



MEDICAL TRACKER

CM2020 Agile Software Project

Project Proposal

Team 57

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Abstract

In this day and age, there is an increasing amount of working adults being preoccupied with work and their daily activities which may result in them neglecting their own health and even their own family members' unknowingly. Many may not notice it, but work stress could be the cause of diseases and surely it can be deterred. Thus, in order to help relieve the stress on these working adults, there must be a way to aid them in keeping track of their health records as well as their loved ones.

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1.0 Background

1.1 Proposal

Four of the most commonly faced health conditions in Singapore can be prevented. Singapore's cost of living can be very high especially if one is sick. So the best way to stay healthy and in order to save money, we are encouraged to start early with preventive methods to keep one from falling ill. This is especially so if the illness or medical conditions require frequent treatment as it can leave a giant hole in your wallet.

Literature and source of information:

Singaporeans have one of the world's longest life expectancies, living to the ripe old age of 83.2 years old on average.¹ While this is positive news, there is also a flip side to this statistic – and that's the fact that Singaporeans are spending more time in ill health, especially towards the end of life.

Items	Unit	Latest Period	Latest Data	% Change (Y-o-Y) 1/	Previous Period Data	% Change (Y-o-Y) 2/
Death and Life Expectancy						
Total Deaths	Number	2021	24,292	10.1	22,054	2.8
Crude Death Rate ^{3/}	Per 1,000 Residents	2021	5.8	na	5.2	na
Age-Standardised Death Rate ^{3/ 4/}	Per 1,000 Residents	2021	3.0	na	2.8	na
Infant Mortality Rate ^{3/}	Per 1,000 Live-births	2021	1.8	na	1.8	na
Life Expectancy at Birth ^{3/ 5/}	Years	2021	83.5	na	83.7	na
Males	Years	2021	81.1	na	81.3	na
Females	Years	2021	85.9	na	85.9	na
Life Expectancy at Age 65 ^{3/ 5/}	Years	2021	21.2	na	21.3	na
Males	Years	2021	19.3	na	19.5	na
Females	Years	2021	23.0	na	23.0	na

¹ <https://www.singstat.gov.sg/find-data/search-by-theme/population/death-and-life-expectancy/latest-data>

Principal Causes of Death

		2018	2019	2020
Total No. of Deaths		21,282	21,446	22,054
% of Total Deaths				
1. Cancer [ICD10: C00-C97]		28.8	28.4	28.6
2. Ischaemic heart diseases [ICD10: I20-I25]		18.1	18.8	20.5
3. Pneumonia [ICD10: J12-J18]		20.6	20.7	18.5
4. Cerebrovascular diseases (including stroke) [ICD10: I60-I69]		6.0	5.8	6.0
5. External causes of morbidity and mortality [ICD10: V01-Y89]		4.3	4.0	3.7
6. Nephritis, nephrotic syndrome & nephrosis [ICD10: N00-N07, N17-N19, N25-N27]		3.0	3.1	3.1
7. Hypertensive diseases (including hypertensive heart disease) [ICD10: I10-I15]		3.0	2.6	2.9
8. Other heart diseases [ICD10: I00-I09, I26-I51]		2.1	2.0	2.1
9. Urinary tract infection [ICD10: N39.0]		2.0	2.3	2.1
10. Diabetes Mellitus [ICD10: E10-E14]		1.3	1.2	1.2

As of 2019, the most common cause of death² in Singapore is cancer, strokes, heart issues and diseases, as well as pneumonia, kidney diseases, urinary tract infections and lung diseases occupying the top ten list.

As mentioned above the top 4 most commonly faced health conditions faced by Singaporeans can be easily prevented. To assist the situation, we have chosen to create a website to assist users in keeping track of any medical conditions. After all, early detection, consistent treatment and prevention methods can help with saving some extra cash.

² <https://www.moh.gov.sg/resources-statistics/singapore-health-facts/principal-causes-of-death>

1.2 Introduction to our Website

To segway into our website Medical Tracker, we have mentioned that our main purpose is to produce an application to aid its users in keeping track of any medical conditions and help them save some extra cash.

Unlike current existing health applications such as HealthHub SG, OneNUHS, WhiteCoat and SingHealth. We decided to push our website to the next step, by adding a notification system that will notify the users on their phones when they have an upcoming medical appointment or if they have to take/refill their medications. With how fast-paced Singapore can be it is very easy to forget and get overwhelmed as you try to keep up with this busy little city.

