

MINI PROJECT – IS2106



VacciCare – Family Vaccination Management System

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- **Title of the Capstone Project:** VacciCare – Family Vaccination Management System

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Introduction

1.1 Overview

The vaccination management project aims to develop a mobile application to streamline the management of vaccination records for families and pets in Sri Lanka. With manual record-keeping currently posing challenges such as data inaccuracy and difficulty in retrieval, this app intends to improve public health outcomes by ensuring timely vaccinations. The objectives include providing automated notifications, user registration, secure data access, educational resources, and pet vaccination management.

1.2 Purpose and Scope of the SRS Document

The purpose of this Software Requirements Specification (SRS) document is to define the requirements for the vaccination management app. It outlines the functionalities, constraints, and limitations of the project to guide the development process. The intended audience includes the development team, stakeholders, and other parties involved in the project.

Scope of the Project

2.1 Project Boundaries

The project will focus on developing a mobile application for vaccination management, targeting families and pet owners in Sri Lanka. It includes features such as user registration, vaccination record management, notifications, educational resources, and pet vaccination management. The geographical scope covers the entire country of Sri Lanka.

2.2 Features and Functionalities

- User registration and authentication
- Vaccination record management for families and pets
- Automated notifications and reminders for upcoming vaccinations
- Access to educational resources on vaccines and health
- Pet vaccination management module

Stakeholder Analysis

3.1 Identification of Stakeholders

- Families
- Pet owners
- Healthcare professionals
- Ministry of Health officials

3.2 Analysis of Stakeholders

- Families and pet owners: End-users responsible for managing vaccination records for themselves and their pets.
- Healthcare professionals: Provide guidance and support in vaccination management.
- Ministry of Health officials: Regulate vaccination practices and may provide support or data for the app

Overall Description

4.1 Old One

Keeping track of vaccinations for families and pets in Sri Lanka is not easy. People have to write down information about vaccinations on paper, which can be messy and hard to understand. As more vaccinations are needed, it becomes even harder to manage all the records. So, there's a need for a better way to keep track of vaccinations.

4.2 New One

To solve the problems with the old way of managing vaccinations, we're going to create a new mobile app. This app will make it much easier for people to keep track of vaccinations for themselves, their families, and their pets. It will send reminders when vaccinations are due, store all the information securely, and even provide helpful information about vaccines and health.

User Requirements

5.1 Requirements Gathering

To understand what families and pet owners want in a vaccination management app, we can understand from our social and family experience. By this, we can learn about their experiences with vaccinations and what they think would make managing them easier.

5.2 User Needs and Preferences

Families and pet owners want an app that feels like a helpful friend, not a complicated chore. They want it to be easy to use, like how they'd use social media or messaging apps with their friends and family. They also want to get reminders about vaccinations at just the right time, so they don't forget. And most importantly, they want to be able to trust the information they find in the app, so they can make the best decisions for their loved ones' health.

Functional, Non-functional Requirements

6.1 Definition of Functional Requirements

Functional requirements are like the building blocks of the app - they're the things the app needs to actually do.

Here are the main things the app needs to do:

- **User Registration:** This means allowing people to sign up for the app, creating their own accounts with their name, email, and password.
- **Vaccination Record Management:** The app should let users add, edit, and delete their vaccination records. This includes things like the name of the vaccine, when they got it, and who got it.
- **Notifications:** The app needs to be able to remind users when they or their pets are due for a vaccination. It'll send notifications to their phone to remind them.
- **Educational Resources:** The app should have information about vaccines and health that users can read or watch to learn more about keeping themselves and their pets healthy.
- **Pet Vaccination Management:** If a user has a pet, the app should also let them keep track of their pet's vaccinations, just like they do for themselves.

6.2 Definition of Non-functional Requirements

Non-functional requirements are a bit different - they're about how the app works rather than what it does.

Here are some things we need to make sure the app does well:

- Performance
- Security
- Reliability
- Usability
- Compatibility

Tools and Technologies Expected to be Used

- Flutter framework with Dart programming language for mobile app development
- MySQL database for storing vaccination records.
- Firebase Cloud Messaging for automated notifications

