



GUJARAT TECHNOLOGICAL UNIVERSITY

Government Engineering College, Bhavnagar



Report On “TRUE CARE LIFE”

DESIGN ENGINEERING-2A

(3150001)

B.E. Semester-5

(Computer Engineering Department)

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CERTIFICATE

This is to certify that project entitled "**True Care Life**" has been carried out by **DIYA PARIKH (230213107011)** fulfillment for the degree of **Bachelor of Engineering in Computer Engineering, 5th Semester** of Gujarat Technological University, Ahmedabad during the academic year 2023-24.

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CERTIFICATE

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CERTIFICATE

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-Diya Parikh
-Rathin Dave
-Mandeep Jadeja
-Param Dixit

ABSTRACT

Our project introduces a centralized website for managing nationwide vaccination records. This innovative platform consolidates individual vaccination histories, recommends future doses, and maps the nearest vaccination centers. Users can schedule appointments, check real-time vaccine availability, and access a user-friendly dashboard for personalized vaccination insights. By combining all vaccination data into one accessible space, we aim to revolutionize and streamline the immunization process across India, fostering a more efficient and coordinated approach to public health.

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INTRODUCTION

Goal and objectives:

- The goal of an e-learning management system (LMS) is to facilitate the delivery, management, and tracking of online learning programs Description

Its objectives typically include:

1.Efficient Content Delivery: Provide a platform for delivering educational content in various formats (text, multimedia, interactive modules) to learners anytime, anywhere.

2.Accessibility and Flexibility: Enable learners to access educational materials and resources at their own pace and convenience, catering to different learning styles and schedules.

3.Course Management: Streamline the creation, organization, and administration of courses, including content creation, assignment management, and scheduling.

4.Student Management: Facilitate the enrollment, tracking, and progress monitoring of students, including registration, grading, and performance analysis.

5.Collaboration and Communication: Foster interaction and collaboration among learners and instructors through features like discussion forums, messaging, and virtual classrooms.

6.Assessment and Evaluation: Provide tools for creating and administering assessments, quizzes, and exams, as well as tracking learner progress and performance.

7.Customization and Personalization: Allow customization of courses and learning paths to meet the specific needs and goals of individual learners or groups.

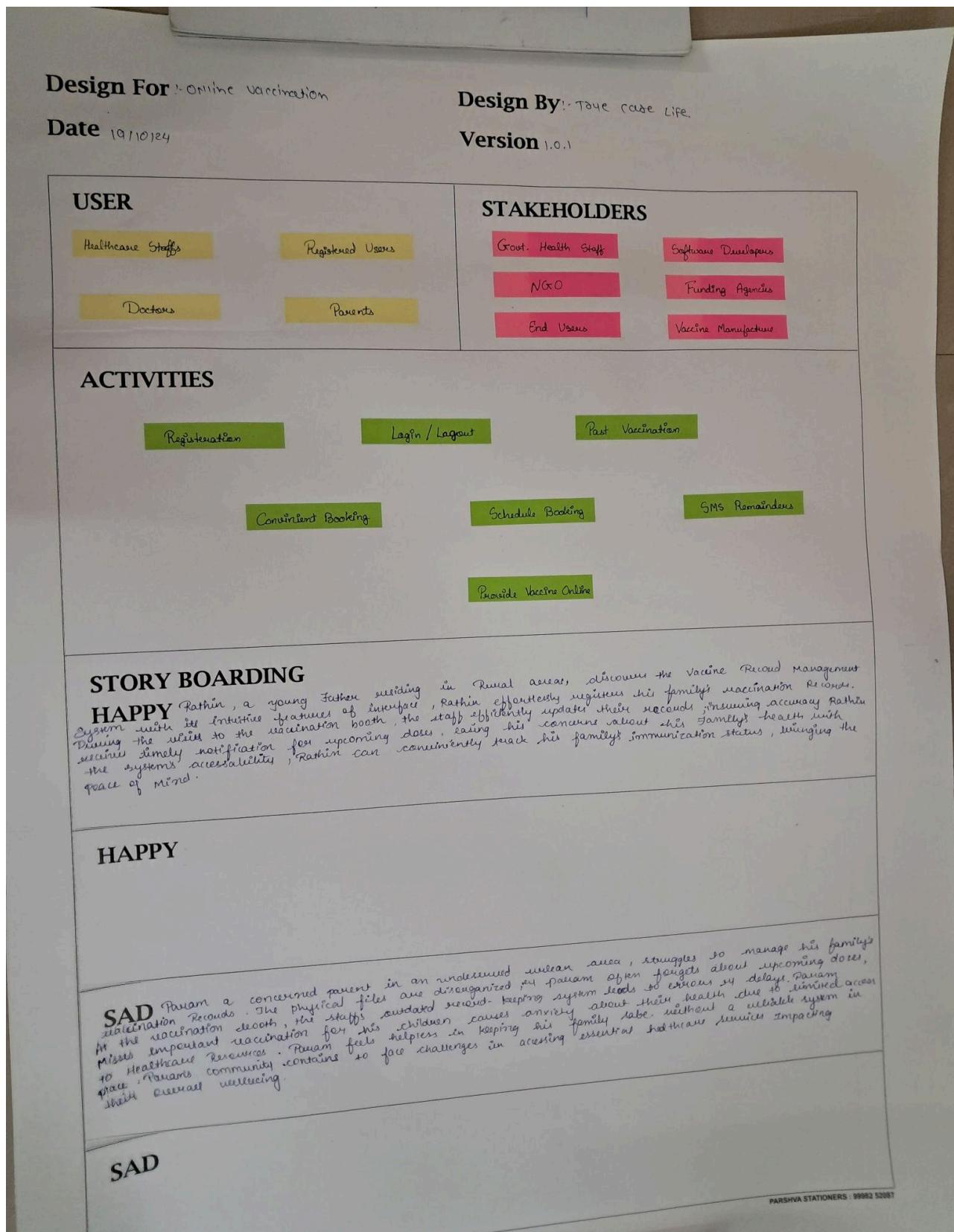
8.Reporting and Analytics: Generate reports and analytics to assess the effectiveness of courses, track learner engagement and performance, and identify areas for improvement.

9.Integration and Compatibility: Integrate with other systems and tools (e.g., learning content repositories, video conferencing platforms) to enhance functionality and usability.