According to a Cigna 360 Well-Being Survey done in 2019, a staggering 92 per cent of working Singaporeans are stressed³. 8 per cent higher than the global average at 84 per cent. There are many health problems related to stress other than mental illness. Studies have found many health problems related to stress⁴. Stress seems to worsen or increase the risk of conditions like obesity, heart disease, Alzheimer's disease, diabetes, depression, gastrointestinal problems, and asthma. So our website will also focus on reducing the stress users' face by assisting them with remembering their medical-related items.

³ <https://lifeskillsinstitute.sg/are-you-part-of-the-92-singapore-stress-report/>

⁴ <https://wb.md/3AbIFMQ>

1.3 Aim of Our Project

The main aim of our project is to develop a website to assist our users such as parents, adults and young adults with keeping track of their medical-related items. More responsibilities are placed on us as we grow up, it can be very overwhelming and hard to manage and cope with at the beginning. This may lead to stress which we hope to be able to reduce with our website. This report would contain evidence of the planning, research, prototyping and iteration, design specifications, system development, analysis, and a final evaluation of our overall website, Medical Tracker.

1.4 Scope

The following addresses the scope for the functionality of our website.

Sign Up Page

This page is to help new users create and register their accounts. The user's email will be used as the primary key since we rarely change email addresses. It also allows users to create their passwords and input their first and last names for added personalization.

Login Page

The login page plays an important role as a security feature for the users to access their accounts. Information such as the user's email and password is required for authentication. By having an account, users are able to track and view their medical information.

Home Page

The home page displays a calendar, this calendar will be marked with smaller icons indicating if there is any medical appointment or medication-related reminder. Icons are colour coded based on the profile related to that event. There will be a sidebar to aid as a shortcut key to add or edit profiles. There is a legend at the bottom of the home page to show what each icon on the calendar represents and another bar for a more detailed explanation of each daily event.

Manage Profile Page

This page helps users edit pre-existing profiles or add new profiles to their accounts. This is to aid the user who may be in charge of keeping track of multiple people's medical-related items. The profile allows you to add a few details such as:

1. First Name and Last Name
2. Gender
3. Age [Date of Birth]
4. Relationship with the user (Grandfather, Grandmother, Father, Mother, etc.)
5. Medical History

Apart from this, the user can assign a colour to the profile to help distinguish each profile apart.

Appointment Page

The appointment booking page helps users with making a medical appointment, the user can select which profile to make the appointment under, and once done they will be redirected to the reminder page. Details such as:

1. Health Institution
2. Purpose of visit
3. Date
4. Time

Reminder Page

This page helps users create reminders for their appointments and medications. For medication, they have to indicate:

1. Medication Name
2. Medication Type [e.g. tablet or liquid]
3. Usage Instruction [their recommended prescription amount]
 - a. Dosage [e.g. no. of tablets]
 - b. Frequency per day [e.g. 2 times a day]
 - c. Special medication note

For appointments, the details from the appointment page will be carried over and all the users need to do is hit the 'Save' button.

Healthy Living Page

This page comes with helpful health articles for the user to read.

Limitations

Our website's biggest limitation apart from the internet is the fact that we have to manually add details to the website. It is hard for one person to keep track of every diagnosis or vaccination they have ever taken in their life, especially for the elderly. As more profiles are being added and constantly updated, the GUI of the website can start to look too cluttered and it will make it hard for the user to read and understand what is on the webpage.

We have also decided to forgo the functionality whereby users are able to modify their health appointments after an appointment is made and the login function that links to our SingPass account.

2.0 Planning

2.1 Gantt Chart

Week 13

	Start	End	Week 13						
			26-Jun S	27-Jun M	28-Jun T	29-Jun W	30-Jun T	1-Jul F	2-Jul S
Planning and Research									
Survey III	26-June-2022	16-July-2022							
User Story	10-July-2022	14-July-2022							
Kanban/Scrum Implementation	14-July 2022	20-July-2022							
Assessing Survey Results	29-July-2022	31-July-2022							
High Fidelity Wireframe	1-August-2022	7-August-2022							
Report									
Background	1-July-2022	10-July-2022							
Planning and Research	10-July-2022	17-July-2022							
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Analysis	28-August-2022	3-September-2022							
Evaluation	28-August-2022	3-September-2022							
Software Development									
Sprint 1	1-August-2022	15-August-2022							
login.html	1-August-2022	10-August-2022							
checklogin.php	5-August-2022	10-August-2022							
index.html	8-August-2022	15-August-2022							
Sprint 2	14-August-2022	28-August-2022							
reminder.html	14-August-2022	21-August-2022							
appointment.html	21-August-2022	28-August-2022							
addappointment.php	27-August-2022	28-August-2022							