Data Requirements

9.1 Types of Data

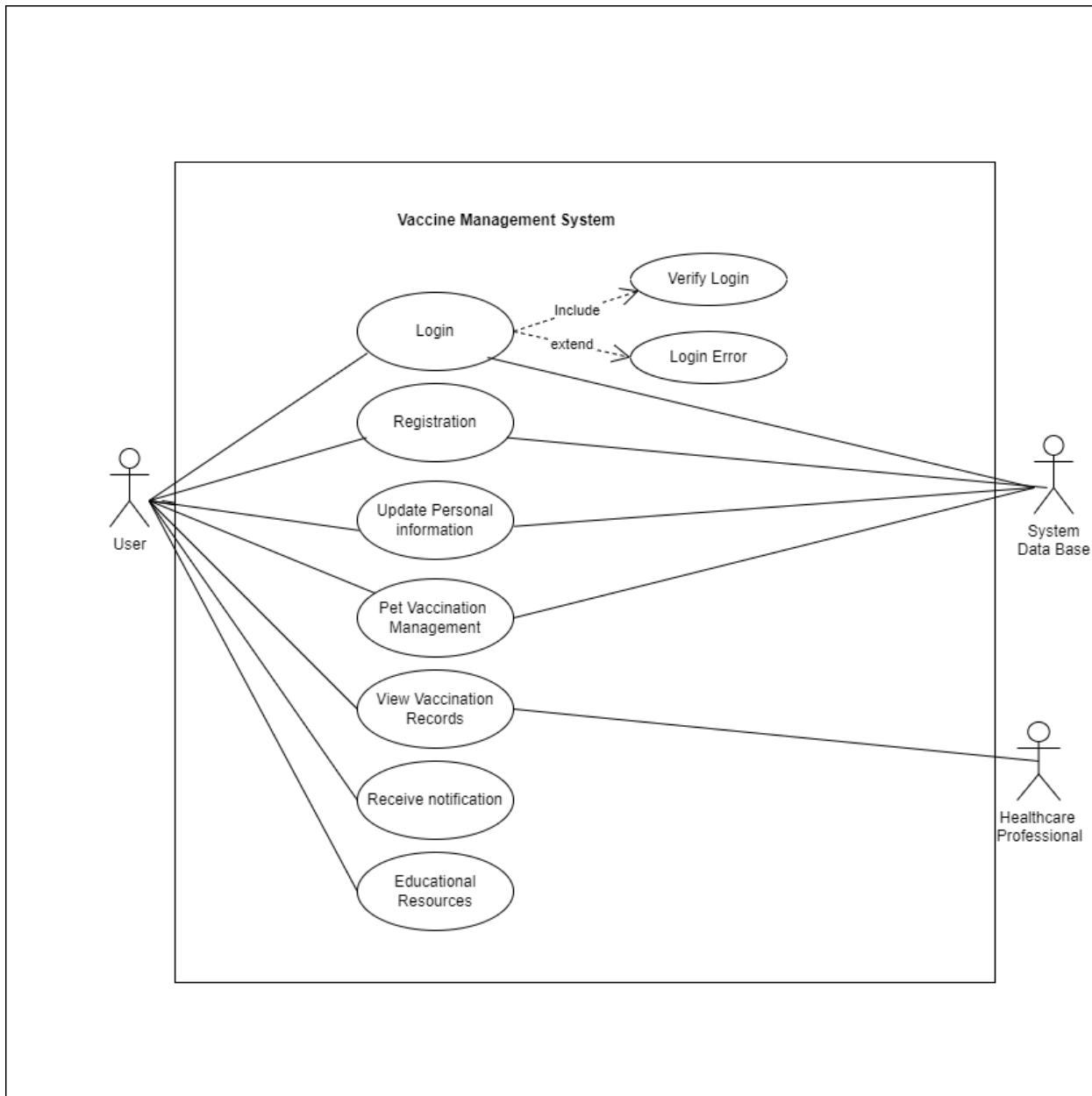
This part talks about the different kinds of information that the app will need to keep track of.

It includes:

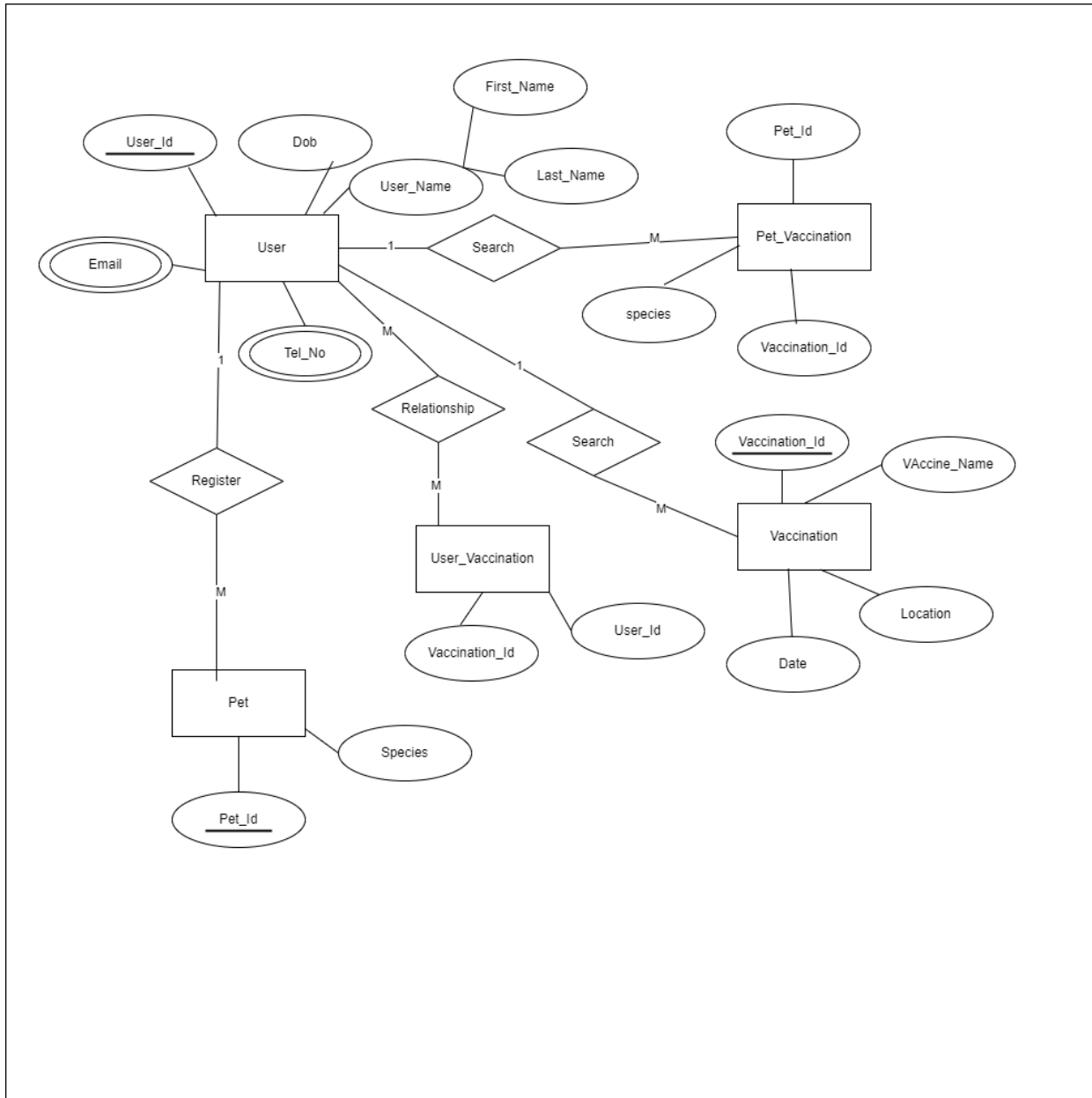
- User Profiles: This means details about the people using the app, like their names and email addresses.
- Vaccination Records: This refers to information about when people and their pets got vaccinated, including details like the type of vaccine and the date it was given.
- Educational Content: This means any articles, videos, or other information that the app provides to help users learn more about vaccines and staying healthy.

System Features

10.1 Use Case Diagram



10.2 ER Diagram



10.3 User Table

Primary Key(User_Id)

Attribute	Data Type	Description
User_Id	INT(20)	The Villager's Id
First_Name	VARCHAR(200)	First Name Of The Villager
Last_Name	VARCHAR(200)	Last Name Of The Villager
Dob	DATE	Villager's Birth Day
Tel_No	INT(10)	Telephone Number
Email	VARCHAR(500)	Email Address

Table -1

10.4 Pet Table

Primary Key(Pet_Id)

Attribute	Data Type	Description
Pet_Id	INT(50)	Id Of Pet
Species	VARCHAR(150)	Type Of Pet

Table-2

10.5 Vaccination Table

Primary Key(Vaccination_Id)

Attribute	Data Type	Description
Vaccination_Id	INT(50)	Id Of Vaccination
Vaccination_Name	VARCHAR(150)	Name Of Vaccination
Location	VARCHAR(500)	Place Of Vaccination
Date	DATE	Vaccination Date

Table-3

10.6 Pet Vaccination Table

Attribute	Data Type	Description
Pet_Id	INT(50)	Id Of Pet
Species	VARCHAR(150)	Type Of Pet
Vaccination_Id	INT(50)	Id Of Vaccination