10.Compliance and Security: Ensure compliance with regulatory requirements and standards for data security, privacy, and accessibility in online education.

EMPATHY CANVAS

Our empathy canvas is a method we used to gather insights about our customer, and this exercise is followed up with the team.



Users:

The platform is designed with empathy towards the following user groups, recognizing their unique needs and challenges:

1. **Healthcare Staff** – The platform simplifies administrative tasks for healthcare workers, allowing them to efficiently manage vaccination records, administer doses, and schedule future appointments, minimizing their workload and improving service delivery.
2. **Doctors** – The system helps doctors stay organized and provide timely, accurate recommendations based on each patient's vaccination history, ensuring they can focus on delivering quality healthcare without getting bogged down by manual record-keeping.
3. **Registered Users** – The platform is designed with a user-friendly interface to ensure all individuals, regardless of their tech skills, can easily manage their vaccination records, book appointments, and receive reminders for upcoming doses, promoting better health outcomes.
4. **Parents** – By providing parents with an easy way to manage their children's vaccination schedules, the platform helps reduce the stress of keeping track of important medical milestones and ensures children receive timely vaccinations for their well-being.

Stakeholders:

The success of the project depends on understanding and addressing the needs of the following stakeholders:

1. **Government Healthcare Staff** – They play a key role in public health initiatives, and the platform enables them to track vaccination coverage, monitor trends, and ensure widespread immunization, supporting national health goals.
2. **Non-Government Organizations (NGOs)** – NGOs often work in remote or underserved areas, and this platform provides them with the tools to coordinate vaccination efforts efficiently, ensuring equitable access to vaccines for all communities.
3. **Software Developers** – The development team focuses on creating a platform that is not only functional but also empathetic to the users' needs, with a simple UI and robust back-end systems to handle large amounts of data, ensuring the platform operates smoothly.
4. **End Users** – Every individual using the platform should feel empowered, knowing they can access reliable vaccine information, book appointments with ease, and receive timely notifications, ultimately feeling more in control of their healthcare.
5. **Funding Agencies** – By ensuring the platform's long-term sustainability and showcasing its impact on public health, the project meets the expectations of funding agencies looking to invest in meaningful and effective healthcare solutions.

6. **Vaccine Manufacturers** – They benefit from the streamlined system as it allows for better demand forecasting, improved logistics, and real-time data on vaccination needs, ensuring the right vaccines reach the right places at the right time.

Activities:

These key actions form the core of the platform, focusing on ease of use and improving healthcare outcomes for all involved:

1. **Registration** – Users can sign up quickly and easily, ensuring they have full access to the platform's services without unnecessary delays or complications.
2. **Login/Logout** – The system ensures secure access to personal vaccination records while allowing users to log in from multiple devices, providing flexibility and peace of mind.
3. **Past Vaccination** – Users can easily view their or their children's vaccination histories, reducing anxiety about missed doses and providing clarity on future needs.
4. **Convenient Booking** – The platform allows users to book vaccination appointments at nearby centers with just a few clicks, reducing the hassle of coordinating with healthcare facilities.
5. **Schedule Booking** – Flexible scheduling options accommodate users' busy lives, allowing them to select times that suit their personal or family needs.
6. **SMS Reminders** – Automated reminders help users stay on track with their vaccinations, reducing the risk of missed doses and ensuring better protection against diseases.
7. **Provide Vaccine Online** – The system enables users to register for vaccination programs or access available vaccines, ensuring timely access to life-saving doses, particularly in critical situations.

Storyboarding:

Happy and sad both sides of the project are declared below:

o Happy

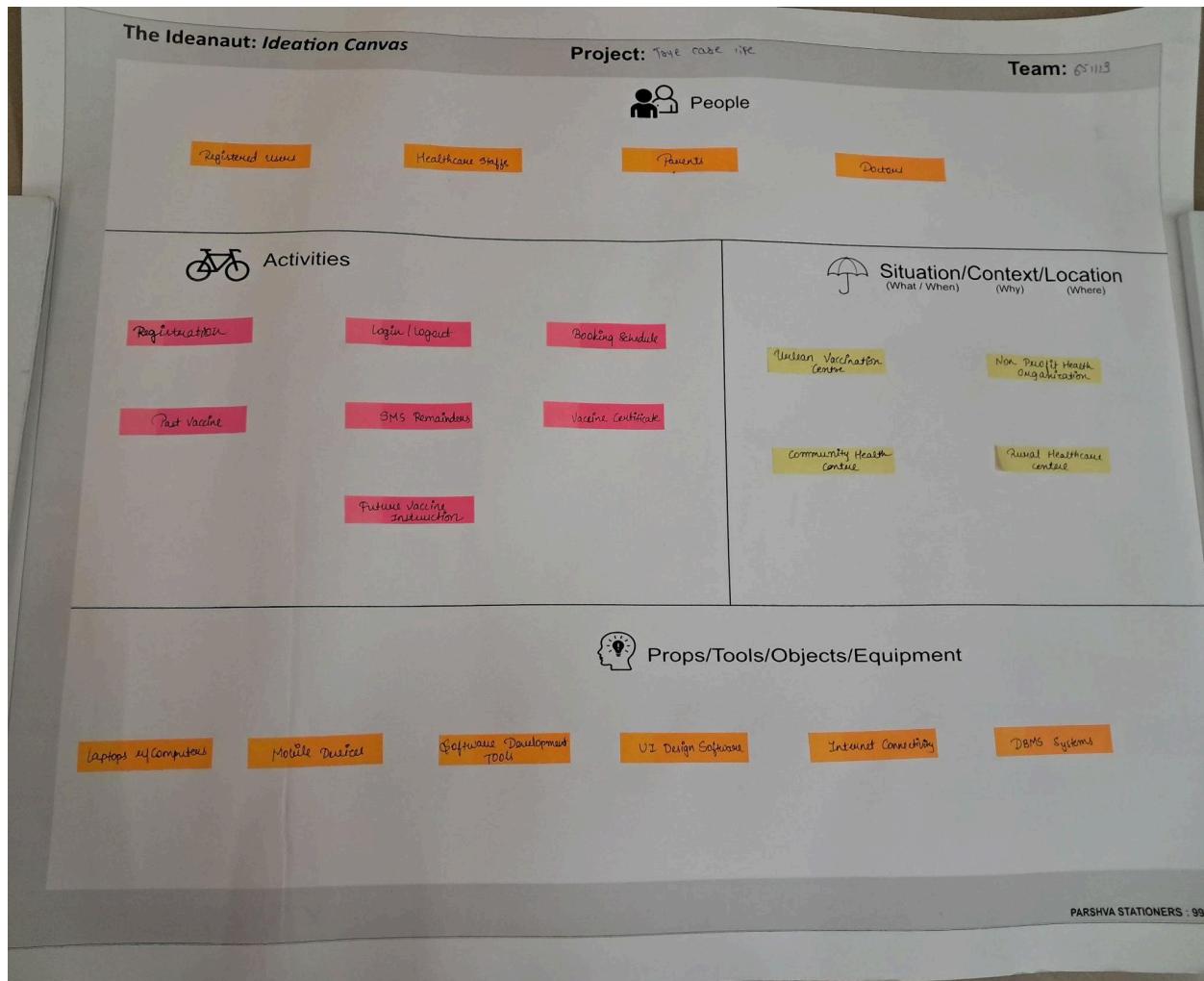
Rathin, a young father residing in a rural area, discovers the Vaccination Record Management System. With its intuitive interface, Rathin effortlessly registers his family's vaccination records. During visits to the vaccination booth, the staff efficiently updates their records, ensuring accuracy. Rathin receives timely notifications for upcoming doses, easing his concerns about his family's health. With the system's accessibility, Rathin can conveniently track his family's immunization status, bringing him peace of mind. The effectiveness of the system contributes to improved public health outcomes in Rathin's community.