Week 14

	Start	End	Week 14						
			3-Jul	4-Jul	5-Jul	6-Jul	7-Jul	8-Jul	9-Jul
S	M	T	W	T	F	S			
Planning and Research									
Survey III	26-June-2022	16-July-2022							
User Story	10-July-2022	14-July-2022							
Kanban/Scrum Implementation	14-July 2022	20-July-2022							
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appointment.html	21-August-2022	28-August-2022							
addappointment.php	27-August-2022	28-August-2022							

Week 15

	Start	End	Week 15						
			10-Jul	11-Jul	12-Jul	13-Jul	14-Jul	15-Jul	16-Jul
S	M	T	W	T	F	S			
Planning and Research									
Survey III	26-June-2022	16-July-2022							
User Story	10-July-2022	14-July-2022							
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appointment.html	21-August-2022	28-August-2022							
addappointment.php	27-August-2022	28-August-2022							

Week 16

			Week 16						
			17-Jul	18-Jul	19-Jul	20-Jul	21-Jul	22-Jul	23-Jul
S	M	T	W	T	F	S			
Planning and Research									
Survey III	26-June-2022	16-July-2022							
User Story	10-July-2022	14-July-2022							
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appointment.html	21-August-2022	28-August-2022							
addappointment.php	27-August-2022	28-August-2022							

Week 17

	Start	End	Week 17						
			24-Jul	25-Jul	26-Jul	27-Jul	28-Jul	29-Jul	30-Jul
S	M	T	W	T	F	S			
Planning and Research									
Survey III	26-June-2022	16-July-2022							
User Story	10-July-2022	14-July-2022							
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appointment.html	21-August-2022	28-August-2022							
addappointment.php	27-August-2022	28-August-2022							

Week 18

	Start	End	Week 18						
			31-Jul	1-Aug	2-Aug	3-Aug	4-Aug	5-Aug	6-Aug
S	M	T	W	T	F	S			
Planning and Research									
Survey III	26-June-2022	16-July-2022							
User Story	10-July-2022	14-July-2022							
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appointment.html	21-August-2022	28-August-2022							
addappointment.php	27-August-2022	28-August-2022							

Week 19

	Start	End	Week 19						
			7-Aug	8-Aug	9-Aug	10-Aug	11-Aug	12-Aug	13-Aug
Planning and Research									
Survey III	26-June-2022	16-July-2022							
User Story	10-July-2022	14-July-2022							
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appointment.html	21-August-2022	28-August-2022							
addappointment.php	27-August-2022	28-August-2022							

Week 20

	Start	End	Week 20						
			14-Aug	15-Aug	16-Aug	17-Aug	18-Aug	19-Aug	20-Aug
Planning and Research									
Survey III	26-June-2022	16-July-2022							
User Story	10-July-2022	14-July-2022							
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appointment.html	21-August-2022	28-August-2022							
addappointment.php	27-August-2022	28-August-2022							