Table-4

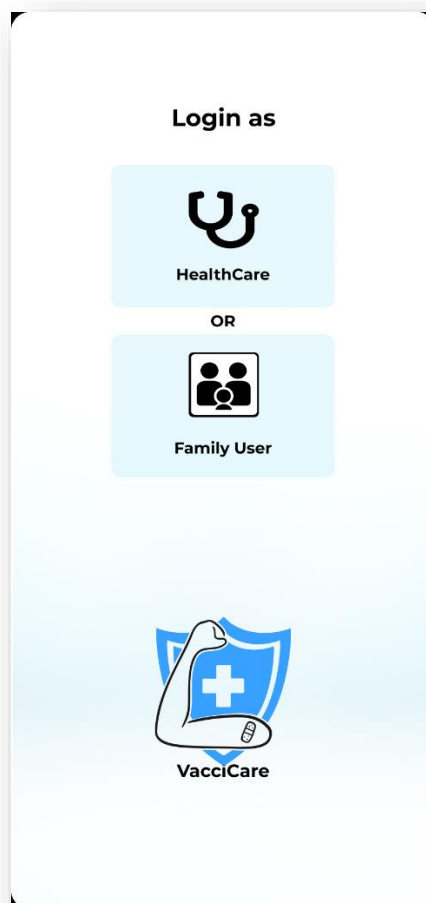
10.7 User Vaccination table

Attribute	Data Type	Description
User_Id	INT(20)	The Villager's Id
Vaccination_Id	INT(50)	Id Of Vaccination

Table-5

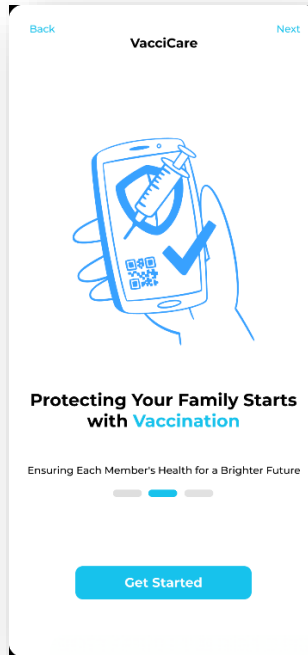
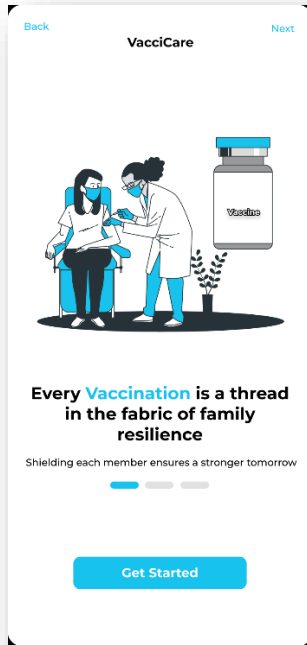
UX/UI Design

11.1 Welcome Page



11.2 Login as Member

11.2.1 Onboarding pages



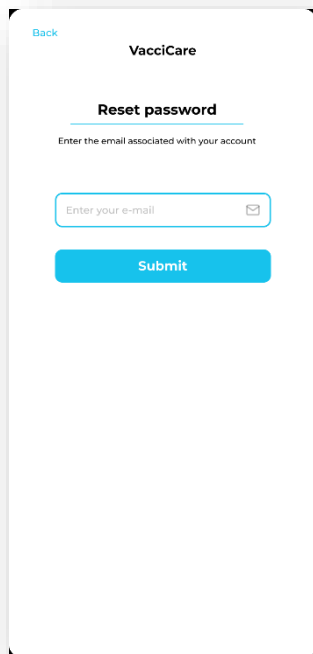
11.2.2 Login

The login screen for VacciCare. It features a blue header with 'VacciCare' and 'Login'. Below the header are Google and Apple login options. A horizontal line with 'OR' separates these from the email and password fields. The 'E-mail' field is labeled 'Enter your e-mail' and has an envelope icon. The 'Password' field is labeled 'Enter your password' and has a lock icon. A 'Remember me' checkbox is checked. A blue 'Log in' button is at the bottom. Below the button, there is a link for 'Did you forget your password? Reset Password' and a link for 'Create Account'.

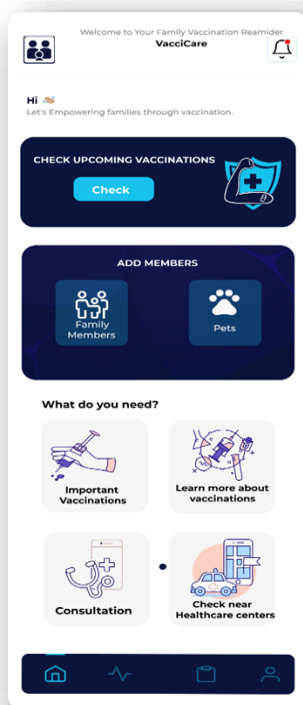
11.2.3 SignUp

The sign-up screen for VacciCare. It features a blue header with 'Back' and 'VacciCare'. Below the header is a 'Sign-up' title. The form fields are: 'Name' (labeled 'Your name'), 'E-mail' (labeled 'Your email'), 'Phone number' (with a country code dropdown showing '+94 771234567'), 'Password' (labeled 'Enter your password'), and 'Confirm Password' (labeled 'Re-enter your password'). A blue 'Sign up' button is at the bottom.