o Sad

Param, a concerned parent in an underserved urban area, struggles to manage his family's vaccination records. The physical files are disorganized, and Param often forgets about upcoming doses. At the vaccination booth, the staff's outdated record-keeping system leads to errors and delays. Param misses important vaccinations for his children, causing anxiety about their health. Due to limited access to healthcare resources, Param feels helpless in keeping his family safe. Without a reliable system in place, Param's community continues to face challenges in accessing essential healthcare services, impacting their overall well-being.

IDEATION CANVAS

This canvas helps to put out ideas and thoughts which should and can be considered in our project.



Props/Tools/Objects/Equipment

We have employed the following tools and technologies to develop our vaccination management platform:

1. **Mobile Device** – For seamless user access, allowing individuals to check vaccination details and appointments on the go.
2. **Laptop/Computer** – Used by developers to code, test, and deploy the website as well as by healthcare professionals for managing records.
3. **Internet Connectivity** – Essential for enabling real-time data exchange and remote access across multiple devices and locations.

4. **UI Design Software** – For creating a user-friendly, intuitive dashboard that enhances the experience of interacting with the vaccination platform.
5. **Software Development Tools** – Integrated to build the back-end, implement APIs, and ensure the smooth operation of the website.
6. **DBMS Systems** – Used to securely store, manage, and retrieve vaccination records for millions of users across the nation.

Activities

The following key functionalities form the foundation of our platform:

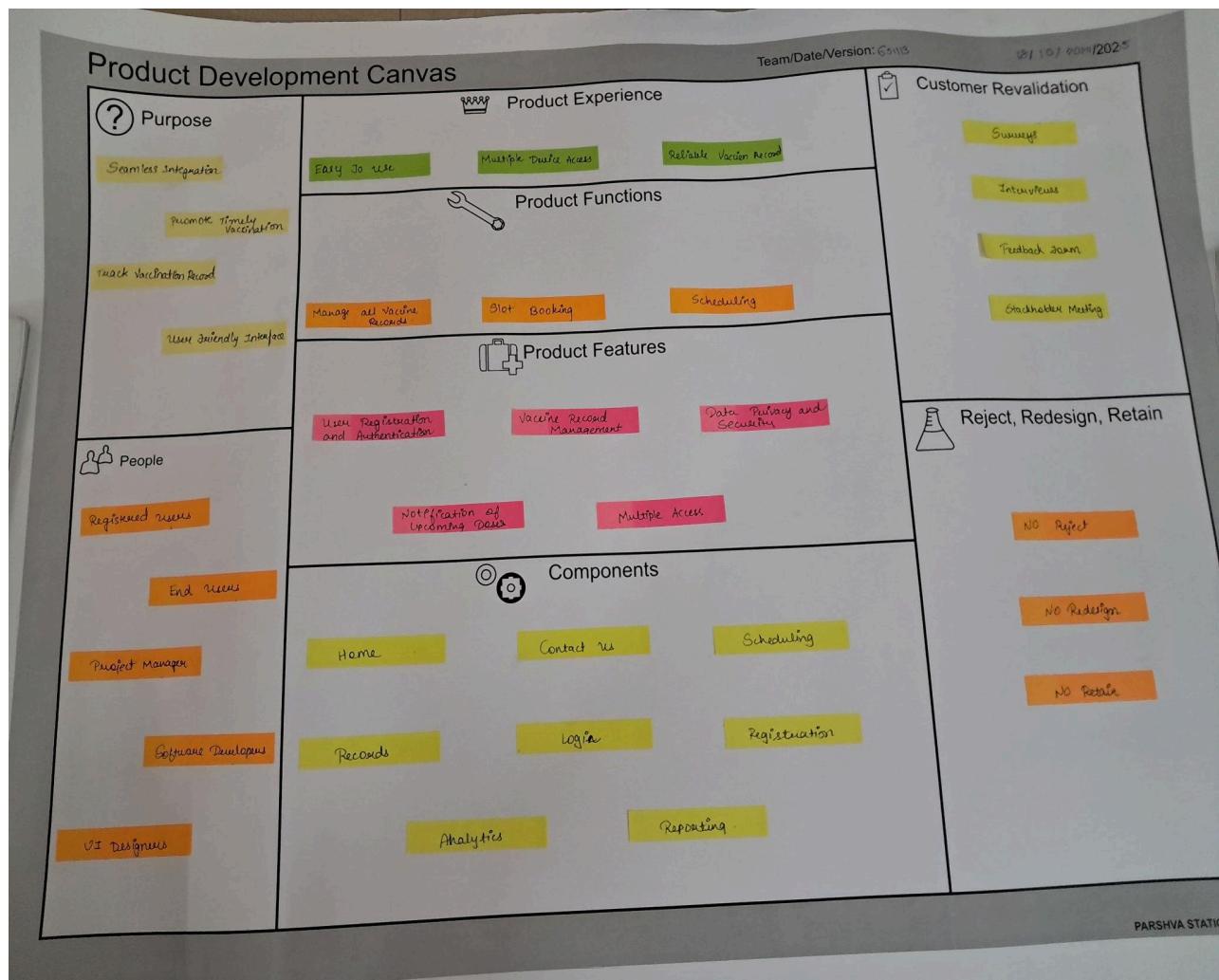
1. **Registration** – Users can create accounts to manage their vaccination history and schedule future appointments.
2. **Login/Logout** – Secure user authentication ensures data privacy and authorized access.
3. **Past Vaccination** – Users can view their entire vaccination history, along with dosage details and dates.
4. **Convenient Booking** – Users can easily find and book vaccination appointments at nearby centers.
5. **Schedule Booking** – Offers flexibility in choosing preferred dates and times for upcoming vaccinations.
6. **SMS Reminders** – Automated text reminders ensure users are notified ahead of their scheduled vaccinations.
7. **Provide Vaccine Online** – Features the ability to register for vaccination programs, facilitating easier access to services.

