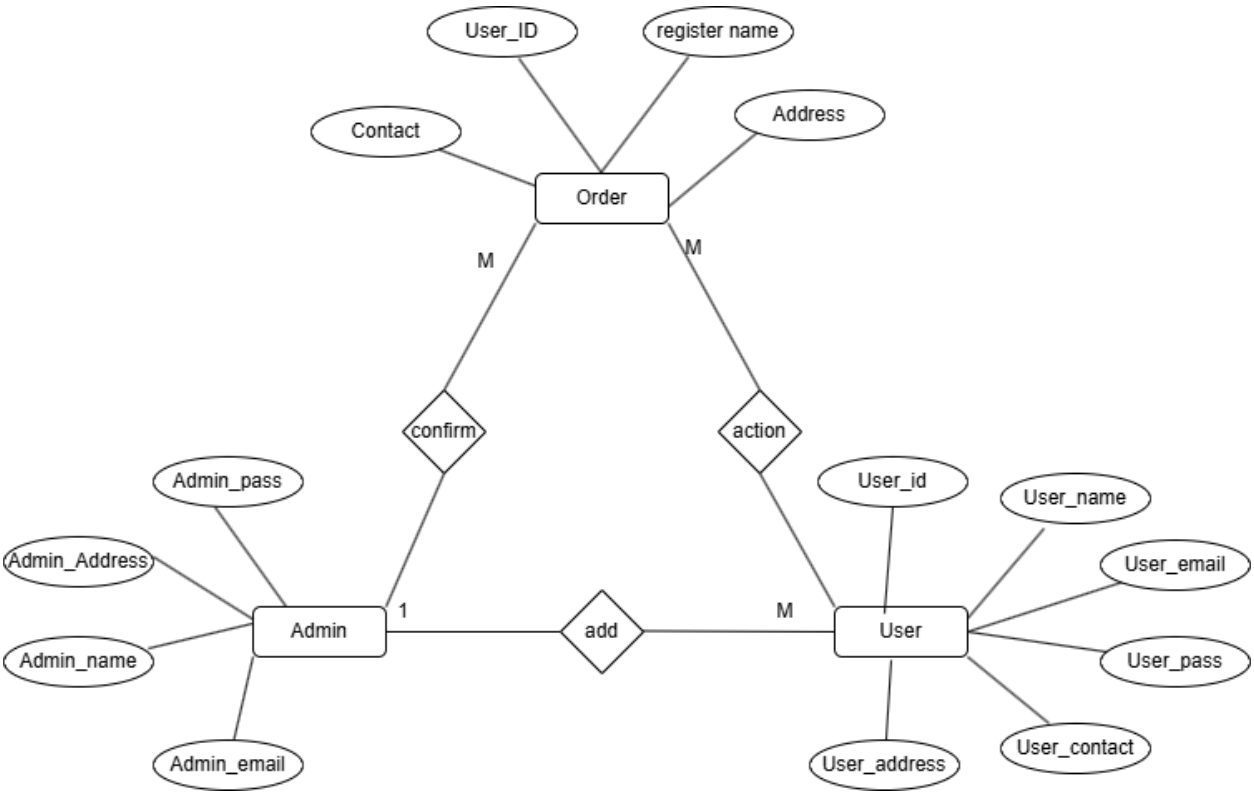


Fig: ER Diagram

CHAPTER - 4

SYSTEM TESTING

4.1 Testing Features

The software development process known as feature testing involves testing several iterations of a feature to determine which one provides the best user experience. By doing feature testing, we can identify which version of a new feature will be more successful and confirm whether it is a good fit for a web page or app.
Feature testing aids in the creation of a web application that is effective, dependable, practical, safe, and efficient.

Features	Priority	Description
Registration	1	In order for the system to recognize the user, the user first needs to sign up.
Log in	1	Before using the system, a user must authenticate.
Log off	3	The session needs to be ended after logging out.
Forget Password	3	Any user can recover their password if they forget it.
Change Password	2	The user can modify the existing password if they so choose.
Confirm order	1	In order for the service to be executed, requesters must confirm their order.
Confirm Request	1	The service provider will verify the order that was sent by the requester.

4.2 Test approach

Two types of testing have been employed to guarantee the system's quality. Its primary focus is on White Box and Black Box testing.