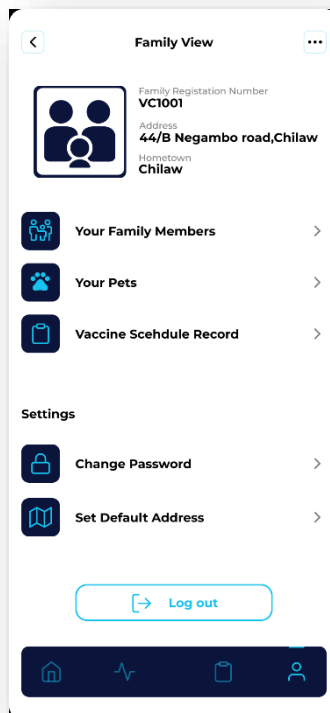
11.2.4 Password Reset page



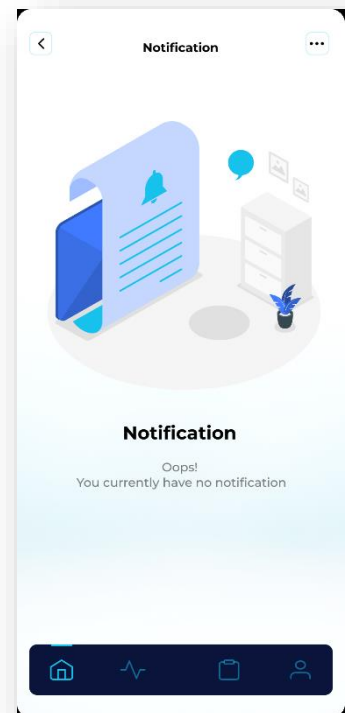
11.3.5 Home



11.3.6 Family View



11.3.7 Notification



11.2.8 Add Family Member

The 'Add Family Members' form in light theme includes the following fields: 'Name Of member' (text input), 'Date of Birth' (date picker), 'Relationship' (dropdown), 'Blood Type' (dropdown), 'Sex' (radio buttons for Female and Male), and 'Allergies' (text area). At the bottom are 'Cancel' and 'Add' buttons. A bottom navigation bar with icons for Home, Vital Signs, Documents, and Profile is visible.

11.2.9 A_Family_M_Successful

This screenshot shows the 'Add Family Members' form in dark theme with a dark blue overlay that reads 'Adding Successfully' with a checkmark icon. The form fields and bottom navigation bar are visible behind the overlay.

11.2.10 Add Pets

The 'Add Pets' form in light theme includes the following fields: 'Pet Name' (text input), 'Species' (dropdown), 'Date of Birth' (date picker), 'Breed' (text input), 'Weight (KG)' (text input), 'Color' (text input), and 'Sex' (radio buttons for Female and Male). At the bottom are 'Cancel' and 'Add' buttons. A bottom navigation bar with icons for Home, Vital Signs, Documents, and Profile is visible.

11.2.11 A_Family_M_Successful

This screenshot shows the 'Add Pets' form in dark theme with a dark blue overlay that reads 'Adding Successfully' with a checkmark icon. The form fields and bottom navigation bar are visible behind the overlay.

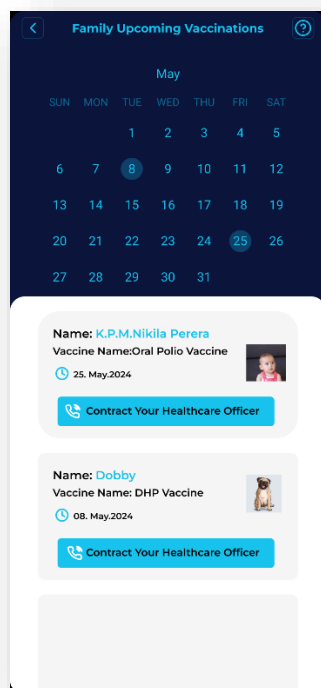
11.2.12 View Family Member

The 'View Family Members' screen in dark theme displays the 'Family Registration Number: VC1001' at the top. Below are three member cards, each with a profile picture, name, date of birth, relationship, and a 'Check Records' button with a right arrow. The members listed are: K.P.M.Perera (Father, DOB: 05-10-1988), W.S.Kalani Kariyawasam (Mother, DOB: 04-02-1992), and K.P.M.Nikila Perera (Son, DOB: 02-09-2019). A bottom navigation bar is at the bottom.

