IN PARTNERSHIP WITH PLYMOUTH UNIVERSITY

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Module Code: **PUSL2023**	Module Name: **Mobile Application Development**
Coursework Title: **Mobile Application Development Project Report**	
Deadline Date: **19th February 2024**	Member of staff responsible for coursework: **Mr. Diluka Wijesinghe**
Programme: **BSc (Honours) Software Engineering – Plymouth University**	

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Group work: please list all names of all participants formally associated with this work and state whether the work was undertaken alone or as part of a team. Please note you may be required to identify individual responsibility for component parts.

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Overall mark _____% Assessors Initials _____ Date_____

Project Proposal

VACCILANKA

(A Mobile Application for Vaccination Updates)

Module Code: **PUSL2023**

Module: **Mobile Application Development**

Module Leader: **Mr. Diluka Wijesinghe**

Group 29

Group Members:

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Introduction

A noticeable deficiency that we saw during our research into mobile application development was the absence of a digital way of obtaining vaccination updates. This deficiency is especially noticeable in regions such as Sri Lanka where conventional vaccination cards are still used. The development of a mobile application intended especially for vaccine administration was the project's unique goal, which was launched in response to this dawn. Our application seeks to improve the efficiency of recording vaccination data, deliver timely updates, and provide users with useful educational resources by tackling the shortcomings of current systems.

This project's importance cannot be emphasized enough. Our application has the potential to have a substantial influence on public health outcomes, healthcare delivery, and individual well-being by filling the gap in the present vaccine management procedures. Our goal is to support preventative healthcare practices and larger initiatives in disease prevention by offering an easy-to-use platform for tracking vaccine updates.

The patient population is our main target audience for our endeavour. By customizing the app to meet their requirements and giving them an easy way to keep track of their vaccination history, people are given the power to take charge of their health and make wise decisions about their immunization status.

Problem Definition

The issue that has been highlighted centres on the absence of an electronic means for getting vaccination updates, which is especially widespread in areas like Sri Lanka where conventional vaccination cards are the norm. For those who could misplace or destroy their vaccination records, this problem presents serious difficulties as they won't have any other way to keep track of their vaccination history.

To tackle this issue, we first carried out background research in the community to learn more about the obstacles people experience as well as the current vaccine management procedures. We collected data on vaccination card prevalence, card loss or damage frequency, and challenges in obtaining vaccination updates using questionnaires and observations. We also investigated the population's knowledge and acceptance of electronic health solutions.

We were able to comprehend the impact of the identified problem on people's lives as well as the larger healthcare ecosystem on a deeper level by interacting with society. This study yielded insightful information that helped us construct our solution, a mobile app intended especially for vaccine administration. We made sure the app met the unique demands and difficulties that individuals face while keeping their immunization data by using user feedback and input collected throughout the research process.

All things considered, the background study that was done in collaboration with the local population was extremely important in helping us comprehend the problem that was discovered and to design a workable solution. Through collaboration with the community, we developed a smartphone application that tackles practical issues and offers a useful tool for people to conveniently and easily maintain their vaccination history.

Scope of the Project

1. User Interface (UI) and User Experience (UX):

To guarantee accessibility and usability for people with different levels of technological expertise, the app will place a high priority on a user-friendly interface and smooth user experience.

2. Data Security and Privacy:

Security and privacy protocols will be followed to secure users' private health information.

3. Integration with Healthcare Systems:

To securely access and update vaccination records, the app may, where appropriate, interface with currently in-place healthcare systems.

4. Testing & Quality Assurance:

Before the app is released, extensive testing will be carried out to find and fix any bugs or usability problems, guaranteeing a dependable and seamless user experience.

5. Deployment and Support:

After the app is made available in the appropriate app stores and platforms, it will get continuous maintenance and support to handle user comments and guarantee that it remains relevant and functioning.

6. Scalability:

The app's capability for scaling up to handle further upgrades, new features, and more user demand will be considered.

Objectives

1. Enhance vaccination Management:

The main goal of the app is to help users maintain their vaccination records more easily and effectively. This offers functions including safely keeping track of vaccination history, making information easily accessible, and enabling schedule changes.

2. Boost Vaccination Adherence:

Increasing user adherence to vaccinations is another important goal. To do this, the app may notify users when their next vaccinations are due and provide educational materials to address any worries or misunderstandings users may have regarding vaccines.

3. Enhance Information Access:

The app seeks to enhance the availability of precise and trustworthy vaccination-related information. This goal entails giving users access to instructional materials about different vaccinations, including information on their safety, efficacy, and possible adverse effects, enabling people to make knowledgeable vaccination decisions.

