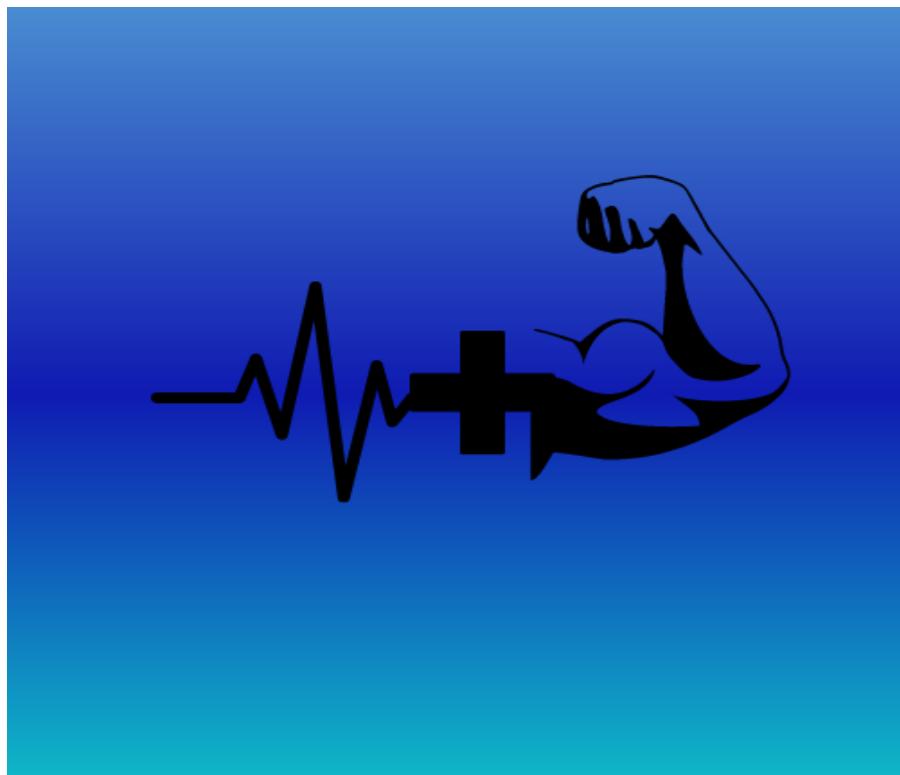




# FitCare App Specifications



## FitCare App

Name : Ria Kalachetty

Wireframe and prototype Figma link :

<https://www.figma.com/file/crLkCceopBpm9INh9gUjW5/FitCareWireFrames?node-id=243%3A424&t=jMJRkpsAyd3Tvtm8-1>

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## Introduction :

### **Purpose :**

FitCare is a mobile application that logs your health data and makes sensible recommendations based on the data. Regardless of age, this application focuses on healthcare and fitness-related aspects. By keeping track of all vital information, scheduling



appointments, and having all features connected to healthcare and fitness in one app, this app aids users in improving their health and fitness.

### **Target Audience :**

This app targets all users, irrespective of their age. Also, it is advantageous for the doctor to have access to the patient's history on the app or even to track the user's location when pressing the emergency button in case of an emergency.

### **Convenience :**

Several elements of the app are advantageous to fitness-related factors as well. The app keeps track of all the important data about your body, including your food, protein intake, and other factors. It keeps track of all this data, makes dietary suggestions that are appropriate for you, and offers a few activities or challenges you should take on to reach your objective. The nutritionist also gains from this because they may examine your daily dietary routine and make recommendations accordingly.

Several individuals can use this app to their advantage in various circumstances. Due to the fact that this application analyses real-time data. It formulates suggestions based on your regular activities. Due to its user-centric design, which collects data from users of all ages, it may be utilised by everyone, from young toddlers to elderly individuals. When it comes to tracking and retrieving information about your health, this app is incredibly useful.

The users benefit from this because the app has a function that allows them to upload the important documents they need to access at any time, so they don't have to worry about losing their prescriptions or other healthcare-related paperwork. The patient won't have to constantly browse for documents thanks to the fact that all relevant documents are in one app.

# **Users**

### **User roles and rights :**

Users can share the data that has been analysed with their doctor. To acquire accurate results and keep up a healthy lifestyle, users are expected to update health-related data. Users play a significant part in this situation since they may have a variety of jobs. But, doctors also benefit from this app because it allows them to monitor patient data and make appropriate



medicine recommendations. Users can log their data and perform new workouts suggested by the app, not just from a medical standpoint but also from a fitness perspective.

### **User Perspective :**

From the user's perspective, this app contains every function pertaining to fitness and wellness. This app includes a lot of useful features, such as the search function, which can be used to look up information or search for a treatment. This function is crucial since in an emergency, the user might not have time to schedule an appointment and would instead choose to utilise the search function. This feature stands out from other search features because it includes a video that demonstrates what to do in the scenario, provides more information about what needs to be done right away, and also provides the phone number of the closest hospital to call for assistance. This feature's primary goal is to save lives in an emergency. The software is really helpful because it includes the option to upload all relevant health-related documents so that the user doesn't have to keep browsing, regardless of the environment. When looking at the app from different perspectives, it contains helpful features like the fitness challenge, which summarises how your body is performing and what has to be improved further.

### **User Convenience :**

In any circumstances, this app is highly useful for all users. This app features a function that allows you to share your data with the doctor, which speeds up analysis and improves the effectiveness of treatment. This software also has an emergency option that lets you dial the crucial helplines and tracks your location to send assistance right away. This is effective in another sense since it keeps track of all your health information, including your sleep, diet, food intake, steps count, and many others. The doctor might utilise this information to receive a quick overview of the patient's history in an emergency. This software is useful in a variety of ways. It is accessible from nearly anywhere and is useful when the user has to reach a hospital right away because it includes a built-in feature that enables calling and viewing the closest hospitals in the current radar.

## **Application Functionality**

### **Application Features :**

The app provides a number of helpful features, including :

1. **Search option :** This function is helpful since it enables the user to browse anything and provides an immediate answer with a video or webpage that contains the



necessary information, additionally recommending nearby hospitals if the situation worsens. To retrieve the data and return very quickly, this feature makes use of relevant API.

2. **Health Charts :** This graph is helpful since it displays the data's total logs and the analysis that was done using them. In weekly, monthly, and yearly analyses, the average is displayed. There are numerous methods to represent these charts. They aid in a better analysis and improvement of an individual's health and fitness. You may add these health features to your favourites list to display them on the home page.
3. **Maps :** Users can access the maps and browse hospitals using this function, or they can create filters to the searches and save it as their current radar to view the hospitals in the area. In order to make an appointment, the hospital's name and phone number are also shown on the map feature. The emergency panel is also connected to this feature, which displays nearby hospitals when an emergency occurs.
4. **Documents feature :** Users can upload relevant papers as a pdf file using this function, which is available under the profile settings. These documents include prescriptions, health insurance, and Covid certificates, among others, and they can be accessed both online and offline.
5. **Emergency feature :** When the emergency option is selected, the app maintains your live location and enables you to call crucial helplines and dispatch assistance immediately to the spot. In the event of an emergency, this function also identifies nearby hospitals on the radar, along with key contacts like family members.
6. **Appointment Organizer feature :** With the use of this function, users may book appointments or add events that include crucial information such as the hospital's name, address, appointment time, and physician. It contains a calendar view, which makes it convenient to see the timing and make plans appropriately, as well as the ability to filter so that it only displays appointments for a specific day.
7. **Fitness Challenge :** This feature is very useful and also offers data analysis and ideas for improvement. When tapped, an interactive human body image displays the data entered and a few constructive suggestions for improvement. Also, it offers the user the chance to challenge oneself and succeed by offering suggestions linked to the selected body part.

### **Serviceability :**

There are two ways to approach this matter. The first is from the perspective of the application, asking how it will react in the event of an error. When we look more closely at this, we realise that a few mistakes could happen when developing the application. Testing is



crucial to ensuring that the app has fewer problems, and it may wind up providing us with fresh ideas to put into practice. Since this app deals with real-time data, it has an extremely low mistake rate and can react quickly.

The clients/users' perspective, which is the second perspective, is equally crucial. Users of any age can operate this app easily and conveniently. In this context, serviceability suggests that the app must be very convenient for the user and that all features must be simple to use.

### **Product perspective :**

The app makes use of a variety of features that are useful to users. The app makes use of a database to store all the data, analyse it, and provide offline functionality. This application additionally offers a calendar view, web view, and map view so users may navigate the app easily. Additionally, it makes various API calls to speed up response time and use services like the GPS for tracking. This can be used to track data in smartwatches and other devices in terms of the application environment.

### **Additional Features :**

If there is time, it is possible to develop a few additional features that are crucial to the app and its users, such as a tool for finding alternatives to prescription medications. The purpose of the medication reminder is to prevent users from forgetting to take their medications on time or from taking the same medication more than once under the mistaken belief that they have already taken it. The other feature, the medicine prescription alternatives search tool, enables you to find substitute tablets based on the ingredients of the prescribed tablet. Having the option to select their meal depending on their diet and the areas where they are deficient would be advantageous for people who care about their fitness and want to improve their eating habits.

## **Innovation via Mobile Technology**

### **App Functionality & Convenience :**

Since this app is intended for users of all ages, having a font size slider would be a useful feature and excellent UX practice. Also, adding a voice assist mode would be beneficial for people with vision impairments or who need it in an emergency. It is crucial to include a number of features that adhere to the usability requirements. Dark mode is also supported by this app. To make things easier for users who are colour blind, the app also offers a colour



blind palette theme. The app makes use of touch gestures to make it interactive and provides a user manual upon first use.