• Black Box Testing: Functional testing is another term for Black Box Testing. This method of testing ignores internal mechanisms in favor of focusing only on the output. In response to a specific input, specific outputs are generated. The expected outcome is then contrasted with these outputs. If the function matches, it is accepted.

• White Box Testing :. The system's internal mechanism is taken into account in this testing approach.

CHAPTER-5

INSTRUCTION GUIDE

5.1 Homepage

Vx
VAXILY
Login Register Get Started

All Your Vaccination Records in One Place

Track your vaccine history, download certificates, book appointments, and access live support—secure, simple, and global.

Create Account Sign In

Upcoming Vaccine

Type: Hepatitis B Booster

Date: Oct 21, 2025

Location: New York, USA

View Certificate

Accessibility

Access your vaccination history from anywhere in the world.

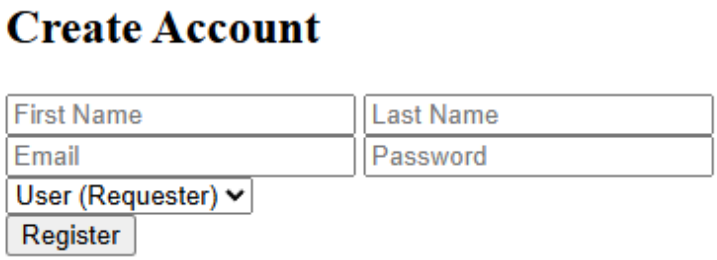
Reliability

Accurate and up-to-date digital vaccination records.

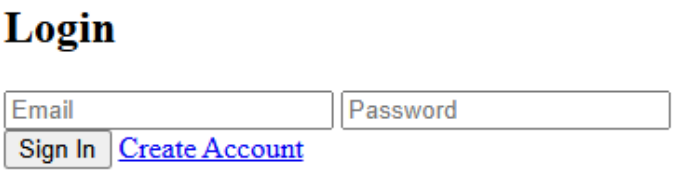
Security

Your records are safely stored and trusted worldwide.