11.2.13 View Family Pets

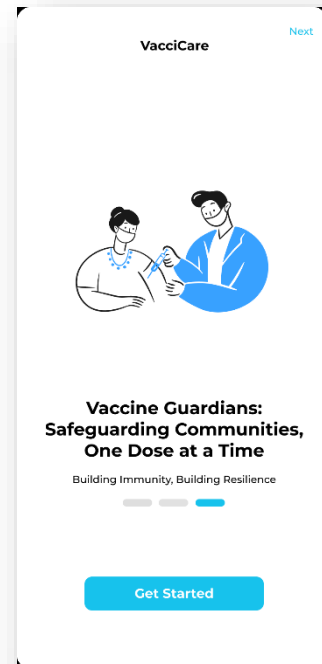
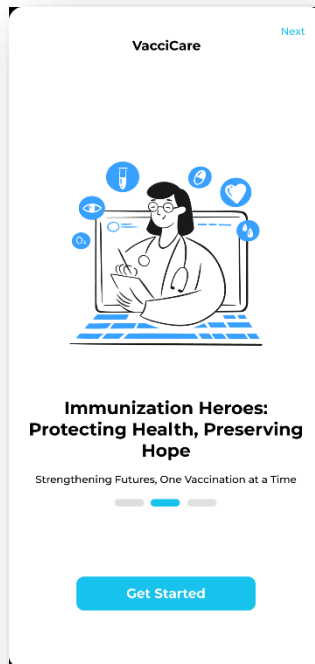
The 'View Family Pets' screen in light theme displays the 'Family Registration Number: VC1001' at the top. Below is a single pet card with a profile picture, name (Dobby), date of birth (01-12-2021), species (Dog), breed (Pug), color (Brown), and a 'Check Records' button with a right arrow. A bottom navigation bar is at the bottom.

11.2.14 Family Upcoming Vaccinations



11.3 Login as Healthcare

11.3.1 Onboarding pages



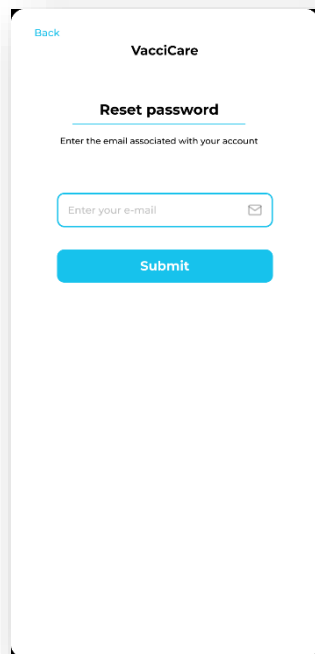
11.3.2 Login

This is the login screen for healthcare users. It has a header with 'VacciCare' and 'Login as Healthcare'. Below the header are Google and Apple login options, separated by an 'OR' divider. There are input fields for 'E-mail' and 'Password', each with a placeholder and an icon. A 'Remember me' checkbox is present. A blue 'Log in' button is at the bottom. Below the button, there is a link for 'Did you forget your password? Reset Password' and a link to 'Create Account'.

11.3.3 SignUp

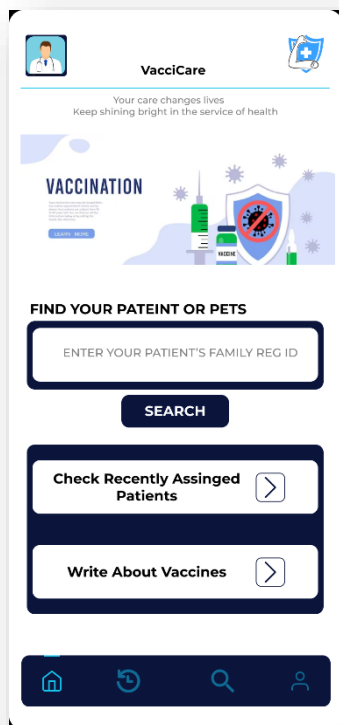
This is the sign-up screen for healthcare users. It has a header with 'VacciCare' and 'Sign-up as Healthcare'. Below the header is a 'Back' link. There are input fields for 'Name', 'S.L.M.C Regd No', 'E-mail', 'Phone number', 'Password', and 'Confirm Password'. Each field has a placeholder and an icon. A blue 'Sign up' button is at the bottom.