People

Our platform primarily revolves around the following key stakeholders:

1. **Healthcare Staff** – Responsible for updating vaccination records, managing stock availability, and ensuring users' appointments are fulfilled.
2. **Doctors** – Provide medical oversight, consultation, and vaccination services for registered users.
3. **Registered Users** – Individuals who use the platform to manage their vaccination history and schedule appointments.
4. **Parents** – Manage the vaccination records of their children, ensuring timely doses and keeping track of medical requirements.

PRODUCT DEVELOPMENT CANVAS



Purpose:

The primary objectives behind our product development are as follows:

1. **Seamless Integration** – To ensure smooth coordination between vaccination centers, users, and healthcare professionals by integrating all data into one platform.
2. **Track Vaccine Records** – Provide a reliable, centralized system to monitor and maintain comprehensive vaccination histories for every user.
3. **User-Friendly Interface** – Design an intuitive interface that offers easy navigation for users of all technical skill levels.
4. **Promote Timely Vaccine** – Encourage timely vaccinations through automated reminders, appointment scheduling, and personalized recommendations.

People:

The following stakeholders are involved in the development and execution of the platform:

1. **Healthcare Staff** – Manage vaccine stock, update records, and assist users with vaccination-related inquiries.
2. **Doctors** – Oversee vaccination procedures and provide medical consultation via the platform.
3. **Registered Users** – Individuals and families who use the platform to schedule appointments and track vaccination records.
4. **Parents** – Monitor their children's vaccination progress and ensure timely administration of doses.
5. **Project Manager** – Leads the development team, oversees the project's progress, and ensures timely delivery of features.

Product Experience:

Our platform is designed to deliver a superior experience with the following key qualities:

1. **Easy to Use** – The platform is designed for simplicity, ensuring that users can perform actions quickly and efficiently.
2. **Multiple Device Access** – Access vaccination records and features seamlessly from any device, whether mobile, tablet, or desktop.
3. **Reliable Vaccine Records** – Guarantee accurate and up-to-date vaccine records, ensuring users have the correct information for their health needs.

Product Functions:

The core functions that drive our platform's value include:

1. **Manage All Vaccine Records** – A centralized hub where users can view and manage their entire vaccination history.
2. **Slot Booking** – Allows users to search for available vaccine slots and book

appointments at their preferred center.

3. **Scheduling** – Flexible scheduling options that allow users to pick convenient times and receive reminders for upcoming appointments.

Product Features:

We've integrated the following essential features into our platform:

1. **User Registration and Authentication** – Secure user sign-up and login for data protection and personalized services.
2. **Vaccine Record and Management** – Comprehensive tools for tracking vaccination status, viewing past doses, and managing upcoming appointments.
3. **Data Privacy and Security** – Strong data encryption and secure protocols to protect sensitive user information.
4. **Notification of Upcoming Doses** – Automated reminders that inform users about their next vaccination appointments or necessary future doses.
5. **Multiple Access** – Allow multiple users to access vaccination records from different devices for enhanced convenience.

Components:

Our platform is built with the following key components:

1. **Home** – The main landing page that provides an overview and easy access to all major features.
2. **Contact Us** – A dedicated section for users to reach out for support or queries.
3. **Scheduling** – The feature where users can book or adjust their vaccination appointments.
4. **Records** – A section where users can view their vaccination history and upcoming doses.
5. **Login** – Secure authentication portal for registered users.
6. **Registration** – New users can create accounts to access the platform's services.
7. **Analysis** – Data-driven insights and reports on vaccination trends, user

activity, and other key metrics.

8. **Reporting** – Generate detailed reports on vaccine administration and user engagement for stakeholders.

Customer Revalidation:

To ensure continuous improvement, we conduct the following:

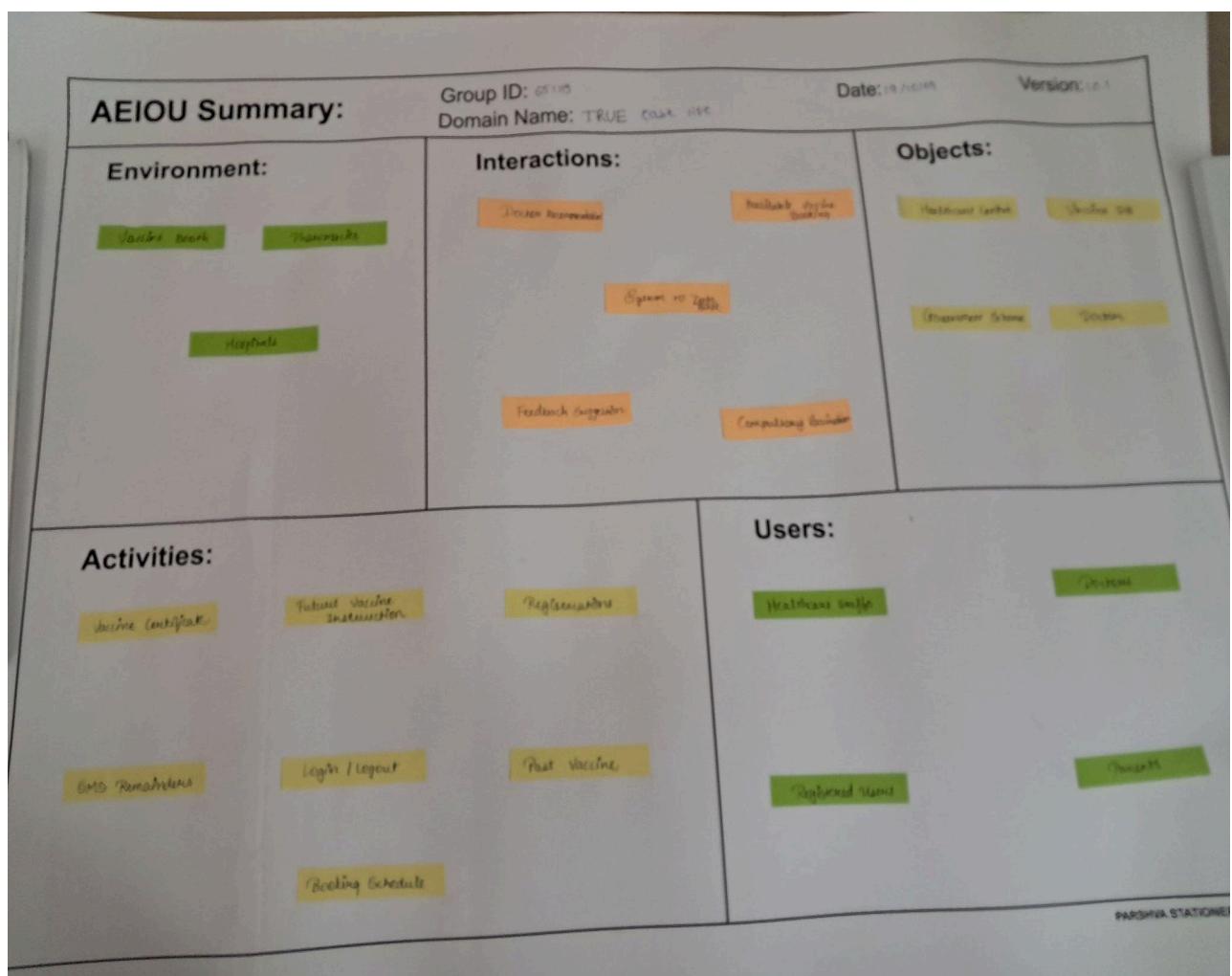
1. **Surveys** – Collect user feedback on the functionality and overall satisfaction with the platform.
2. **Interviews** – In-depth discussions with key stakeholders and users to identify potential enhancements.
3. **Feedback Form** – A streamlined way for users to provide their opinions directly within the platform.
4. **Stakeholder Meeting** – Regular meetings with healthcare professionals, users, and other key figures to review performance and suggest improvements.

Reject, Redesign, Retain:

Based on our current stage of development, we have:

1. **No Reject** – All features and components are aligned with our project vision and goals.
2. **No Redesign** – No significant redesigns are required at this stage, as the product meets functional and user needs.
3. **No Retain** – There is no need to retain outdated features, as all current components are essential for the platform's success.

AEIOU SUMMARY



- In the AEIOU Canvas, AEIOU stands for 5 elements to be coded: Activity, Environment, Interaction, Object, and User.

Activity:

The following actions are integral to the smooth operation of the platform:

1. **Registration** – Users can create accounts to manage their vaccination records and access personalized services.
2. **Login/Logout** – Secure authentication mechanisms that allow users to access or exit the system while ensuring data protection.
3. **Past Vaccination** – Users can view their complete vaccination history, including administered doses and dates.
4. **Convenient Booking** – Enables users to easily find and book vaccination slots at nearby healthcare centers or pharmacies.
5. **Schedule Booking** – Users can schedule future appointments based on availability and personal preferences.
6. **SMS Reminders** – Automated reminders sent via text messages to notify users

of upcoming vaccination appointments.

7. **Provide Vaccine Online** – An option for users to register for vaccination programs and get necessary information on vaccination availability.

Object:

Key entities that support and facilitate the platform's objectives:

1. **Healthcare Center** – Vaccination centers where users receive their vaccines, managed by healthcare staff.
2. **Vaccine Database** – A secure, centralized repository for storing and managing vaccine records, dosage details, and user information.
3. **Government Schemes** – Policies and initiatives that support mass vaccination campaigns and ensure equitable access to vaccines.
4. **Doctor** – Healthcare professionals who provide medical guidance, administer vaccines, and update vaccination records.

Environment:

The primary settings where vaccination services are provided:

1. **Vaccine Booth** – Designated areas at vaccination centers or pop-up locations where vaccines are administered.
2. **Hospitals** – Medical facilities where users can receive vaccinations, with records updated and maintained by healthcare staff.
3. **Pharmacies** – Local pharmacies that offer vaccination services, making it more convenient for users to receive doses in their community.

Users:

The platform caters to the following groups:

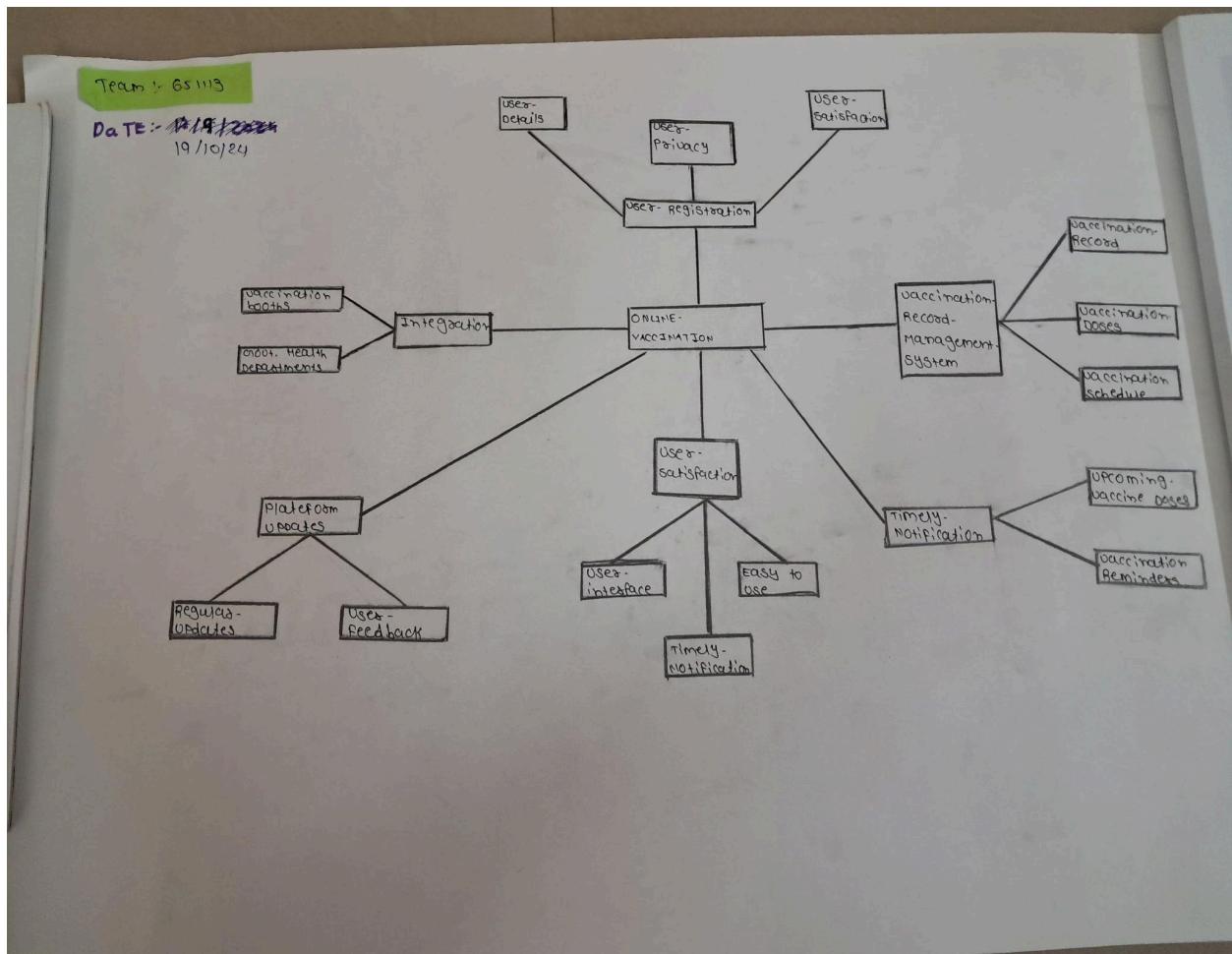
1. **Healthcare Staff** – Professionals responsible for managing vaccination records, administering doses, and updating the system.
2. **Doctors** – Provide medical oversight, administer vaccines, and ensure user health and safety.
3. **Registered Users** – Individuals who use the platform to track their vaccination history and schedule future appointments.
4. **Parents** – Manage the vaccination records of their children, ensuring timely administration of required doses.

Interaction:

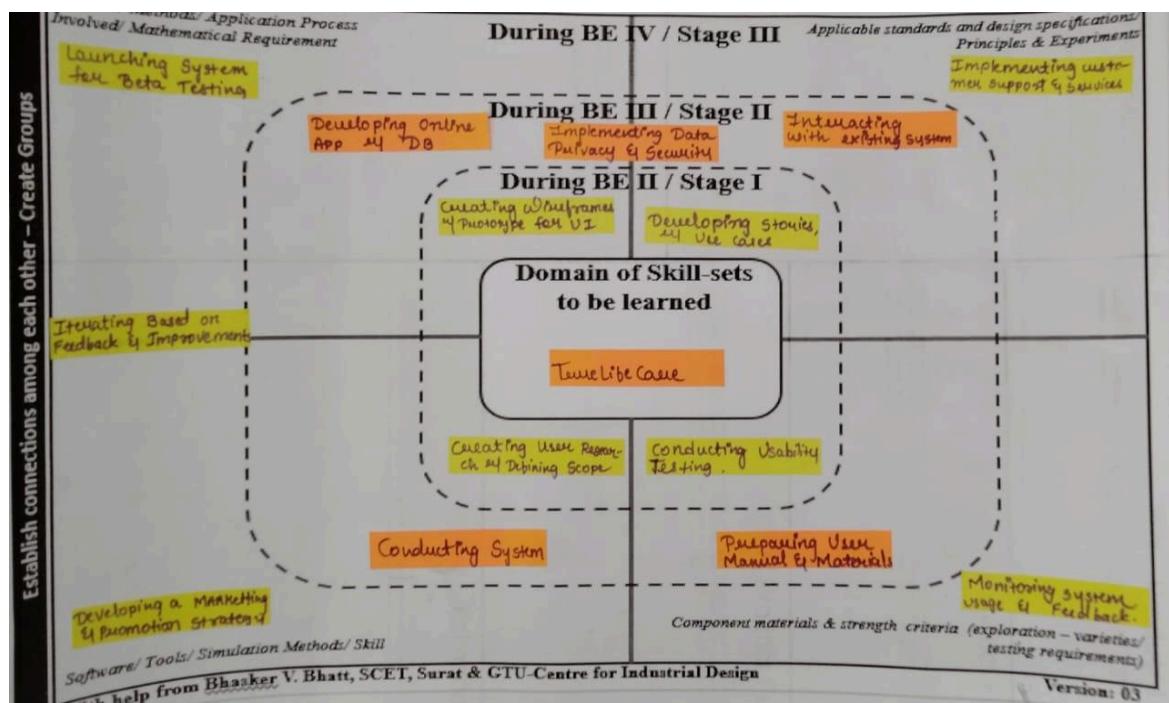
The key interactions that define how users and stakeholders engage with the system:

1. **Doctor Recommendation** – Doctors can recommend vaccines based on medical history and upcoming required doses, ensuring proper vaccination schedules.
2. **Available Vaccine Booking** – Users can search and book available vaccine slots, either at healthcare centers or pharmacies.
3. **Compulsory Vaccination** – Notifications and alerts for compulsory vaccines, especially for children or high-risk groups, as mandated by government health guidelines.
4. **System to Database** – Vaccination records are updated in real time in the centralized vaccine database, ensuring consistency and accuracy.
5. **Feedback Suggestion** – Users can provide feedback on their experience with the platform and vaccination services, which can be used for improving system performance.