2.2 Work Breakdown Structure (WBS)

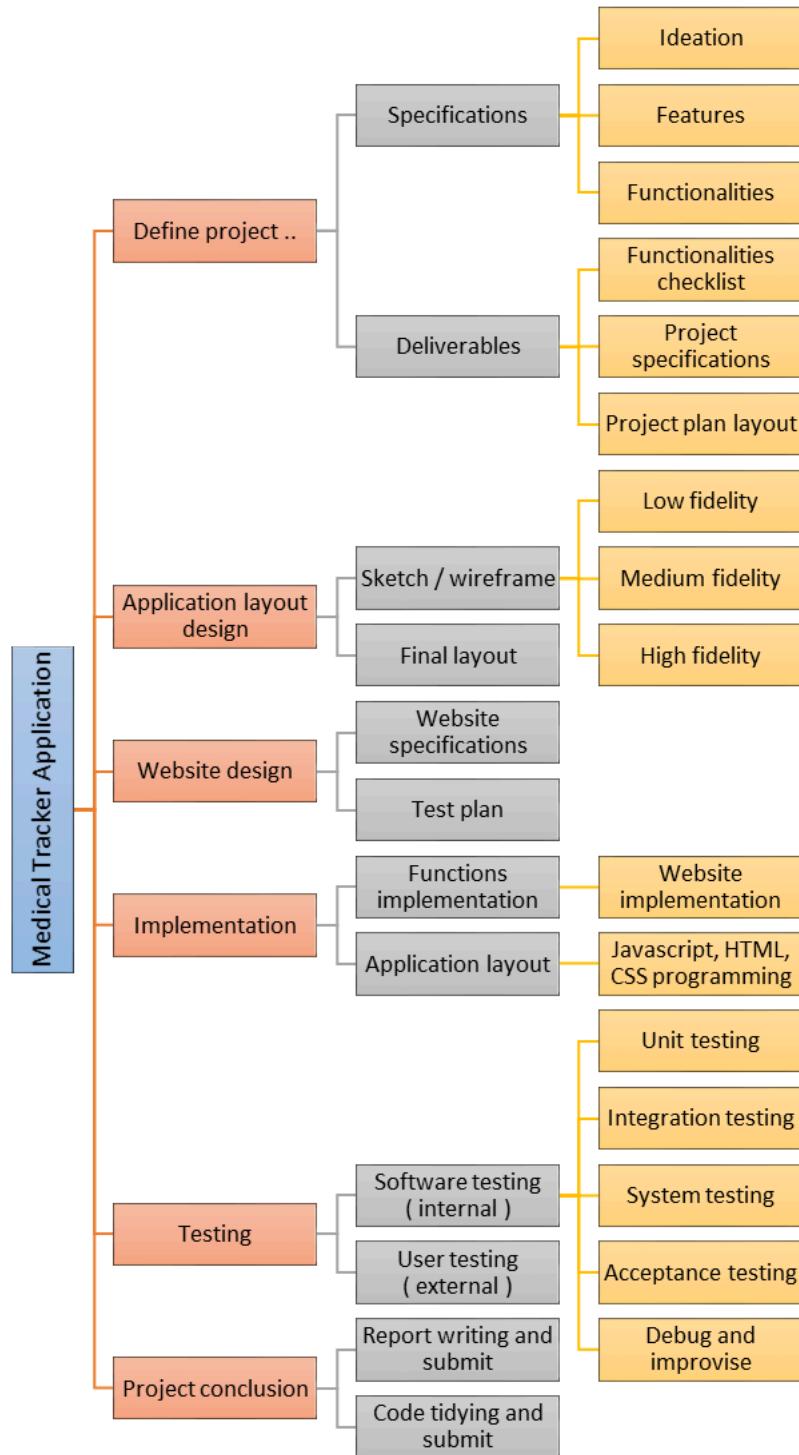


Figure 2.2. Work Breakdown Structure (WBS)

2.3 Unified Modelling Language (UML) diagram

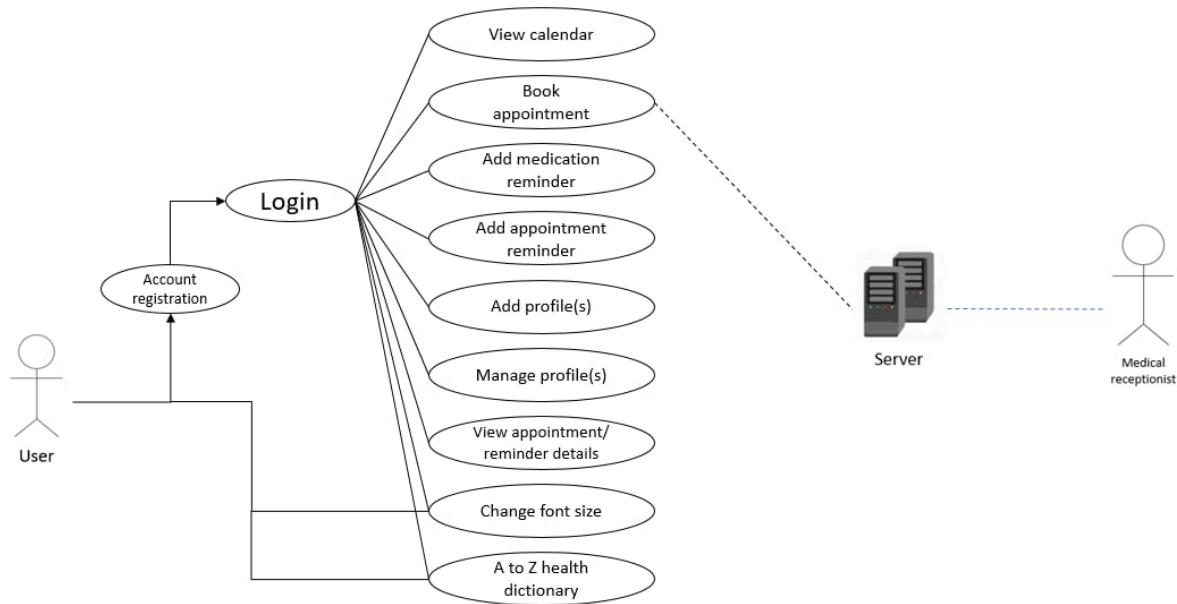


Figure 2.3. Unified Modelling Language (UML) diagram

3.0 Research

3.1 Market Research

Healthcare is not cheap in Singapore, yes we do have insurance to cover the treatment. However, some diseases have lifetime treatment, such as kidney dialysis, in other cases, some treatments are just generally costly, for example, chemotherapy. Apart from that, treatment cost varies based on the stages of the medical condition, when the disease is detected early on the treatment will be relatively cheaper than if it was detected at a later time. Apart from saving the extra penny, early detection can also help increase the chances of survival, this is especially so with diseases such as cancer where early detection will make a big difference.