11.3.4 Password Reset page



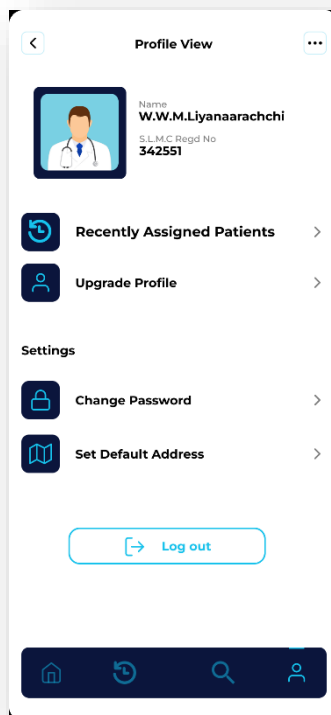
The screenshot shows the 'Reset password' page in the VacciCare app. At the top, there is a 'Back' link. Below the app name 'VacciCare', the title 'Reset password' is underlined. A subtitle reads 'Enter the email associated with your account'. There is a text input field with the placeholder 'Enter your e-mail' and an email icon. Below the input field is a blue 'Submit' button.

11.3.5 Home of Heathcare



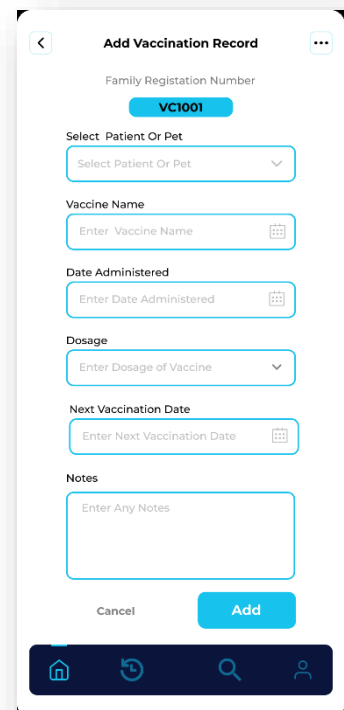
The screenshot shows the 'Home of Healthcare' page in the VacciCare app. At the top, there is a 'Back' link, the app name 'VacciCare', and a profile icon. Below the app name, a tagline reads 'Your care changes lives Keep shining bright in the service of health'. There is a 'VACCINATION' section with a graphic of a vaccine bottle and a shield. Below this is a 'FIND YOUR PATIENT OR PETS' section with a text input field 'ENTER YOUR PATIENT'S FAMILY REG ID' and a blue 'SEARCH' button. At the bottom, there are two buttons: 'Check Recently Assigned Patients' and 'Write About Vaccines', both with right-pointing arrows. A bottom navigation bar contains icons for home, search, and profile.

11.3.6 Profile View



The screenshot shows the 'Profile View' page in the VacciCare app. At the top, there is a 'Back' link, the title 'Profile View', and a menu icon. Below the title, there is a profile card with a doctor's icon, the name 'W.W.M.Liyanaarachchi', and the S.L.M.C Regd No '342551'. Below the profile card, there are two sections: 'Recently Assigned Patients' and 'Upgrade Profile', both with right-pointing arrows. Below these is a 'Settings' section with two options: 'Change Password' and 'Set Default Address', both with right-pointing arrows. At the bottom, there is a blue button with a right-pointing arrow and the text 'Log out'. A bottom navigation bar contains icons for home, search, and profile.

11.3.7 Add Vaccination Record



The screenshot shows the 'Add Vaccination Record' page in the VacciCare app. At the top, there is a 'Back' link, the title 'Add Vaccination Record', and a menu icon. Below the title, there is a 'Family Registration Number' section with a blue button 'VC1001'. Below this is a 'Select Patient Or Pet' section with a dropdown menu. Below the dropdown is a 'Vaccine Name' section with a text input field and a calendar icon. Below the input field is a 'Date Administered' section with a text input field and a calendar icon. Below the input field is a 'Dosage' section with a dropdown menu. Below the dropdown is a 'Next Vaccination Date' section with a text input field and a calendar icon. Below the input field is a 'Notes' section with a text input field. At the bottom, there are two buttons: 'Cancel' and 'Add'. A bottom navigation bar contains icons for home, search, and profile.

11.3.8 Adding Successful

The screenshot shows the 'Add Vaccination Record' screen. At the top, the title is 'Add Vaccination Record'. Below it, there's a 'Family Registration Number' field with the value 'VC1001'. A dropdown menu 'Select Patient Or Pet' is open, showing 'Select Patient Or Pet'. Below that, there's a 'Vaccine Name' field with the value 'Enter Vaccine Name'. A modal dialog is displayed in the center with the text 'Adding Successfully' and a checkmark icon. Below the modal, there's a 'Next Vaccination Date' field with the value 'Enter Next Vaccination Date'. At the bottom, there's a 'Notes' field with the value 'Enter Any Notes'. The bottom navigation bar has icons for Home, Refresh, Search, and Profile.

11.3.9 Recently Assigned Patients

The screenshot shows the 'Recently Assigned Patients' screen. It displays a list of patients with their IDs and names. The bottom navigation bar has icons for Home, Refresh, Search, and Profile.