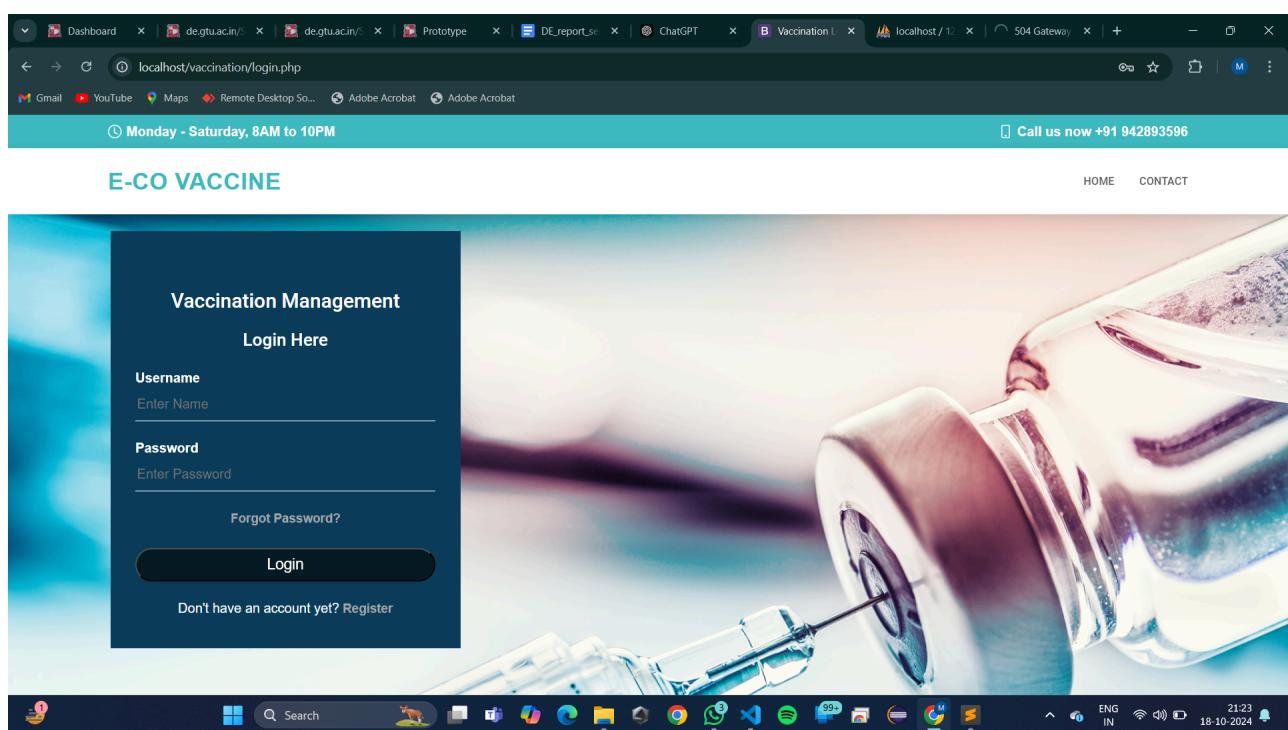
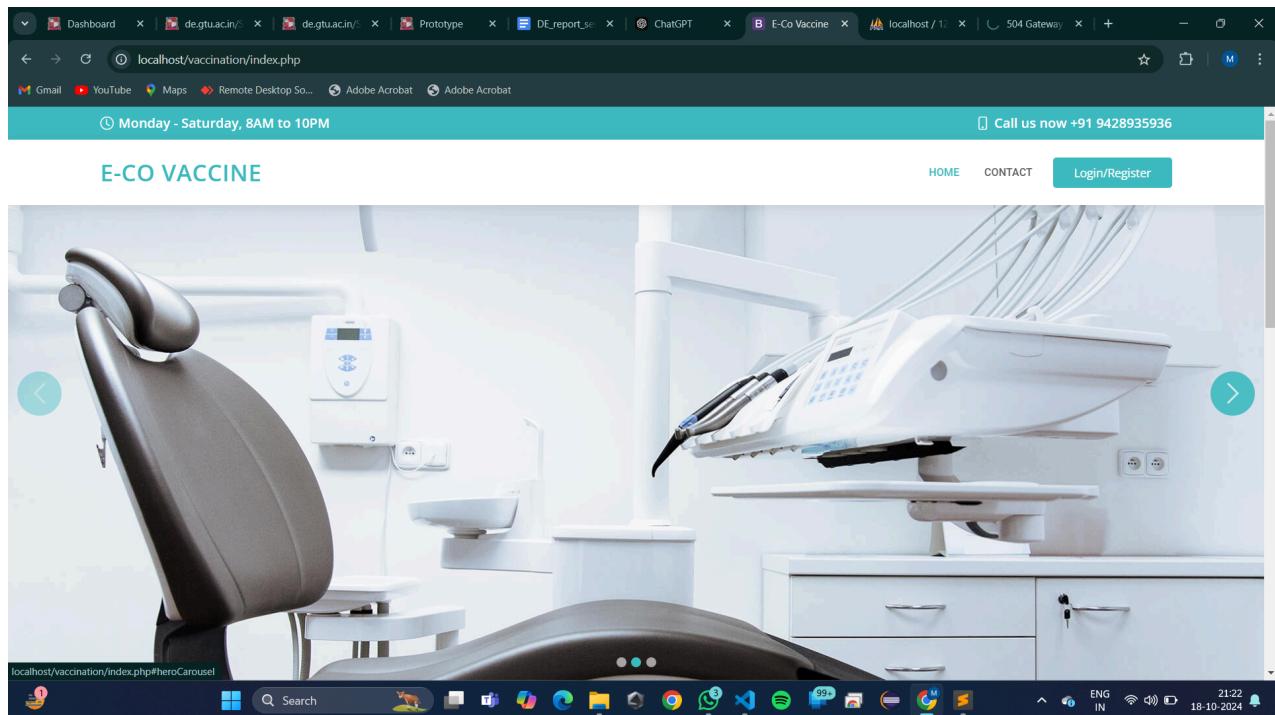
MIND MAP