3.2 Literature Review

As mentioned previously in the proposal the most common cause of death in Singapore is cancer, strokes, heart issues and diseases, as well as pneumonia, kidney diseases, urinary tract infections and lung diseases. Most mentioned conditions can be prevented or minimised if the person is aware of their chances of contracting such diseases. For example, if they are aware that their relatives are suffering or have suffered from medical conditions such as cancer, heart issues and diseases, etc. They will know that they have an increased risk in developing such diseases due to genetics. Being aware earlier and making lifestyle changes along with annual health checkups can help them with early detection or better yet prevent them from contracting the disease altogether.

3.3 Research done

Our project focuses on the creation of a website that allows users to create appointments and reminders for both themselves and their families. This helps users better keep track of important information such as dates of doctors' appointments or when to take their medication.

As we aim to create a user-friendly website, our project aims to complete the following requirements:

- Login page
- Calendar home page
- Medication refill/reminder page
- Medical appointment creator
- Profile creator
- Text size change

Though we previously used a Gantt chart to keep track of our project, for our finals we decided to make a shift to using scrum in order to better prioritise, assign and manage our tasks.

Our requirements were first broken down into user stories that were both implemented using scrum and kanban as shown in the following. However, upon testing both methods the team decided to use scrum as it not only helped track our tasks efficiently but also helped us see the various priority of the stories and related tasks as well as keep track of any difficulties faced and redistribution of work according to each member's strength.

User stories:

- As a user, I want to be able to change my password so that I can maintain the security of my account
- As a user, I want to have an online tracker, so that I can keep track of important information easily.
- As a user, I want to be able to create online profiles for my elderly parents, so that I can help them keep track of their important appointments.
- As a user, I want to be able to keep track of my medications online, so that I can easily remember when to take my medications.

- As a user, I want to make appointments online, so that I can make appointments without leaving my house.
- As a user, I want to have access to information online, so that I can better educate myself on various things.
- As a user, I want to be able to alter the text size of the site I am on so that I can view the site with ease.

Use of scrum poker to prioritise various user stories

User Story	Priority	Story Point
1. As a user, I want to be able to change my password so that I can maintain the security of my account Acceptance Criteria: - User can change their account password	Must Have	4
2. As a user, I want to have an online tracker, so that I can keep track of important information easily Acceptance Criteria: - User can view all events to be tracked on a calendar view - User can add or remove events on the calendar - Users can choose which type of events to view	Must Have	4
3. As a user, I want to be able to create online profiles for my elderly parents, so that I can help them keep track of their important appointments Acceptance criteria: - User can create profiles for various members - User can remove any pre-existing profiles - User can store related important data regarding the profiles subject	Must Have	4
4. As a user, I want to be able to keep track of my medications online, so that I can easily remember when to take my medications Acceptance criteria: - Users can add medication reminders as events onto the tracker	Must Have	5

- Users can create medication reminders that intake important information regarding the medication		
5. As a user, I want to make appointments online, so that I can make appointments without leaving my house Acceptance Criteria: <ul style="list-style-type: none">- User can create appointments- User can add appointment details to tracker	Must Have	5
6. As a user, I want to have access to information online, so that I can better educate myself on various things Acceptance Criteria: <ul style="list-style-type: none">- User can search for various diseases they want additional information on- User can view accurate and factual information regarding various common medical issues	Good to have	2
6. As a user, I want to be able to alter the text size of the site I am on, so that I can view the site with ease Acceptance Criteria: <ul style="list-style-type: none">- User can adjust the text size of the site	Good to have	3

Task	In Progress	Completed
		Set up login page
	Set up calendar home page	
	Set up add profile page	
		Set up reminder page
		Set up appointment page
Set up information page		

3.4 Product Backlog

Upon choosing to use scrum to track our tasks, each user story was broken down into its respective tasks. The tasks were then assigned to each respective team member according to their strengths. An estimated time was also assigned to each task that took into account our project deadline.