### **Functional Requirements :**

There are numerous features in this app that call for numerous different technologies. First of all, while the app needs internet access to many features, not all features require it. For example, documents submitted and data saved can be accessed offline. This software has been created with the user's convenience in mind. Some additional elements of the app are in compliance with the usability standards, including the ability to change the text size, the use of a colorblind palette, the placement of all relevant features, etc. Via the export as PDF option, the data can be downloaded in PDF format. Another beneficial feature of the app is the ability to bookmark specific browsed searches so that the user can review them later. Other functional requirements include a phone which supports GPS.

## **iOS Technology**

### **Implementation Constraints :**

The app uses a lot of browsing and demands a quick response, therefore this necessitates requests to the API, which speeds up the response. These functions are mostly used to display data visualisation in the charts page, maps feature, appointment organiser tool, and quick search feature.

In order to keep crucial information like the health data gathered, the user's personal information, and the documents feature that can be read offline, this app also needs a database. The app also has a map feature that makes use of the map view, and an appointment scheduling feature that makes use of the calendar view. Also, the app offers quick charts to display the data analysis.

### **Availability :**

Functional App Requirements - API to be used with the feature which utilises it.

API	Feature	Utilisation
-----	---------	-------------



MedAPI <a href="https://rapidapi.com/metraapi-default/api/medapi-2/">https://rapidapi.com/metraapi-default/api/medapi-2/</a>	This feature will be utilised in the fitness challenge feature to allow the user know their health status according to the collected data.	This API will be mainly used to get an analysis of the data collected as the API already has a function to calculate all the required medical aspects.
Drug info and price history <a href="https://rapidapi.com/rnelsonain/api/drug-info-and-price-history/">https://rapidapi.com/rnelsonain/api/drug-info-and-price-history/</a> And fda_ndc_directory <a href="https://rapidapi.com/borbert-ZF5G7C2En/api/fda_ndc_directory/">https://rapidapi.com/borbert-ZF5G7C2En/api/fda_ndc_directory/</a>	This feature will be utilised in the prescription in the documents page to allow users to get alternatives if the medication is not available and also gives the price history as additional information.	The API is mainly used to get alternative medication and to know the price history.
Endless Medical API <a href="https://rapidapi.com/lukaszkiljanek/api/endlessmedicalapi/">https://rapidapi.com/lukaszkiljanek/api/endlessmedicalapi/</a> (future)	This feature will be utilised in the quick search to get remedies and to know more about the current symptoms.	The API is mainly used to know more about the symptoms and analyse what is happening.
Medical name and details <a href="https://rapidapi.com/dkr73/api/medicine-name-and-details/">https://rapidapi.com/dkr73/api/medicine-name-and-details/</a>	This feature will be utilised in the quick search along with the other API to get to know more about the health status and medication of the user.	The API is mainly used to know more about the medicine names and details about it.
Body Calculator <a href="https://rapidapi.com/Futurenovation/api/body-calculator/">https://rapidapi.com/Futurenovation/api/body-calculator/</a> (future)	This feature will be utilised in the fitness challenge feature to know the fitness level of the user and recommend challenges based upon that.	The API analyses the data collected and gives the fitness level.
Firebase database	This feature will be utilised in the appointment organiser feature, documents and the data collection.	Stores the data on firebase database.
Cloud healthcare API <a href="https://cloud.google.com/healthcare-api">https://cloud.google.com/healthcare-api</a> (This might be used in the future)	This feature might be used to exchange and get information via the cloud to get from the hospital. As our app allows sharing data to the doctor.	Exchange health data over the cloud from or to the hospital.
Google Maps API	This feature will be utilised	The API is mainly used for



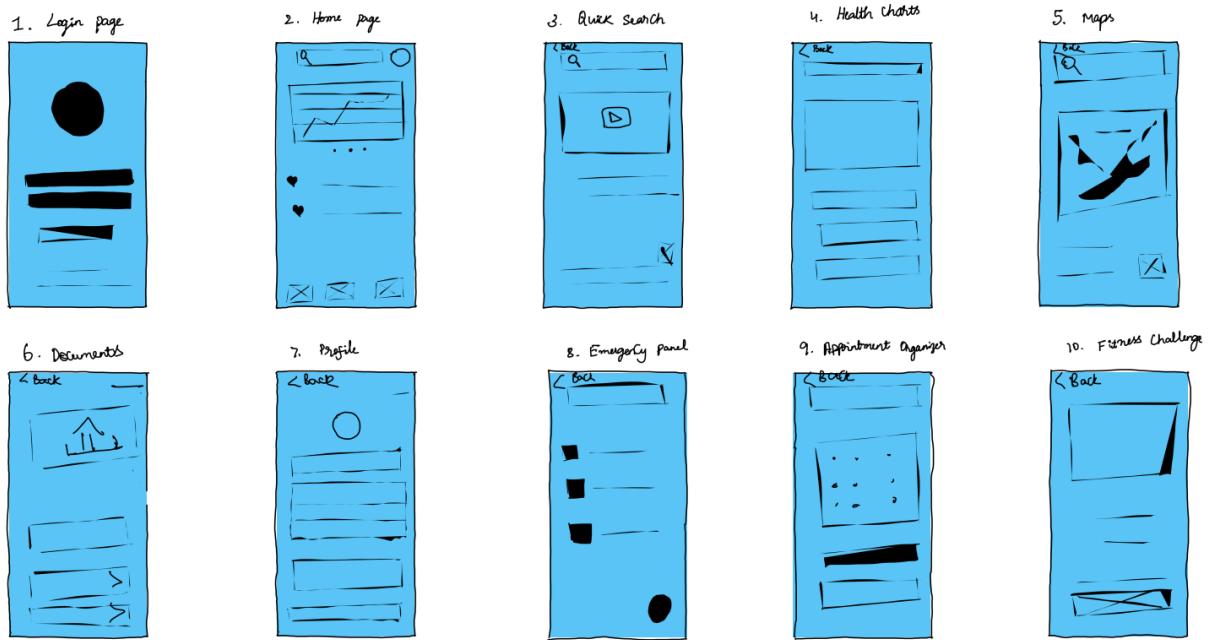
<a href="https://developers.google.com/maps/documentation/ios-sdk">https://developers.google.com/maps/documentation/ios-sdk</a>	in the maps and emergency feature which can access the current location.	location services.
Recipe search and diet <a href="https://rapidapi.com/edamam/api/recipe-search-and-diet/">https://rapidapi.com/edamam/api/recipe-search-and-diet/</a>	This feature will be utilised in the fitness challenge to give the user an overview of their food intake.	The API is mainly used to know more about the food intake and its other aspects.
API might be used in the future <a href="https://rapidapi.com/edamam/api/edamam-nutrition-analysis/">https://rapidapi.com/edamam/api/edamam-nutrition-analysis/</a> Edaman nutrition analysis (future)	For nutrition information.	Provides analysis on nutrition.
API might be used in the future <a href="https://rapidapi.com/priaid/api/symptom-checker/">https://rapidapi.com/priaid/api/symptom-checker/</a> Symptom checker (future)	For symptom checker.	Provides info about the symptoms.
API might be used in the future <a href="https://rapidapi.com/gabamml/api/health/">https://rapidapi.com/gabamml/api/health/</a> health (future)	For BMI calculator	Provides many features and calculates BMI.

# User Interface Design and Navigation

## Sketch :



## Screenshot 1



This is the FitCare App's original concept art. It comprises a Login page where, if the user already has an account, they are asked to login otherwise, they are asked to register or create an account. It comprises a home page with the key functionalities and a rapid search functionality that mainly focuses on returning results to a specific query supplied by the user. Additionally, it contains health charts that display data analysis that has been visualised. Also, it offers a map feature that enables users to look up hospitals in the area.