4. Boost Public Health Outcomes:

The app helps achieve larger public health goals by encouraging vaccine adherence and information availability. This will eventually improve herd immunity, slow the spread of illnesses that may be prevented by vaccination, and improve both individual and community health outcomes.

5. Protection of Data Security and Privacy:

Protecting users' personal information and vaccination records is a primary goal. To secure sensitive data, this calls for the implementation of strong security measures, following relevant data protection laws, and building user confidence in the app's management of their data.

Features of the Application

This mobile application offers a lot of functions to improve the vaccination management process, with a user-friendly interface for patients and healthcare providers. All features are designed to fulfil the needs of patients and the healthcare sector.

Vaccination History

This feature will provide details of the vaccination data of customers. It allows users to monitor previous vaccines, by ensuring they are informed about their immunization status.

Vaccination Updates

This feature will provide the latest information about new and future vaccines for users. This function is very important to keep users informed about the most recent vaccine availability with the details of those vaccines.

Educational Resources

Gives valuable information regarding vaccines, including the advantages of them, possible negative reactions, and general health guidance. These resources will provide information to the users, helping them to make good choices about their health and well-being.

Vaccination Reminders

Send customized notifications to users regarding their upcoming vaccination appointments.

Emergency Information

The Emergency Information section provides immediate access to essential emergency contacts, such as neighbouring hospitals and clinics.

Patient Information

Patients can access and review their personal health information through the app using the Patient Info feature. They can check the vaccines that they have received with the dates and locations.

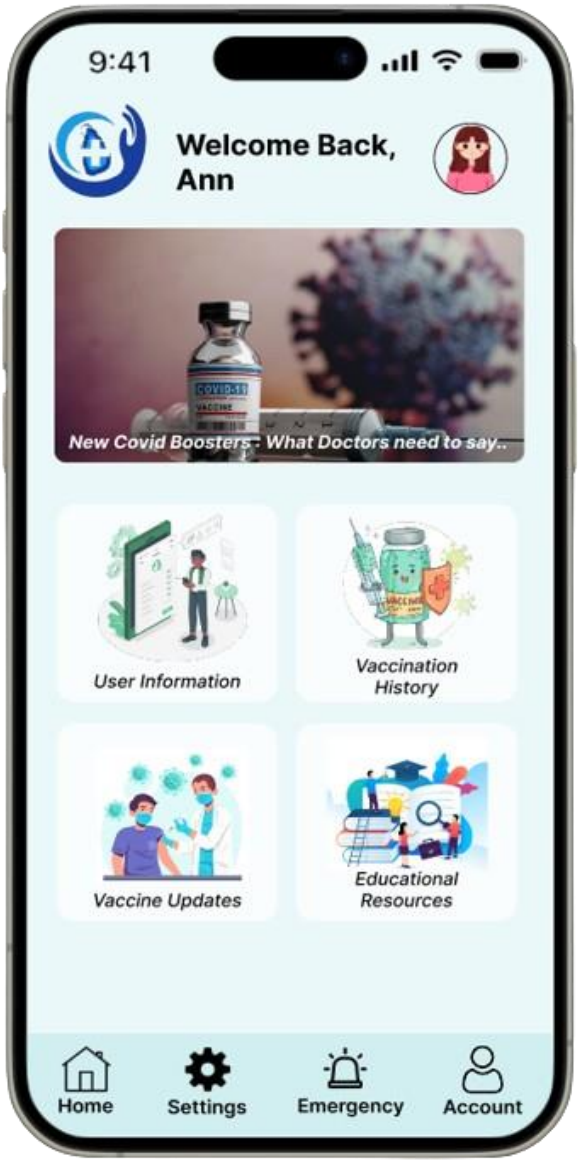
Account Settings

Account Settings include features like updating contact information (phone number, email), managing passwords, adjusting privacy settings for data sharing, and selecting the app's theme (dark or bright mode). These settings allow users to customize their app experience based on their preferences and privacy considerations.