Each team member was to work on tasks according to their priority with higher priority tasks to be done first. The backlog was to be updated every day, with meetings being conducted once a week to check the progress of the tasks. Once all tasks within a sprint are completed, the following sprint comes under review for any possible reassignment of manpower or time.

Sprint 1

Story ID	Sprint Backlog Item	Tasks	Est Hrs	Hrs						
01	As a user, I want to be able to change my password so that I can maintain the security of my account	1. Set up login page	1	1	0	0	0	0	0	0
		2. Set up login form	2	1	1	0	0	0	0	0
		3. Set up sign-up form	2	1	1	0	0	0	0	0
		4. Allow users to change their password	6	0	0	0	0	0	0	0
02	As a user, I want to have an online tracker, so that I can keep track of important information easily	1. Set up calendar page	1	1	0	0	0	0	0	0
		2. Set up header	1	1	0	0	0	0	0	0
		3. Calendar to display dates of	3	1	2	0	0	0	0	0

		the current month							
		4. Set up daily view calendar	2	0	0	0	0	0	0
		5. Selected day on the calendar appears on daily view	2	0	2	0	0	0	0
		6. Information regarding selected profiles appears	8	0	2	3	0	0	0
		3. Add information to page	6	0	0	4	0	0	0
		4. Set up information filter	4	0	0	1	0	0	0
		5. Link page to menu	1	1	0	0	0	0	0

03	As a user, I want to be able to create online profiles for my elderly parents, so that I can help them keep track of their important appointments	1. Set up profile page	1	1	0	0	0	0	0
		2. Set up header	2	1	0	0	0	0	0
		3. Set up profile editor	8	0	0	0	0	0	0
		5. Profile creator intakes information of respective	8	0	0	0	0	0	0

		subject								
		5. New profiles created appear on calendar page	8	0	0	0	0	0	0	0

Sprint review:

We were able to code out the fundamentals of a website by setting up the login and index page. The login page will take in login credentials input by the users and check through using checkLogin.php against the database used in MySQL in the physical wamp server.

Editing or changing password of an user account was brought upon to the group for consideration as further enhancement of the website. However, we were unable to retrieve values from the database used in MySQL and went on to complete other issues with higher priorities. Index page consisted of the calendar, event tab and profile tab. The calendar uses Jquery extension to be displayed up without the need of manually creating a static table of content. This way the calendar can be used to backtrack on appointments made or can be used to view future appointments in later months.

Sprint 2

04	As a user, I want to be able to keep track of my medications online, so that I can easily remember when to take my medications	1. Set up medication page	1	1	0	0	0	0	0	0
		2. Set up profile selector	4	0	0	1	0	0	0	0
		3. Reminder receives information regarding medication	6	0	0	2	0	0	0	0
		4. A new reminder can be created for	6	0	0	2	0	0	0	0

		selected profile								
		5. Respective events related to respective profiles appear on calendar	8	0	0	1	0	0	0	0

05	As a user, I want to make appointments online, so that I can make appointments without leaving my house	1. Set up appointment maker page	1	1	0	0	0	0	0	0
		2. Set up header	2	1	0	0	0	0	0	0
		3. Set up profile selector	4	0	0	1	0	0	0	0
		4. Set up appointment maker	6	0	0	2	0	0	0	0
		5. Appointments can be created for related selected profiles	6	0	0	2	0	0	0	0
		6. Appointment reminders can be added to the calendar	4	0	0	1	0	0	0	0

Sprint review:

We are able to create the medication reminder page. The medication page will check through the inputs required before allowing users to click on the submit button. After the submit button is clicked on the form will trigger an action to insert the inputs given by the user into the database in MySQL, thus creating a reminder which could be used for viewing purposes to remind them of their medication type, dosage and frequency. The appointment page is also very similar to the medication

reminder page, where inputs will be required from the user and then when all are completed, a new row of data with the inputs will be inserted into the database of MySQL. This row of data can also be used to display date, venue and the patient name on the calendar at index page for user reference.

Sprint 3

06	As a user, I want to have access to information online, so that I can better educate myself on various things	1. Set up information pages	1	0	0	0	0	0	0	0
		2. Research various common medical problems	12	0	0	0	0	0	0	0
		3. Add information to page	6	0	0	0	0	0	0	0
		4. Set up information filter	4	0	0	0	0	0	0	0
		5. Link page to menu	1	0	0	0	0	0	0	0

07	As a user, I want to be able to alter the text size of the site I am on, so that I can view the site with ease	1. Set up size buttons	1	0	0	0	0	0	0	0
		2. Size buttons alter site text size when clicked	1	0	0	0	0	0	0	0

Sprint review: As the other tasks were higher in priority, we could not finish our further developments which included the information page and a button to alter text size on the website.