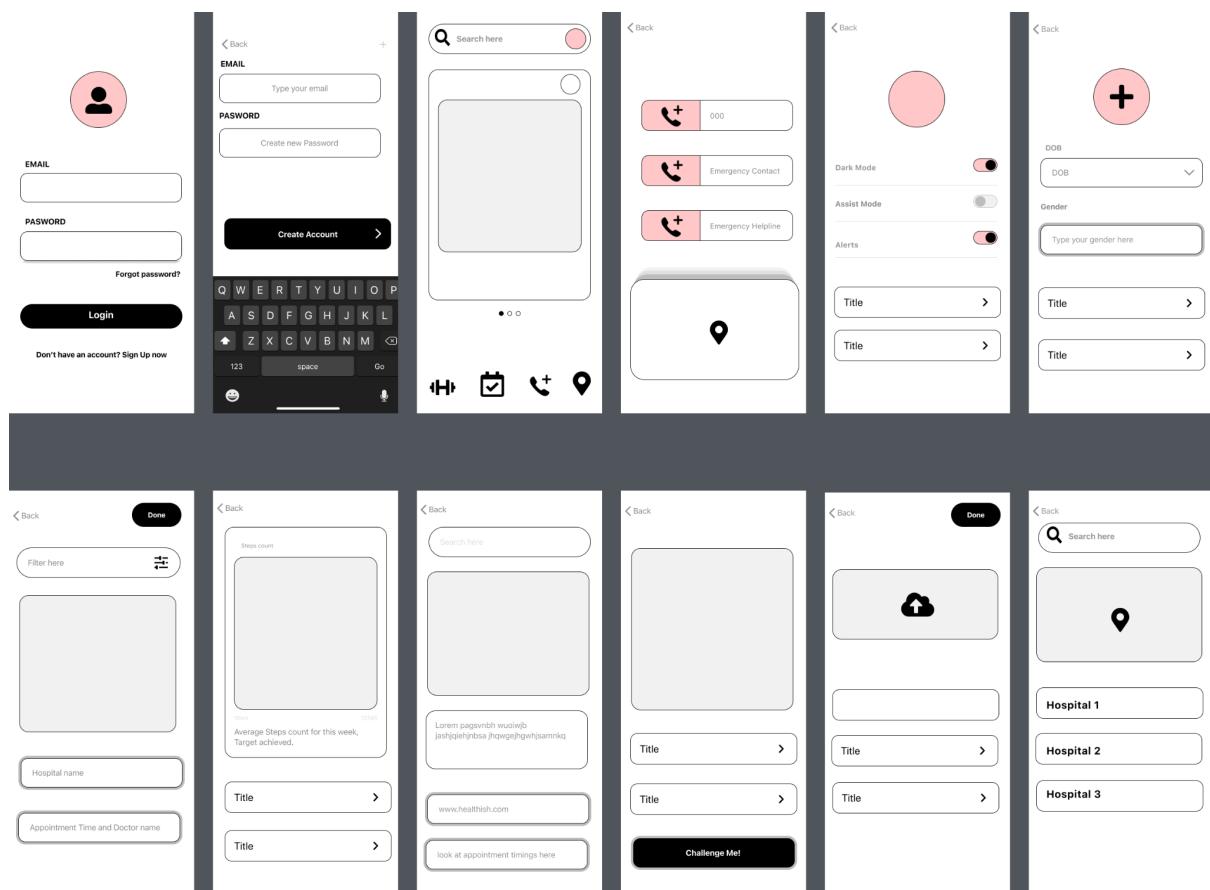
It includes an emergency panel with information on the crucial emergency hotlines to call in an emergency and access to the user's location so that assistance may be provided immediately. It includes simple features like profile settings and an appointment organiser so users can see their schedules and make plans appropriately. Also, it offers a document feature that lets users submit crucial health-related information that can be viewed without an internet connection, saving time on surfing.

## Wireframe :

<https://www.figma.com/file/crLkCceopBpm9INh9gUjW5/FitCareWireFrames?node-id=243%3A424&t=jMJRkpsAyd3Tvtm8-1>



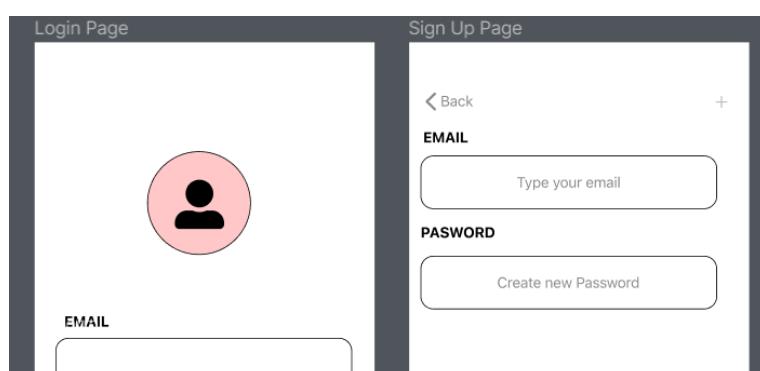
## Screenshot 2



The above screenshot 2 shows the FitCare wireframes which consists of 12 screens displaying the features of the app.

Below screenshots explain every screen and their features.

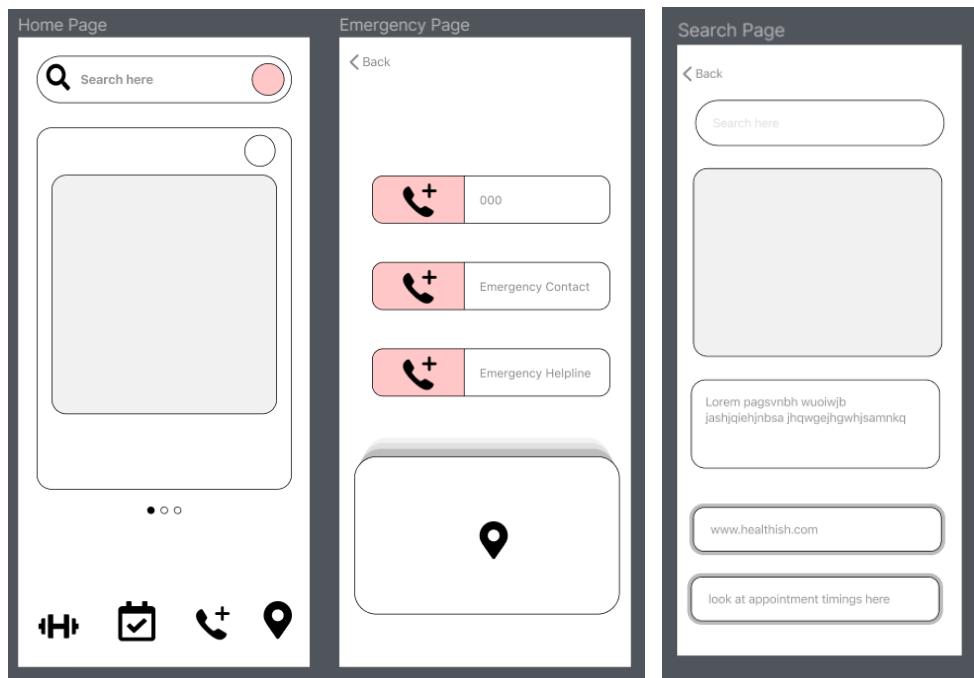
## Screenshot 3





The above screenshot 3 displays the Login and sign up page for the FitCare App. This information is collected to make sure the user can access the features of the app.

#### Screenshot 4

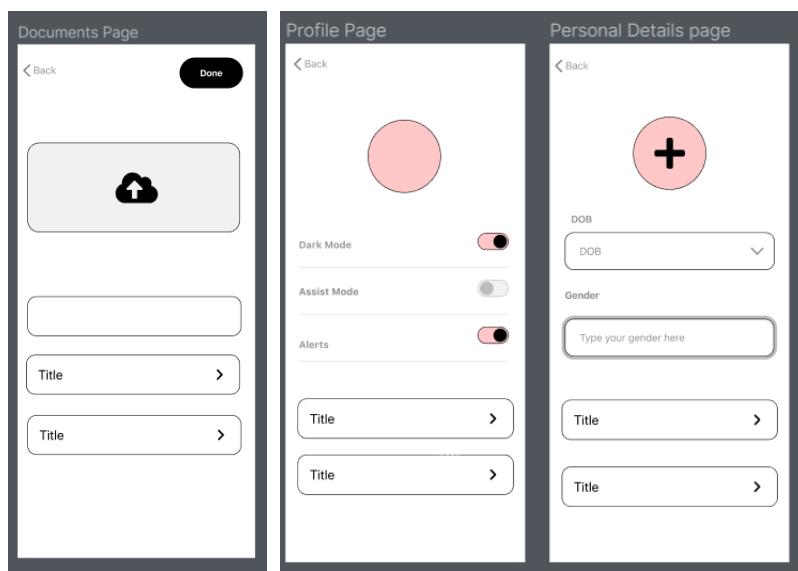


The above screenshot 4 shows the Home page, Emergency page and the search page. The home page has the main features like the quick search feature which responds with a remedy for the user's query, it also has a swift charts feature that displays the visualised data and analysis according to the data collected. The home page also has features like the fitness challenge, appointment organiser, emergency panel and maps feature.



1. **Emergency Page** - this feature has all the important emergency helplines contacts and also accesses the location of the user to send support right away.
2. **Search Page** - this feature allows users to search for remedies and consists of video tutorials on how to deal with the situation , has a webview displaying more information on it, gives quick links to helpful websites and allows the user to have a look at the appointments schedule.

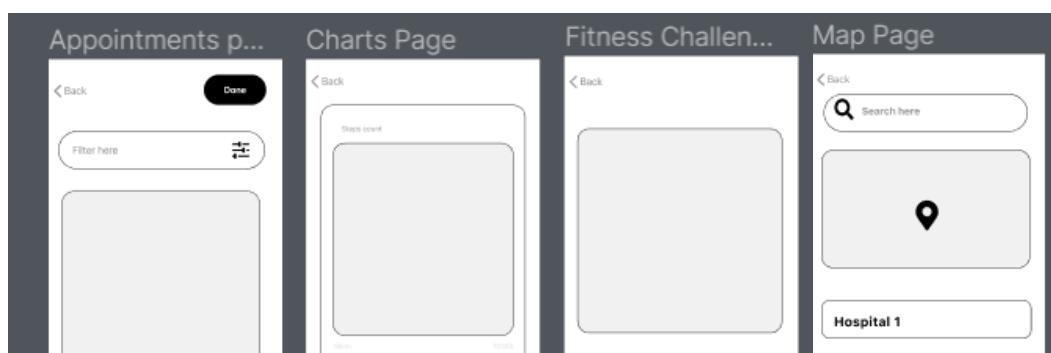
Screenshot 5



The above screenshot 5 displays the profile settings features which consists of Profile page, Personal details page and documents page.