ID	Name
VC1001	K.P.M.Nikila Perera
VC1033	S.V.M.Samaraweera
VC1001	Dobby
VC1021	P.V.Kalana Sithumina
VC1018	Kitty
VC1011	Daham Senarathna
VC1041	W.P.Sisira Kumara

11.3.10 View Details

The screenshot shows the 'Recently Assigned Patients' screen. A modal dialog is displayed in the center with the following details:

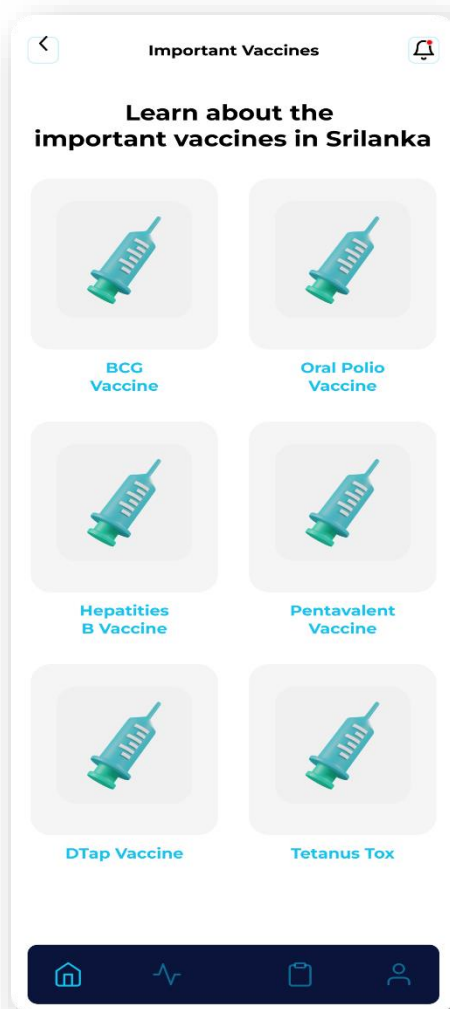
Name	Vaccine Name	Date
K.P.M.Nikila Perera	Oral Polio Vaccine	25.08.2022

11.3.11 View Details

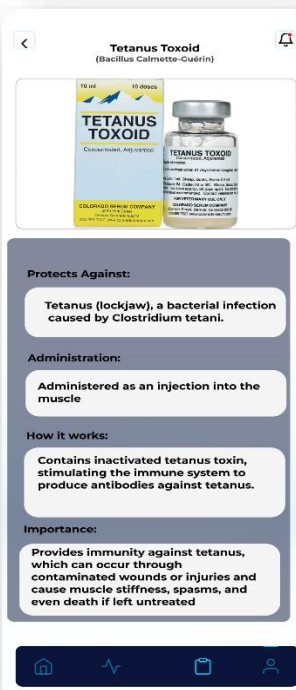
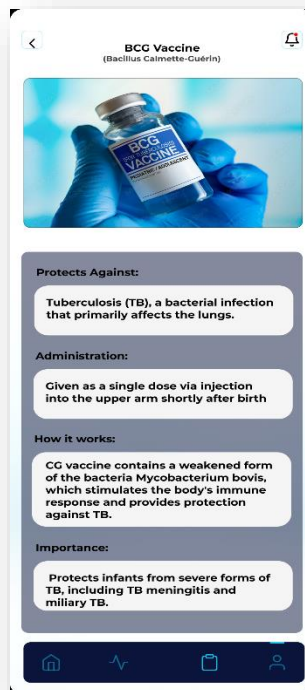
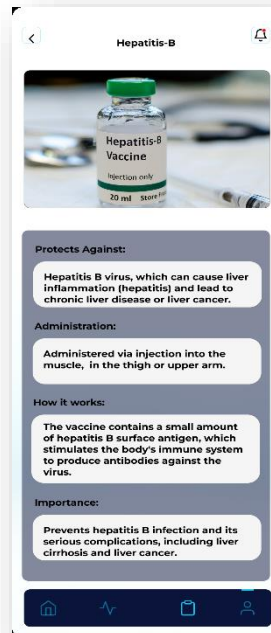
The screenshot shows the 'Recently Assigned Patients' screen. A modal dialog is displayed in the center with the following details:

Name	Vaccine Name	Date
Dobby	DHP Vaccine	08.05.2023

More Information About Vaccine



11.4.1 About Vaccines Pages



Figma Link

<https://www.figma.com/file/xuSEa8gqXCjLNqBGVWvOxa/VacciCare-App-Project?type=design&node-id=0%3A1&mode=design&t=FDbxPoXkjAeneUP8-1>