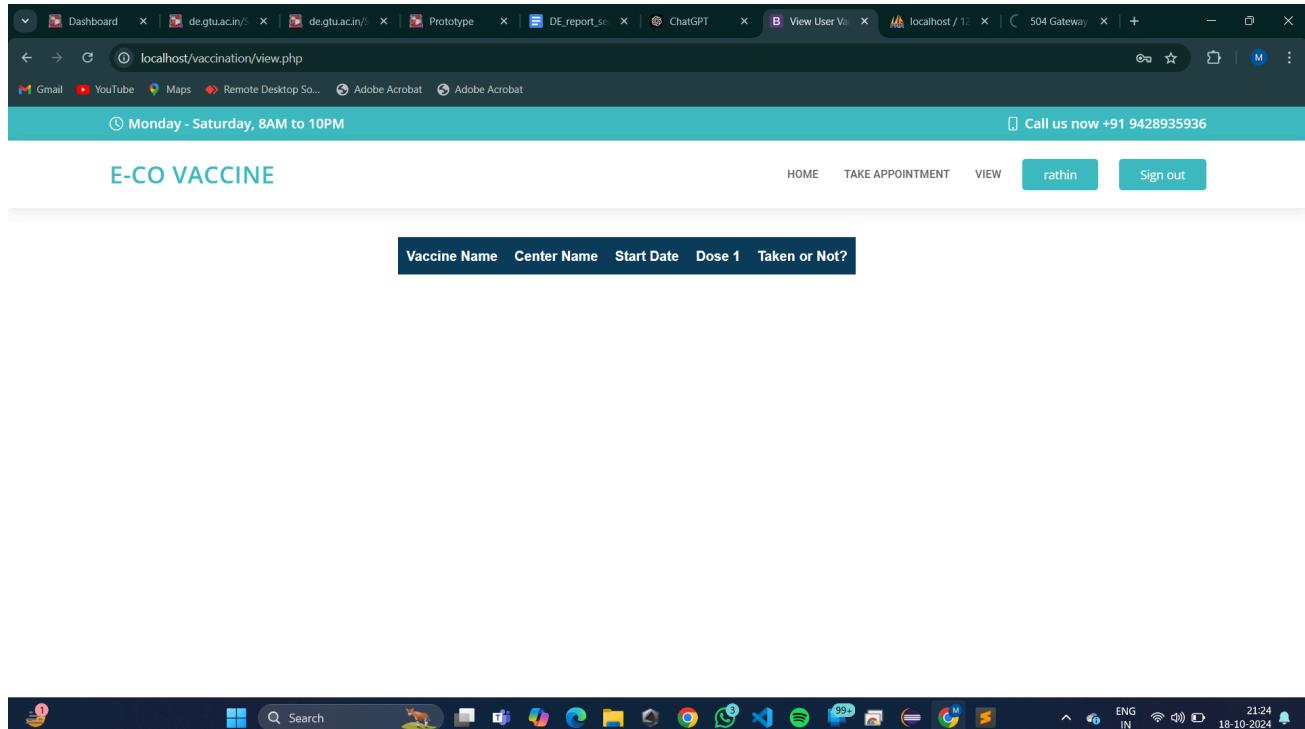
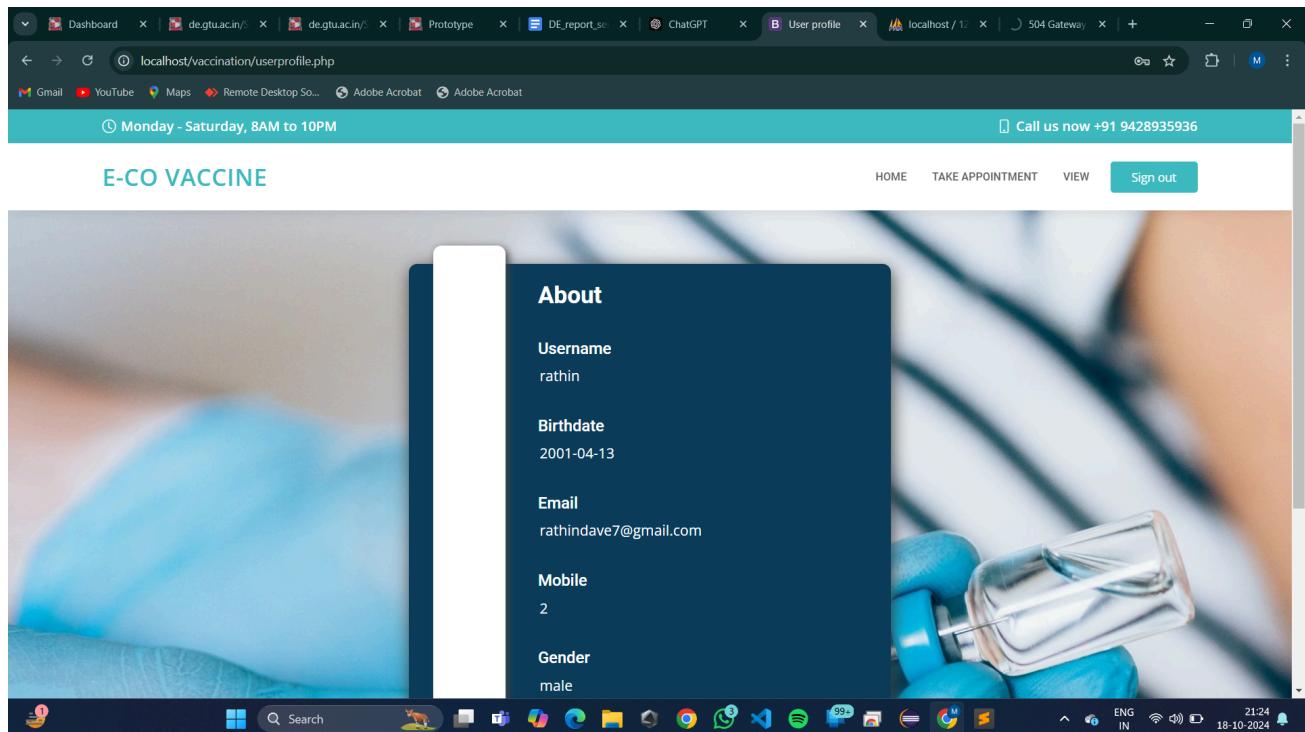


LEARNINGS NEED MATRIX



PROTOTYPE CANVAS





CONCLUSION

This centralized web application simplifies nationwide vaccination management by providing a user-friendly platform for tracking records, scheduling appointments, and receiving reminders. It reduces administrative burdens for healthcare staff and doctors while offering users, especially parents, a convenient way to manage vaccinations.

By integrating stakeholders like government bodies, NGOs, and vaccine manufacturers, the system ensures equitable access and efficient vaccine distribution. Prioritizing data security and feedback-driven improvements, the platform promotes better public health outcomes and streamlines India's vaccination process for a more coordinated healthcare system.