1. **Profile page** - this feature allows the user to change the settings of the app and has additional features like the personal details page and documents page.
2. **Personal Details Page** - Prompts the user to input their personal and health data to further analyse their health status, it has 2 additional features like medications and data. Medication - Intends to know your daily medications and analyse the symptoms and further suggest alternatives. Data - collects all health related data to analyse the user's health.
3. **Documents page** - Allows users to drag and drop files which will be stored in the database which later can be accessed when the user is offline. And this feature is useful as it saves time when the user is browsing a health related file.

Screenshot 6





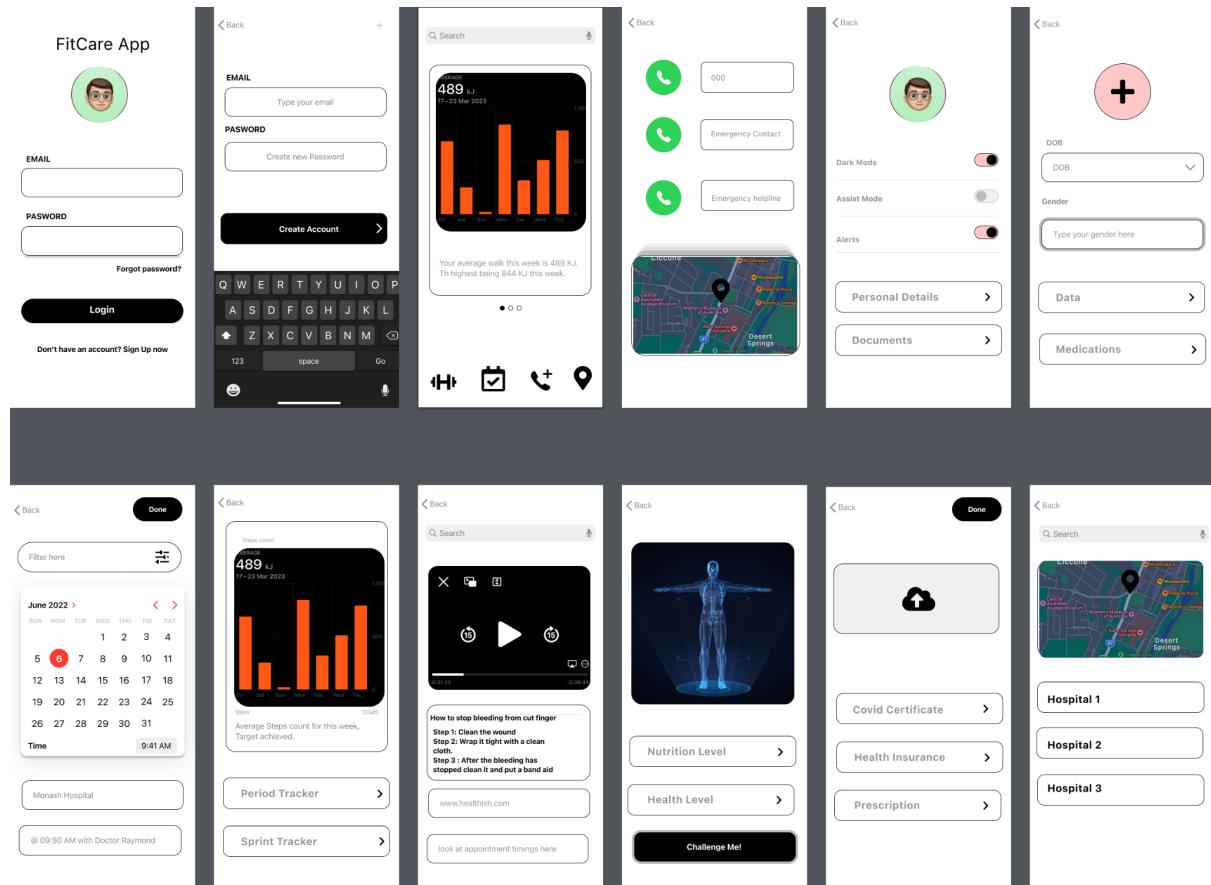
The above screenshot 6 displays the additional main features present on the home page, which includes Fitness challenge, appointment organiser, charts page and maps page.

1. **Fitness challenge** - this feature allows the user to interact with the human anatomy and gives the data analysis according to the data collected. For instance, if the user taps on the arms it will show the data analysis if entered which might be the measurements and the maximum weight you can lift and it also suggests food intake, exercises and many other aspects. This feature has 3 additional features : i. Nutrition level- which shows the health status but these features may vary according to the users filters and data. ii. The health level - which shows all the analysed data related to the selected part the user wants to investigate and gives suggestions of exercise and food intake accordingly. iii. Challenge me - which motivates users to follow a dedicated plan throughout the course.
2. **Appointment page** - this feature allows users to have an overview of their scheduled appointments by filtering the days and it also has a calendar view which shows when the appointment is. It also displays the hospital/ clinic name and the appointment time and appointment with(doctor).
3. **Charts Page** - this feature displays the analysed data in the form of visualisations and has many other similar charts according to the collected data. It shows the other 2 most recently opened charts to have a look at the visualisation and analysis, in this case - period tracker and sprint tracker.
4. **Map Page** - this feature allows users to browse hospital locations in the radar and suggests 3 hospitals nearest to the location. The recent search locations will be saved to make it more convenient for the user.

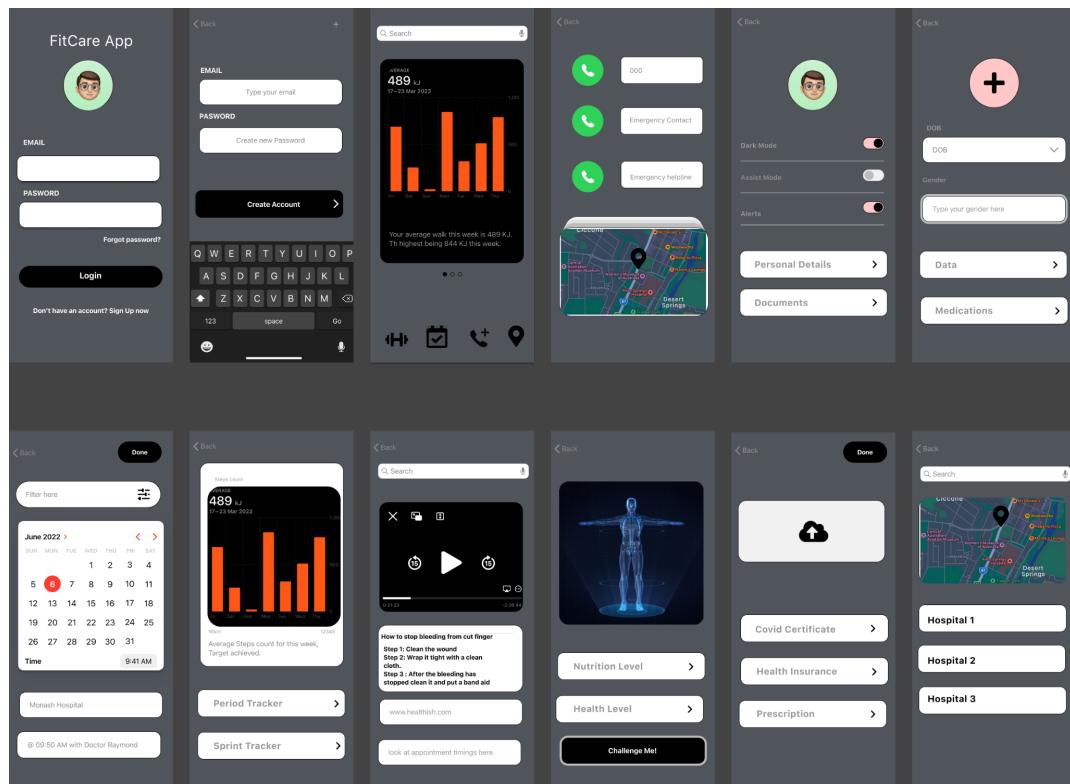
## **Prototypes :**



## Screenshot 7



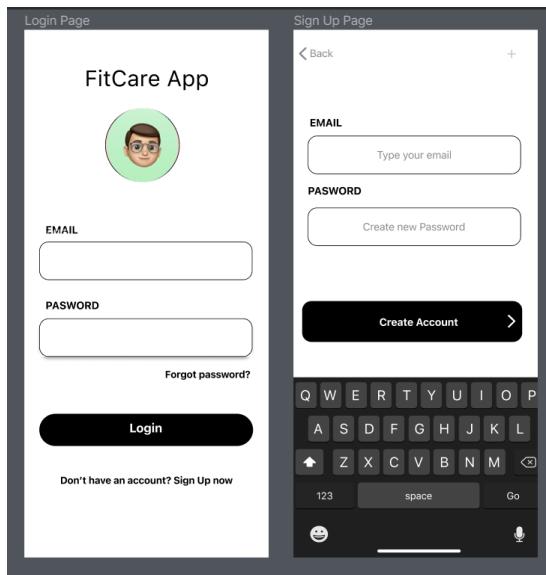
The above screenshot 7 displays the prototype of the FitCare app in light mode.



Screenshot 8

The above screenshot 8 displays the FitCare app in dark mode.