5.2 Registration

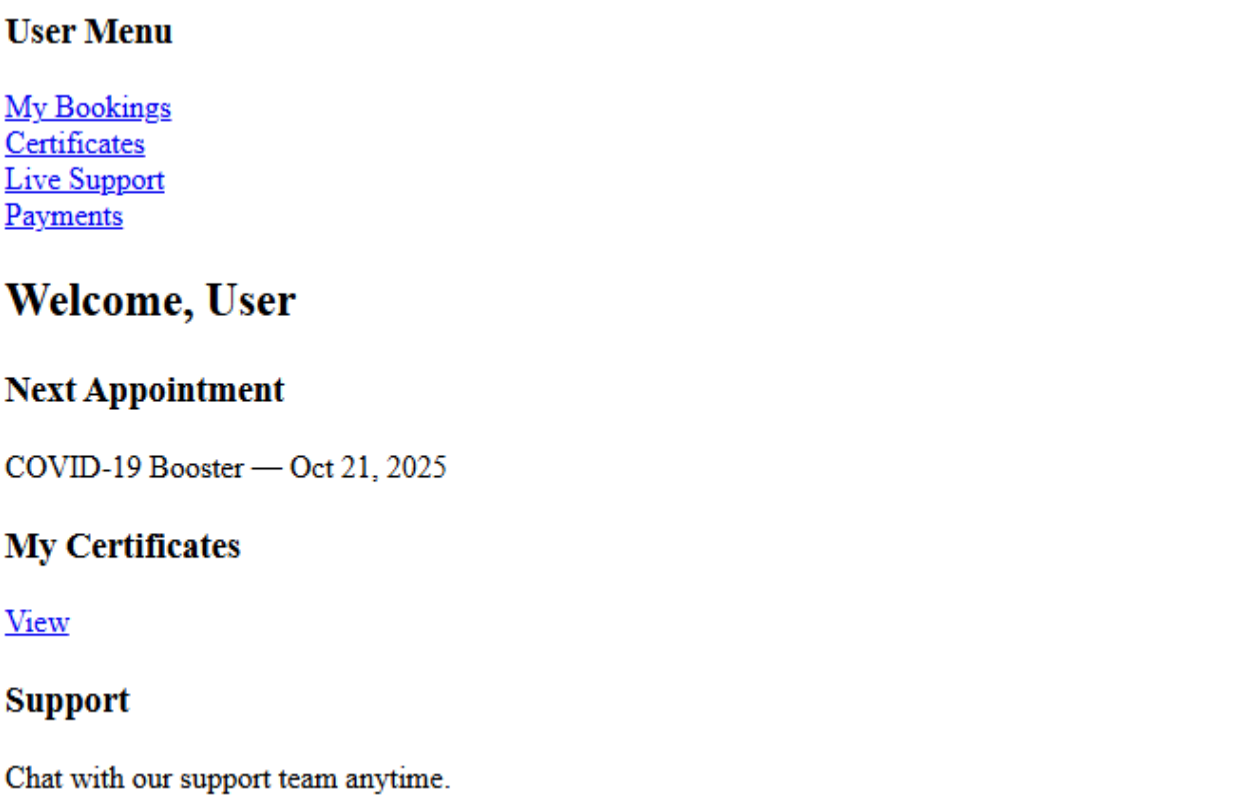


5.3 Login



5.4 Order Vaccine

5.5 User panel



5.6 Admin (panel)

Admin Menu

Manage Vaccines
Payments
All Orders
Show by Location

Admin Dashboard

Total Vaccines

42 Active

Total Users

1,205 Registered

Pending Payments

$3,200

5.7 Certificate

Vaccination Certificate

Certificate of Vaccination

Name: John Doe

Date of Birth: 1990-05-14

Vaccine: COVID-19 Booster

Date: Oct 21, 2025

Provider: VAXILY Health Center

Print Certificate

CHAPTER-6

CONCLUSION

6.1 Summary

Vaxily aims to provide a complete vaccine management solution . Fixing the problems with existing vaccination record systems. This platform aims to give users an easy-to-use interface . They are able to monitor their vaccination history and schedules.
The main goal of Vaxily is specific vaccination dates, connectivity with healthcare providers, worldwide accessibility and strong data security.
Emergency response plans and community engagement tools are provided by real time. The system will allow people to take responsibility for their own healthcare. Furthermore , Vaxily focuses on accessibility and inclusivity to ensure that users with all kinds of needs can utilize the platform.
Vaxily is a lifelong vaccination solution. It provides the most reliable vaccine variations . It also guarantees a vaccine history or record book from birth.

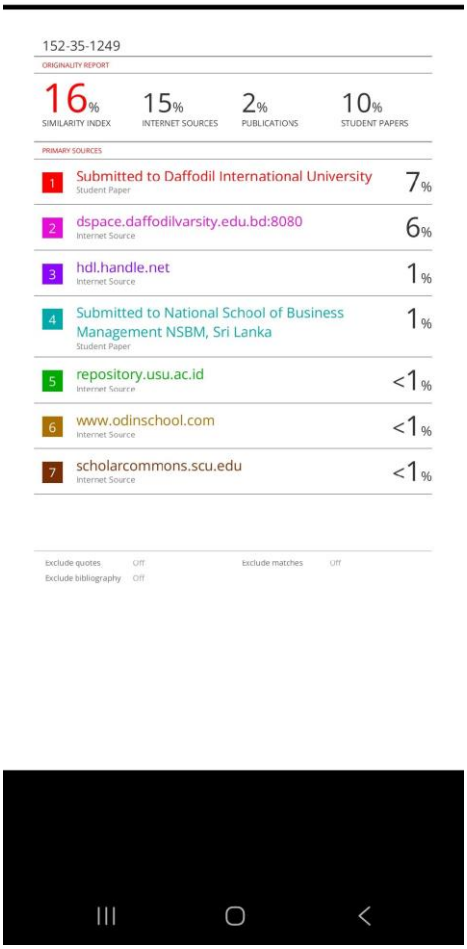
6.3 Weakness

- It was not possible to integrate SMS alert functionality.
- Due to storage limitations, image files in PDF format cannot be altered.
- Email confirmation is not available.
- the potential for unauthorized access.

6.4 Future Scoop

VAXFIX's future plans call for constant development and growth to accommodate new problems. Develop your knowledge of data analytics to gain a better understanding of vaccination patterns, spot possible areas. Health programs could be strengthened, and provide useful information for medical research.Find out how to improve security and transparency in vaccination records .

Governments to establish a universally accepted vaccination management system. It could involve seamless cross-border health management. Through connectivity with similar systems in other nations.The system's function to be improved in emergency response and crisis management.Notify the users important updates, vaccine recalls, and other pressing information in real time.



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