Wireframe Design

01. Login Page

02. Home Page

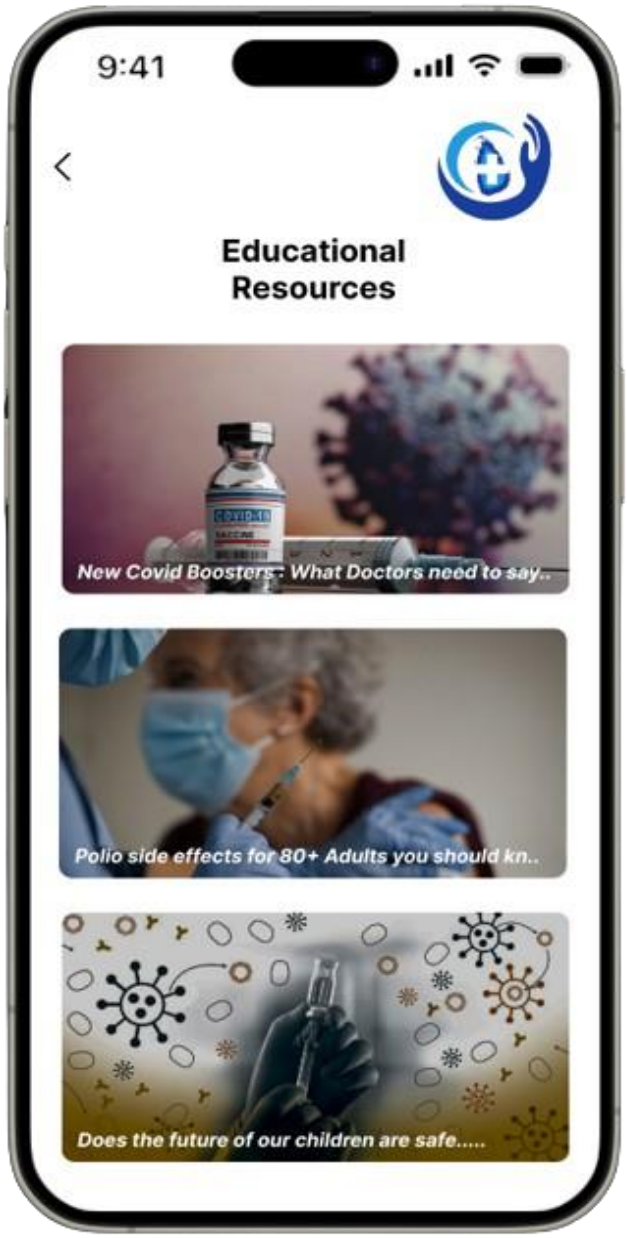


03. User Information

04. Vaccination History

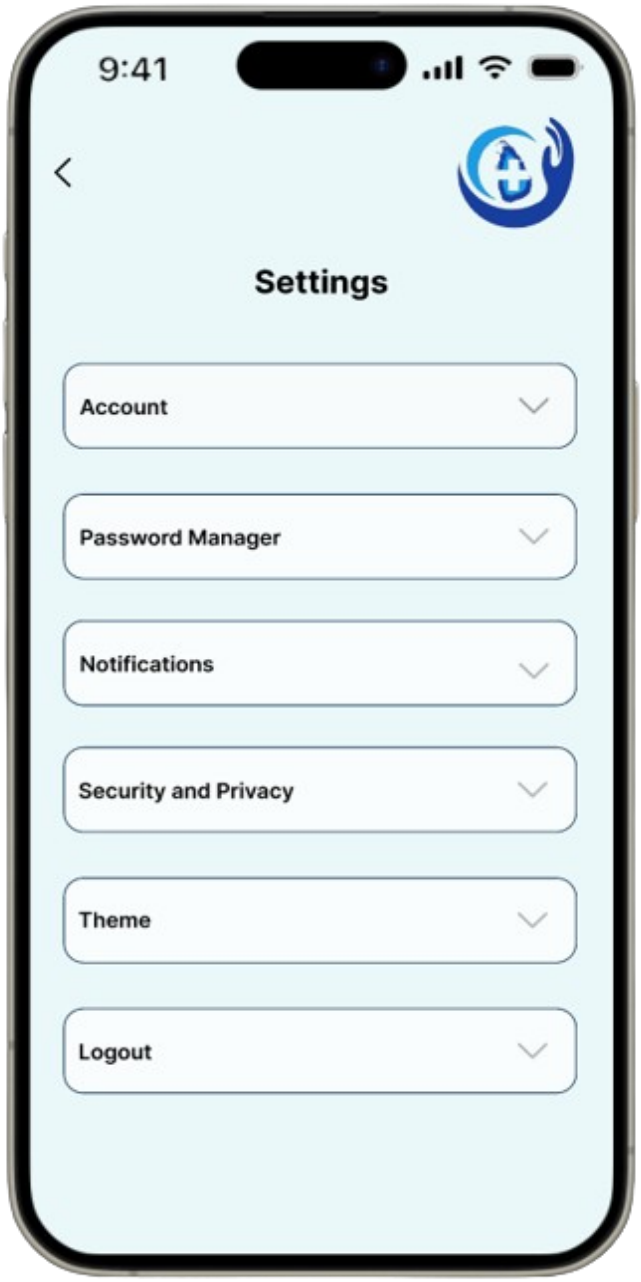
05. Vaccine Update

06. Educational Resources



07. Emergency Contacts

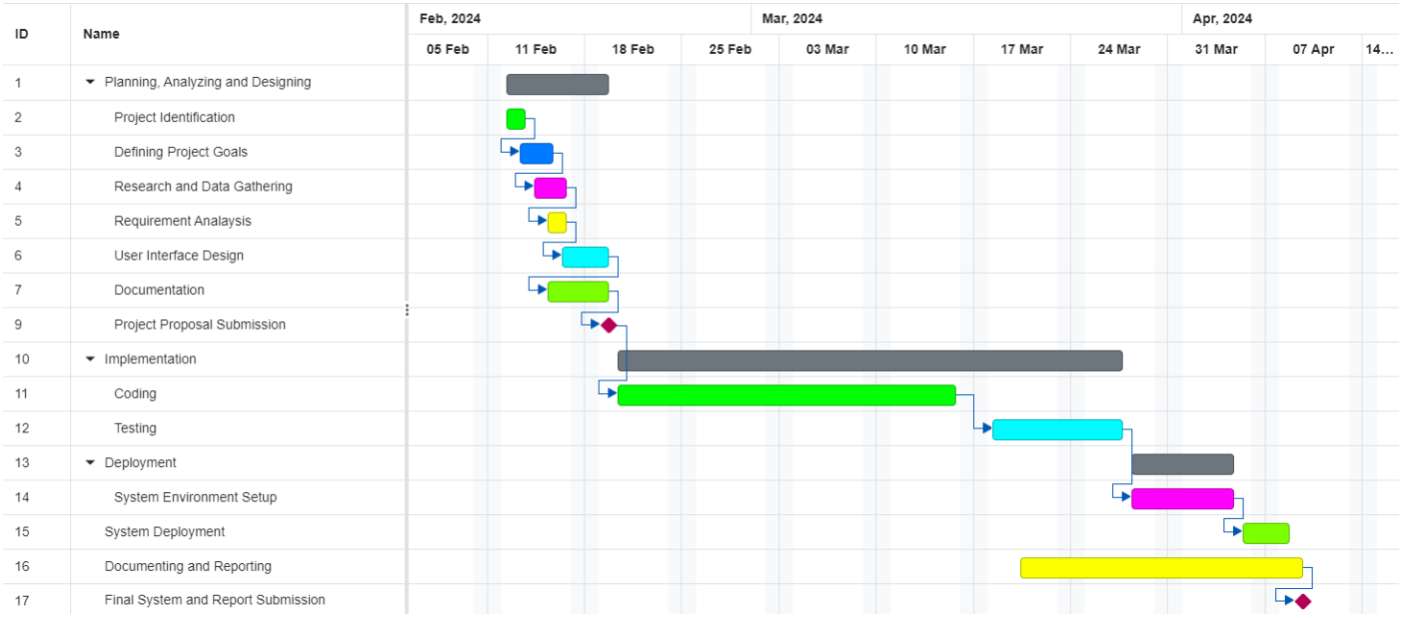
08. Settings



09. Contact Us

10. About Us

Gantt Chart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Feb, 2024
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31 Mar
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14...
1 Planning, Analyzing and Designing
2 Project Identification
3 Defining Project Goals
4 Research and Data Gathering
5 Requirement Analaysis
6 User Interface Design
7 Documentation
9 Project Proposal Submission
10 Implementation
11 Coding
12 Testing
13 Deployment
14 System Environment Setup
15 System Deployment
16 Documenting and Reporting
17 Final System and Report Submission

Conclusion

To round up, the creation of a mobile app for vaccinations is a big step towards resolving the drawbacks and shortcomings of conventional vaccine management systems. The app seeks to enable people to take charge of their health and make educated vaccination decisions by expediting access to vaccination data, offering frequent updates and educational materials, and encouraging vaccine engagement.

The app guarantees the confidentiality and integrity of users' personal health information with strong security measures and a user-centric approach, encouraging confidence and trust in its use. Furthermore, the app is essential to improve the health and well-being of individuals and communities by supporting larger public health goals including halting the spread of illnesses that can be prevented by vaccination and enhancing health outcomes.

Essentially, the smartphone app for vaccinations is a major contribution to public health initiatives as well as a technology advancement. The app has the potential to significantly improve community health outcomes, healthcare delivery, and individual health by utilizing mobile technology to improve vaccination management practices.

Work Matrix

	Workload	Done By
01	Identifying Problems and Project Documentation	Pulindu Hettiarachchi
02	Background Research	Jayalath Melisha
03	Finding Solutions and Project Documentation	Bhagya Gunaratne
04	Project Scope and Project Documentation	Liyana Udeshika
05	Identifying the relevant Objective and Documentation	Amarasinghe Amarasinghe
06	Key features, Functionalities and Documentation	Sabapathi Bandara
07	Gantt Chart	Pulindu Hettiarachchi
08	UI/UX Design	Jayalath Melisha

Table 1 Work Matrix