3.5 User Requirements

When using our website, the user's goal is to help monitor their health-related items such as medications and appointments for both the user and their loved ones. In order to achieve that goal, we need a few functions.

- Reminder or Notification system
 - As our services are on the website we will have a function to link to their phone so that the user can get a reminder.
- Appointment/Medication Viewing Function
 - Able to view when their appointments are and when they are required to take their medication. This will be done over a calendar display for easier viewing.
- Adding of Profiles
 - A function for users to add multiple profiles so that they are able to monitor their loved ones' health-related items.
 - User Input Required:
 - Users are required to input the other profile information into the system along with their relationship.
- Viewing Multiple Profiles Health Related Items
 - Able to toggle between displaying single or multiple profiles health-related items on the calendar.
- Sign Up / Login
 - For privacy, users are required to sign up to create an account with our service.
 - They are then needed to log in to use our services.
 - User Input Required:
 - First and last name
 - Email address
 - Password
- Booking an Appointment
 - For users to book an appointment on our website.
 - By doing so it will register in our system and appear on the calendar as well as provide a reminder for the user as the day of the appointment comes nearer
 - User Input Required:

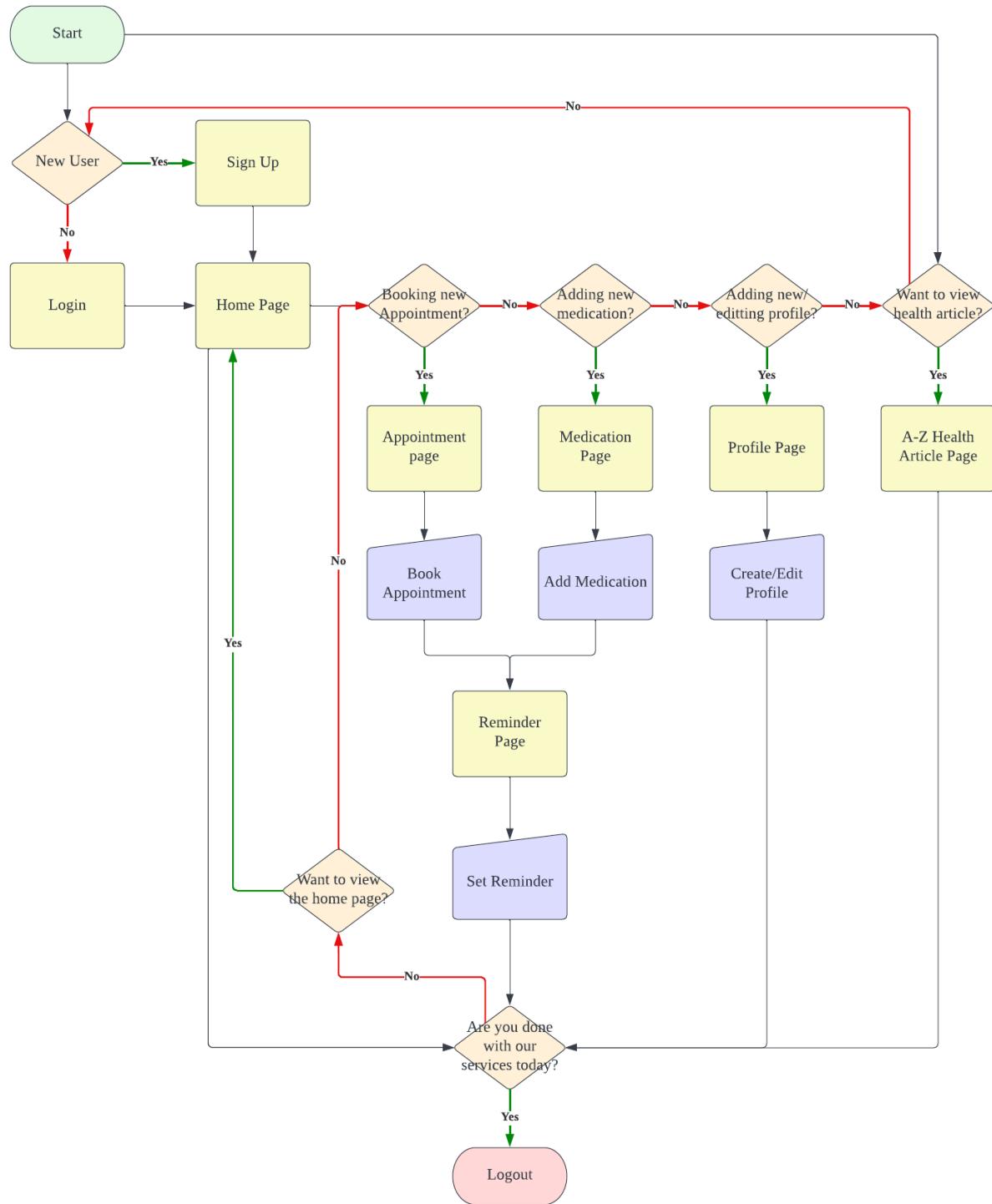
- Location of the health institute
 - Type of medical service they are visiting for
 - Date of the appointment
 - Time of the appointment
- Adding of Medication
 - For users to include the medication that they have been prescribed.
 - By doing so the website will include a reminder for the user and display it on the calendar.
 - User Input Required:
 - Medication name
 - Medication type
 - Prescription instruction
 - Personalisation of Reminder
 - When users have multiple profiles in their account, they can set up their own unique reminder icon for a clearer depiction on the calendar.
 - User Input Required:
 - Choosing a reminder icon and colour
 - Healthy Living page
 - For users to read to see what lifestyle changes they can make to prevent certain medical conditions or for an overall healthier lifestyle.