Screenshot 9

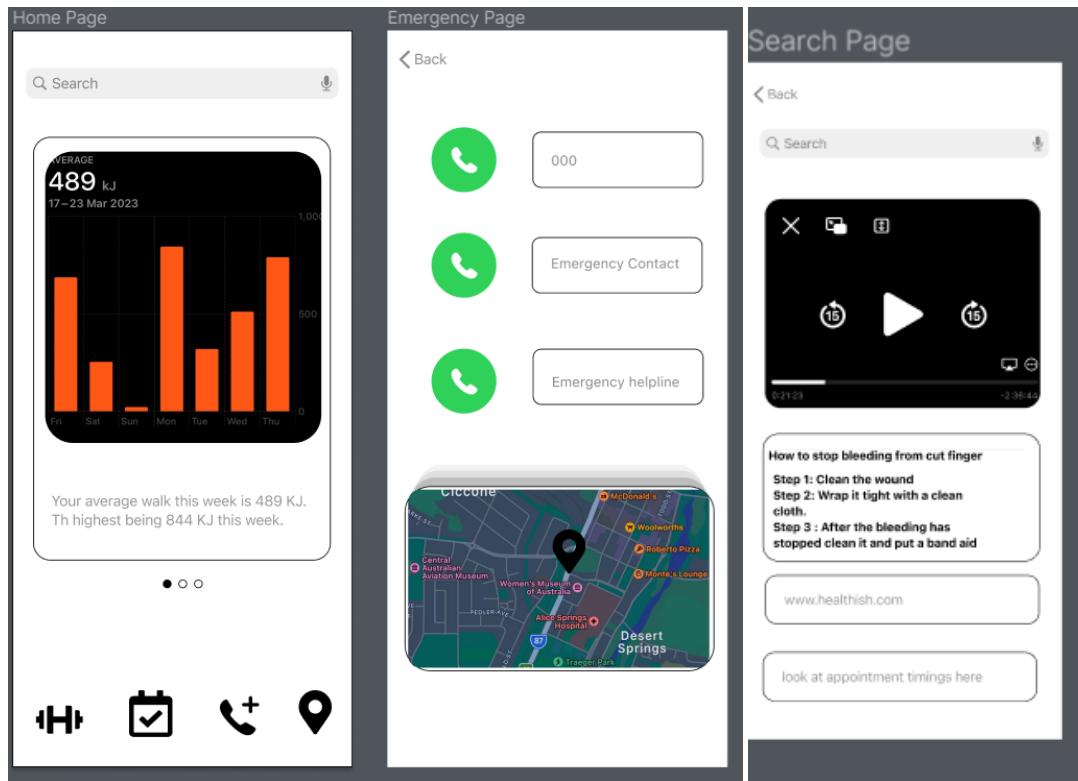


1. **The login page** - the basic app feature which prompts the user to input the details to make sure they can access the app features.
2. **The sign up page** - if the user doesn't have an account already, they will be prompted to sign up to use the app and these details need to be collected to make sure the app is not misused



and is used by a human for right purpose, as crucial data such as health data is stored and shared with the doctor.

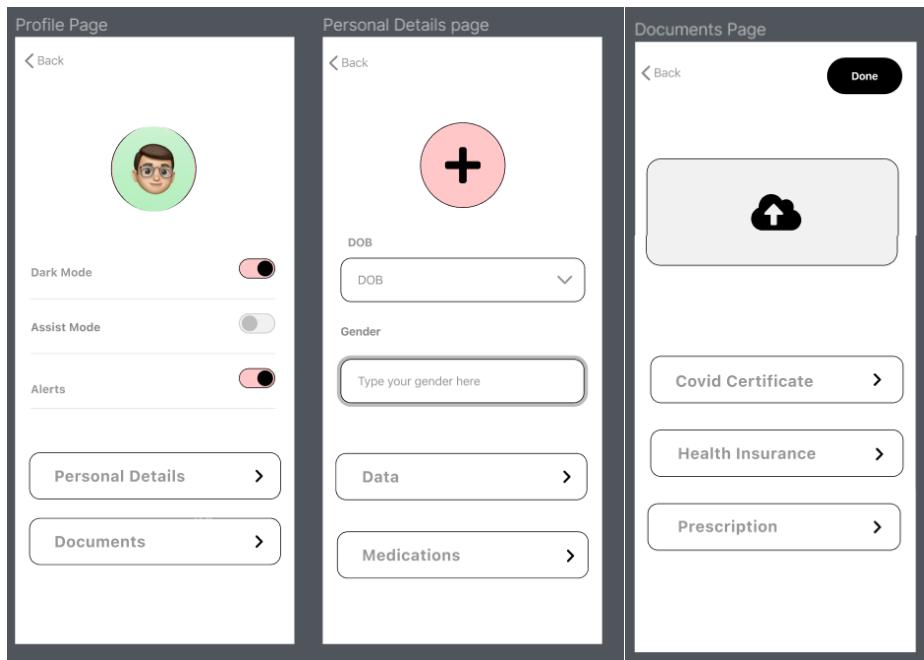
Screenshot 10



1. **Home Page** - it utilises several API calls as mentioned in the above API section, and mostly has all important features in an accessible manner. The data collected will be stored in the firebase database as realtime data is collected, and is stored in json objects. The data collection includes : user's age, gender, height, weight, medication, all health related test results, blood group, and other data that would usually consist in a medical report as these data can be shared with the doctor. Other data collection includes : health related documents which the user uploads to the app and later is saved in the database so that it can be accessed while offline.
2. **Emergency Page** - utilises location services as the location of the user is tracked in case of emergency to send help right away to the user current location.
3. **Search Page** - which has API calls to get remedies as response to the users query and also has the webview which gives more information in regards to the search.

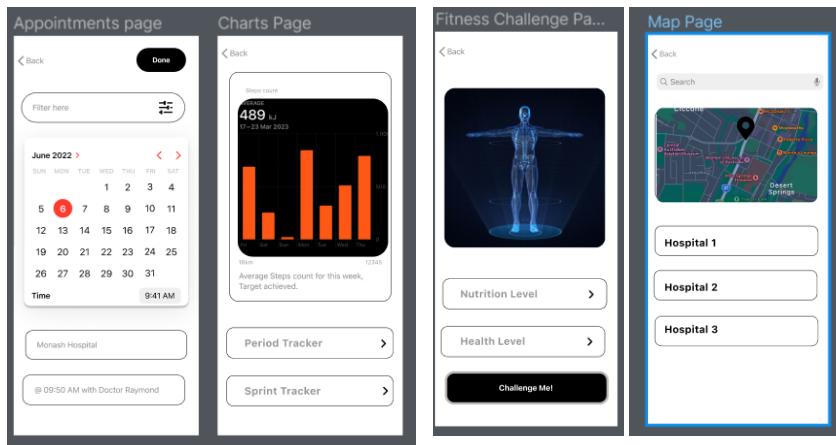


## Screenshot 11



The above screenshot 10 includes a profile settings feature which collects users details and also the user may upload documents which are stored in the database and can be accessed offline.

## Screenshot 12



The above screenshot 11 displays the other important features.

**Note : Please refer to the figma link to see more comments on the features**

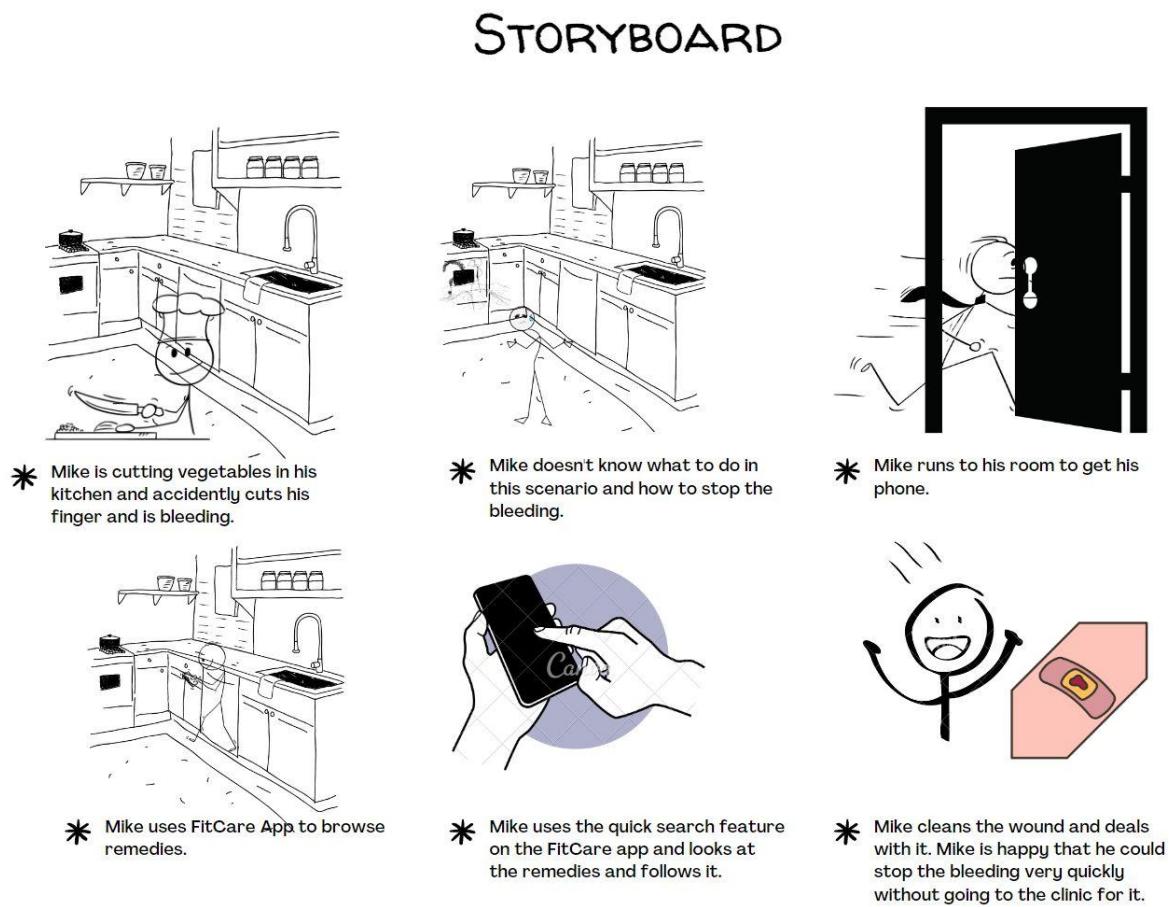
<https://www.figma.com/file/crLkCceopBpm9INh9gUjW5/FitCareWireFrames?node-id=243%3A424&t=jMJRkpsAyd3Tvtm8-1>



## Storyboard :

### i. User Storyboard -

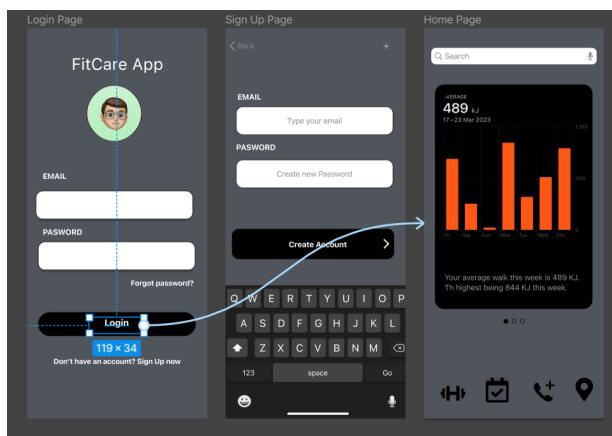
Screenshot 13



In the above screenshot 13 it shows that mike is a FitCare App user. And explains how the app is useful for Mike in his scenario.

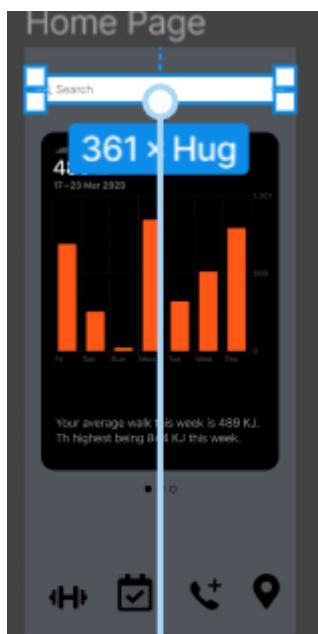
App Storyboard - Shows the transition between screens

Screenshot 14





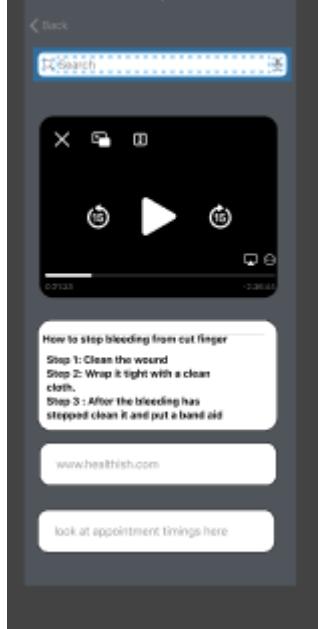
Screenshot 15



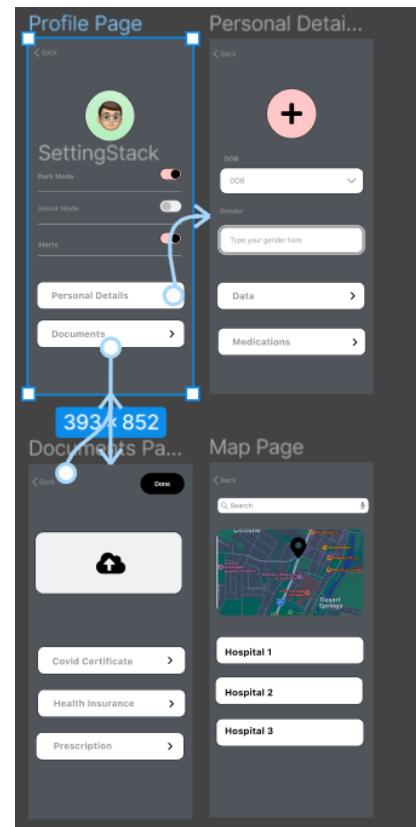
Screenshot 16



Search Page

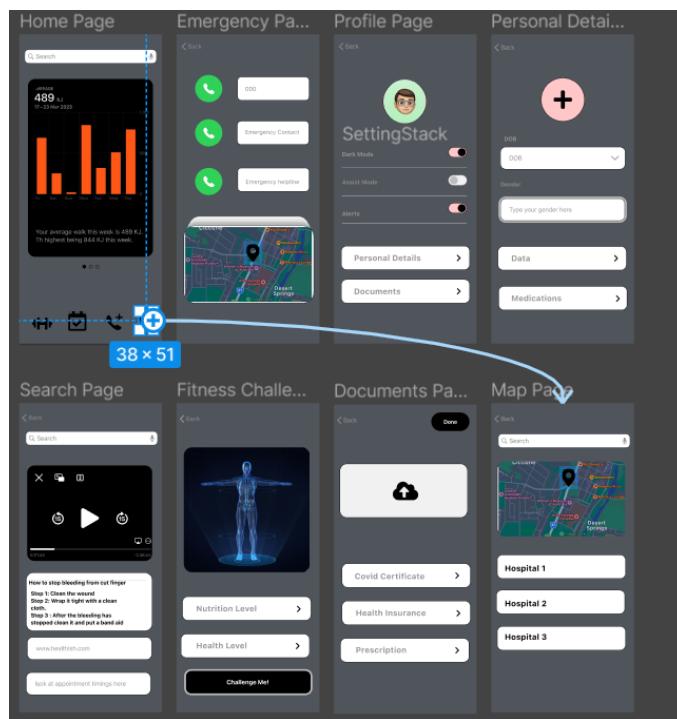


Screenshot 17

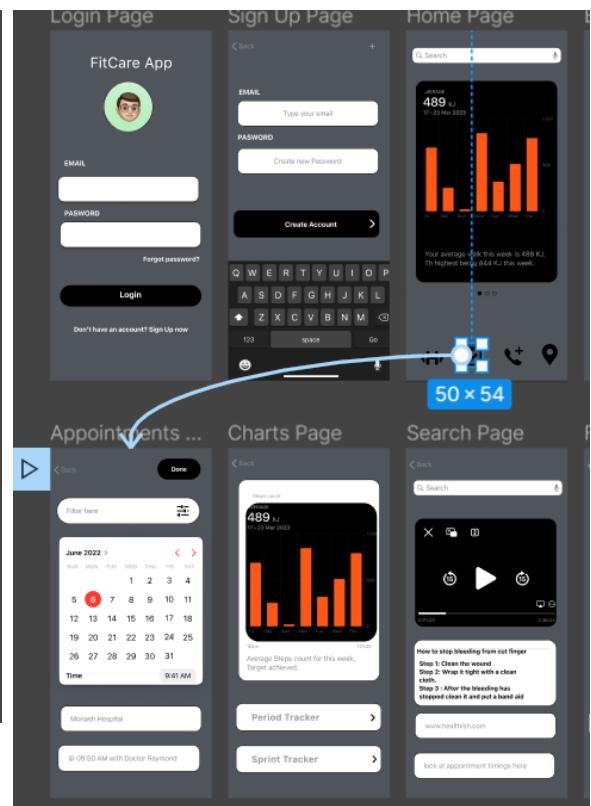




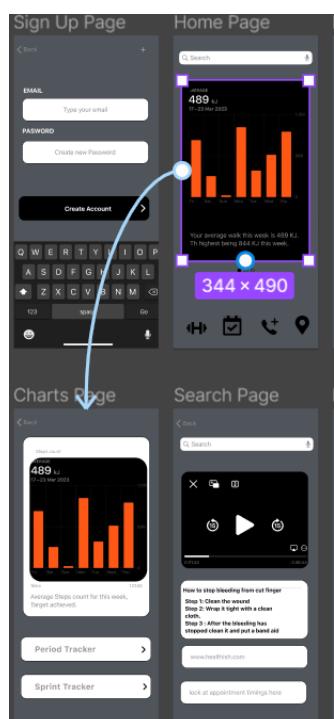
Screenshot 18



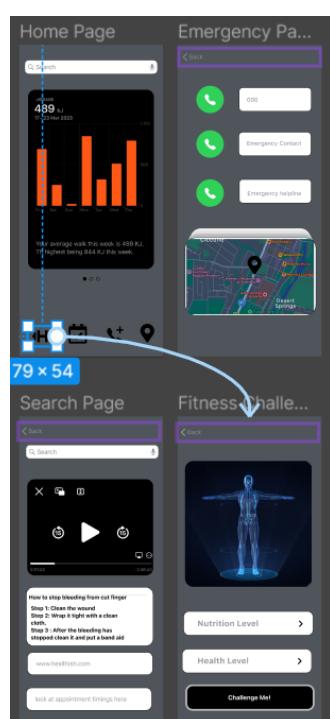
Screenshot 19



Screenshot 20



Screenshot 21

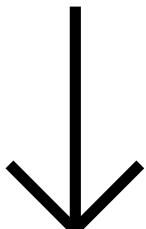




# Scope and limitation

## Priority : (MVP)

Priority	Feature
1	Search feature - Utilises API calls and is very useful as it gives remedies with tutorials and gives info about it in the webview.
2	Emergency feature - Utilises Phone call(might require deep linking to access the phone) and maps feature to get access to the location
3	Maps feature - Utilises the google maps platform API call
4	Fitness feature - Utilises several API calls and an interactive human anatomy
5	Charts feature - Utilises swift charts
6	Documents feature - Utilises databases
7	Appointment organiser feature - Utilises databases and calendar view as well as filter
(Future) 8	Image processing - Which might use Machine learning models to analyse data or just an API call, this feature mainly allows users to upload a picture of their wound and gives more remedies and info about it.
(Future) 9	Other trackable features - Uses swift charts, other trackable features like : sleep tracker, Medication tracker etc
(Future) 10	Bookmarks feature - This is useful as the user can bookmark the searches and view it later



The priority decreases as we go down.



Features 1 to 4 are in the highest priority and need to be completed.

The technologies that i need to learn in order to build this app would be :

1. API connection and working
2. Database connection
3. Maps GPS working

## Project Timeline

Deadline	Task Allocation	Duration
Week 6	Start implementing the high fidelity prototype with all additional features and transitions. Keep all API's ready to use.	4 days
Week 7	Start implementing the high fidelity prototype on xcode and implement at least 1 high priority feature(the search feature). Try testing if the API implementation is done correctly	6 days
Week 9	Review 1st feature implemented and Implement the 3 other high priority features ( emergency, maps feature and fitness challenge feature)	10 days
Week 10(mid)	Test all 4 features together and work on other features on the priority list (Charts, document and appoint organiser feature)	10 days
Week 11(mid)	Testing all features and	7 days



	making sure there are no bugs so that the app doesn't crash	
Week 12	Try to add additional features(image processing and other trackable feature)	10 days
Week 13(mid)	Test app again with all running features	5 days

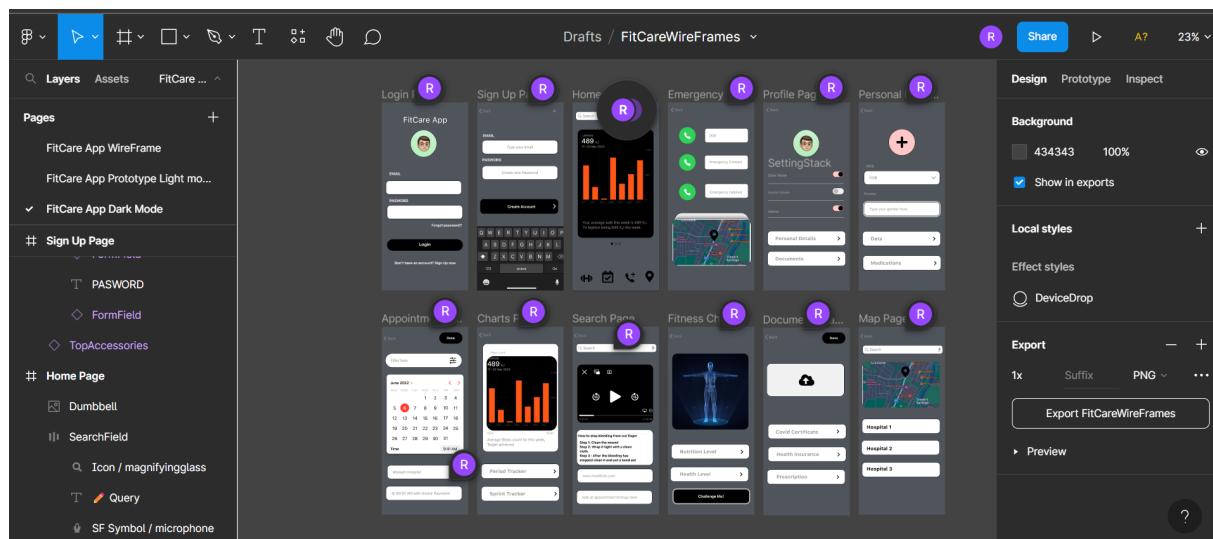
In Case there is an error and I'm not able to solve it, the deadline will move forward by 2 days.

In conclusion the following report consists of a detailed description of the app specifications which consists of Introduction to the app, Users, Application functionality ,Innovation via mobile technology , iOS technology, User Interface Design and navigation, Scope and limitation and project timeline. The app design consists of all the components adhering to the apple human interface guidelines.

All comments for each feature are written and can be found under the FitCare App Dark mode.

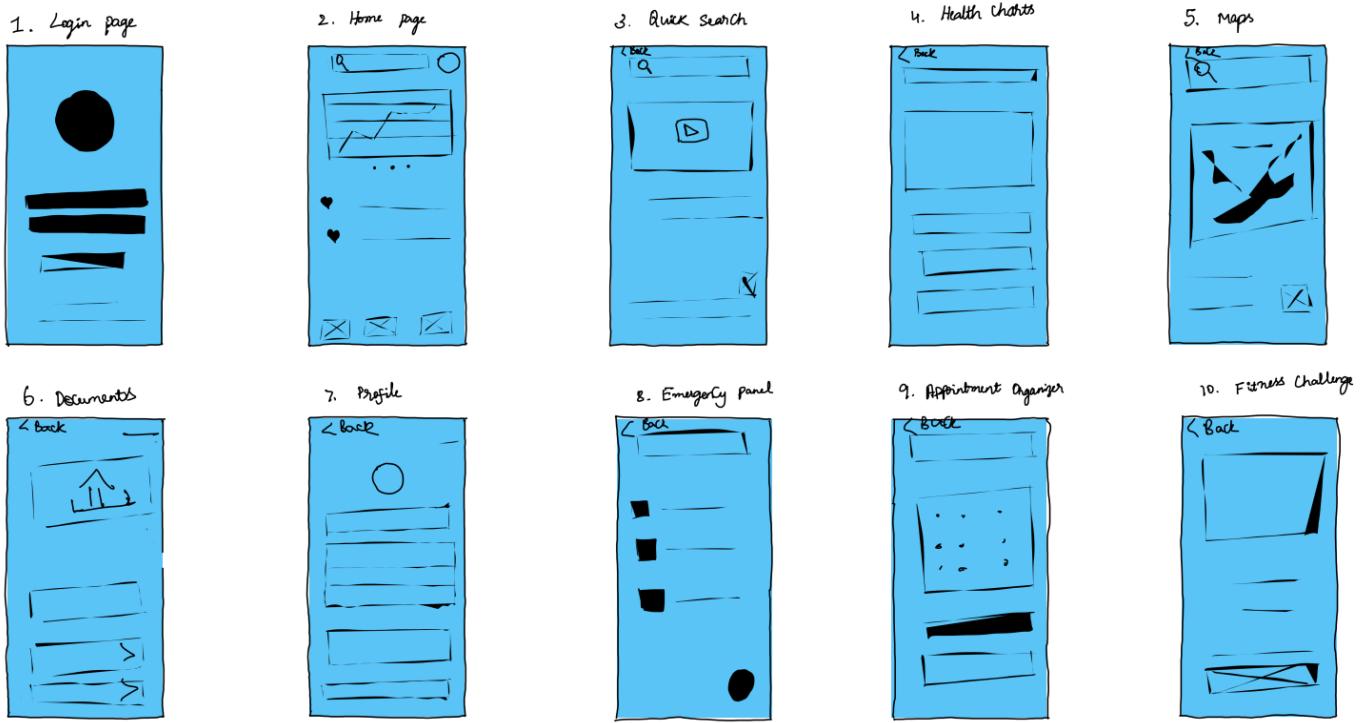
<https://www.figma.com/file/crLkCceopBpm9INh9gUjW5/FitCareWireFrames?node-id=243%3A424&t=jMJRkpsAyd3Tvtm8-1>

The prototype transition has been implemented for FitCare App Dark mode.

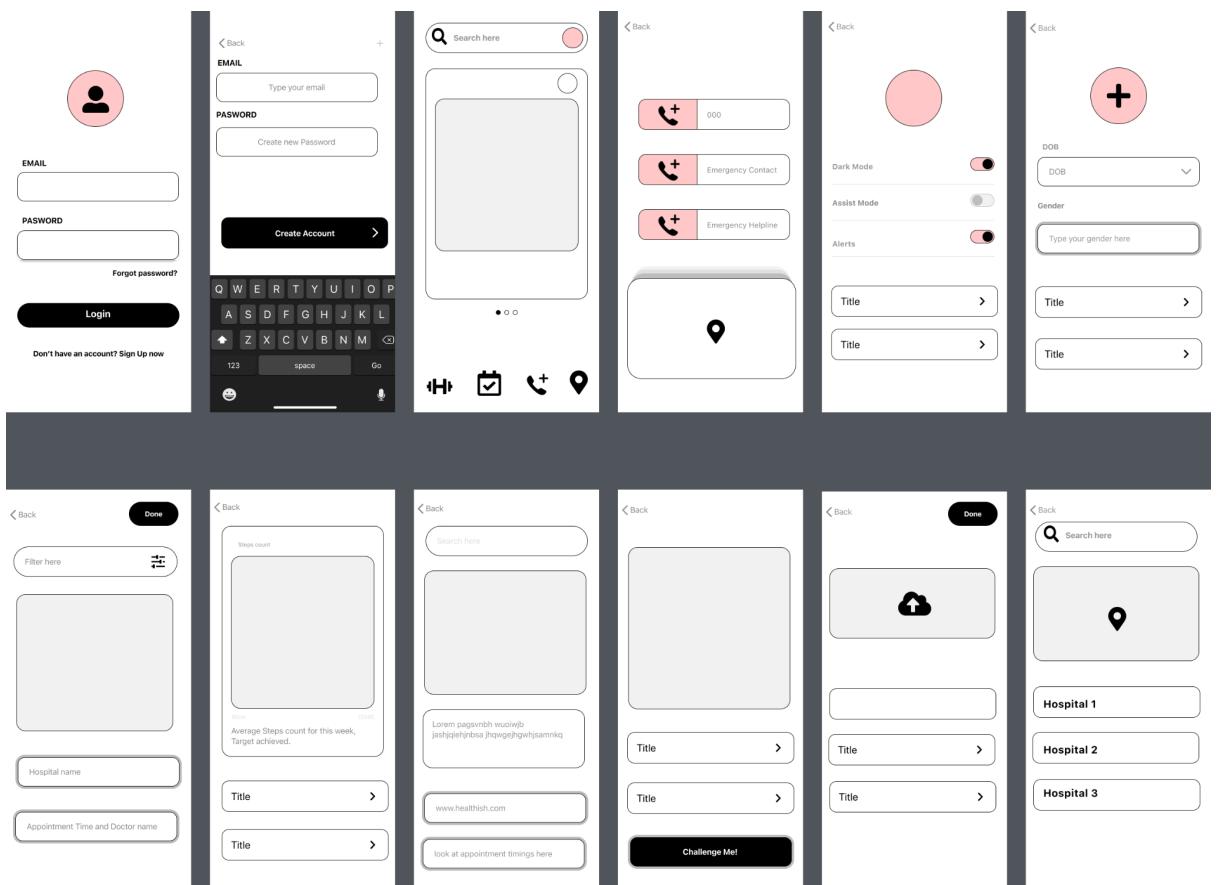




## 1. Sketch -

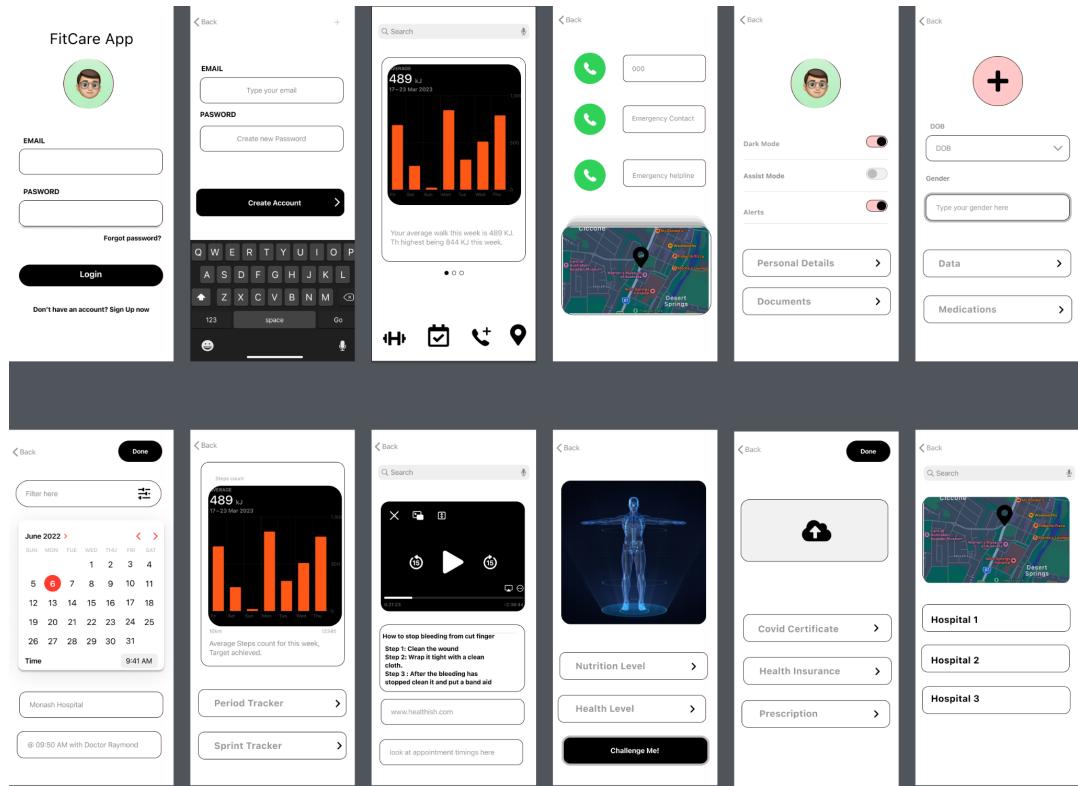


## 2. Wireframes -

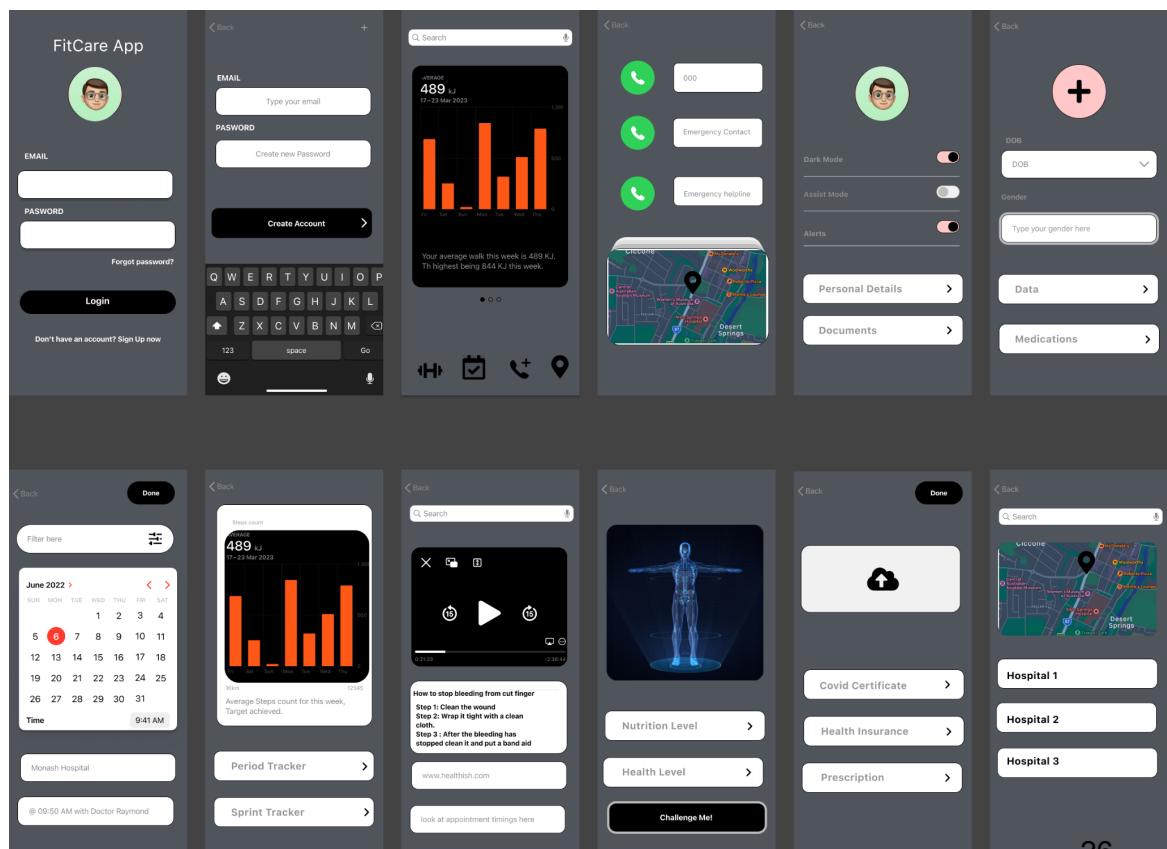




### 3. FitCare App Light mode Prototype



### 4. FitCare App Dark mode Prototype



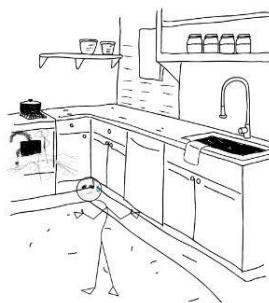


## 5. Storyboard

### STORYBOARD



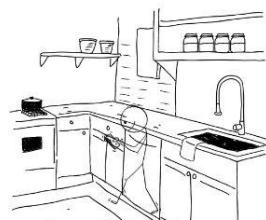
\* Mike is cutting vegetables in his kitchen and accidentally cuts his finger and is bleeding.



\* Mike doesn't know what to do in this scenario and how to stop the bleeding.



\* Mike runs to his room to get his phone.

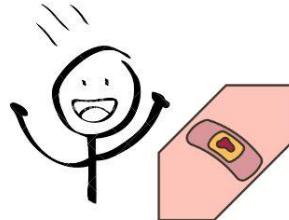


## 6. FitCare App Logo

\* Mike uses FitCare App to browse remedies.



\* Mike uses the quick search feature on the FitCare app and looks at the remedies and follows it.



\* Mike cleans the wound and deals with it. Mike is happy that he could stop the bleeding very quickly without going to the clinic for it.



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<https://www.fontmirror.com/sf-pro-text>