3.6 Functional Specification

As mentioned in our proposal we aim to help our users reduce their stress and keep track of their medical-related issues or prescriptions. Our website has multiple functions from aiding users with making appointments, reminding them when to take their medication or go for their medical appointments to keeping track of multiple different profiles with medical-related items too. The website comes with health-related articles to help users with making better and healthier lifestyle changes along with prevention methods for certain health conditions.

Since there are multiple profiles that can be added under one user account which will lead to a very messy and cluttered user interface. Currently, the website can allow users to put a reminder on when to take their medication and when to refill it. However, they cannot order their medication on our website as of now. There is also a problem for users to manually input every medical detail when setting up the profile which can prove to be a hassle.

The above-stated problem will be reviewed by the team and have new functions to be implemented in the future as the solution for the problems stated above.



Above is an illustration of our website user flow.

4.0 Prototyping and Iteration

4.1 Prototyping

Prototype I VS Prototype II

Home Page

The wireframe shows a mobile application interface. At the top is a header with a circular logo containing 'MT'. To the left is a sidebar icon. Below the header are three large rectangular content areas. On the far right, there is handwritten text that reads 'specify data'.

May 2022

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	
16	17	18	19	20	21	22	
23	24	25	26	27	28	29	
30	31						

Logout

The calendar interface includes a sidebar on the left with items like 'Appointment' and 'Take Medication'. To the right of the calendar is a sidebar with user profiles for 'bob' (purple), 'Thomas' (blue), 'Peppa' (green), and a placeholder '+' icon.

User feedback: About [27% of respondents](#) found the wireframe difficult to understand, with the majority of feedback expressing difficulty in understanding the colour coding.

Reminder Page

MT

medication ▾

TA medication

Select Profile:

PARENT	PARENT	CHILD 1	CHILD 2	+ +
--------	--------	---------	---------	--------

Medication/Appt ▾

Medication Name

Medication Type: Tablet Liquid

Usage Instructions:

Dosage per intake: e.g. 2 Tablets **Frequency per day:** 2 ▾

User feedback: About [11.1% of respondents](#) found the page difficult to understand. Thus, the page was generally kept the same with stylistic changes made to make the page more appealing to users.

Profile Page

Add profile

New profile

—
—
—

RIS
Symbol: Δ★○---

USER

PARENT

PARENT

CHILD 1

CHILD 2

New Profile

First Name Last Name Gender: Male ▾

Date of birth:

Relationship:

Medical History:

User feedback: About [16.7% of respondents](#) found the page difficult to understand. Thus, the page was generally kept the same with stylistic changes made to make the page more appealing to users.

Iteration 1 Conclusion

Generally, feedback covered the lack of consistency in the colour coding and categorisation between the profiles and events. With the majority of respondents finding the pages easy to understand and read, each page's respective formatting was kept the same.

Taking into consideration the feedback, the wireframes were then edited to fix any prior lackings as well as given stylistic changes according to the team's discussions.

Such changes included:

1) The profile selector format

- Discussion within the team considered that the selection of profiles for various pages may not be very clear to various users. This is due to the nature of the selection being represented using a red circle around the profile icon which may be difficult to see for users that are colour blind or have bad eyesight.

2) The page's styling

- Rearrangement of certain elements on the page as well as the creation and addition of the website's logo to help improve the look of each page and ensure consistency of styling.

3) Addition of a navigation bar

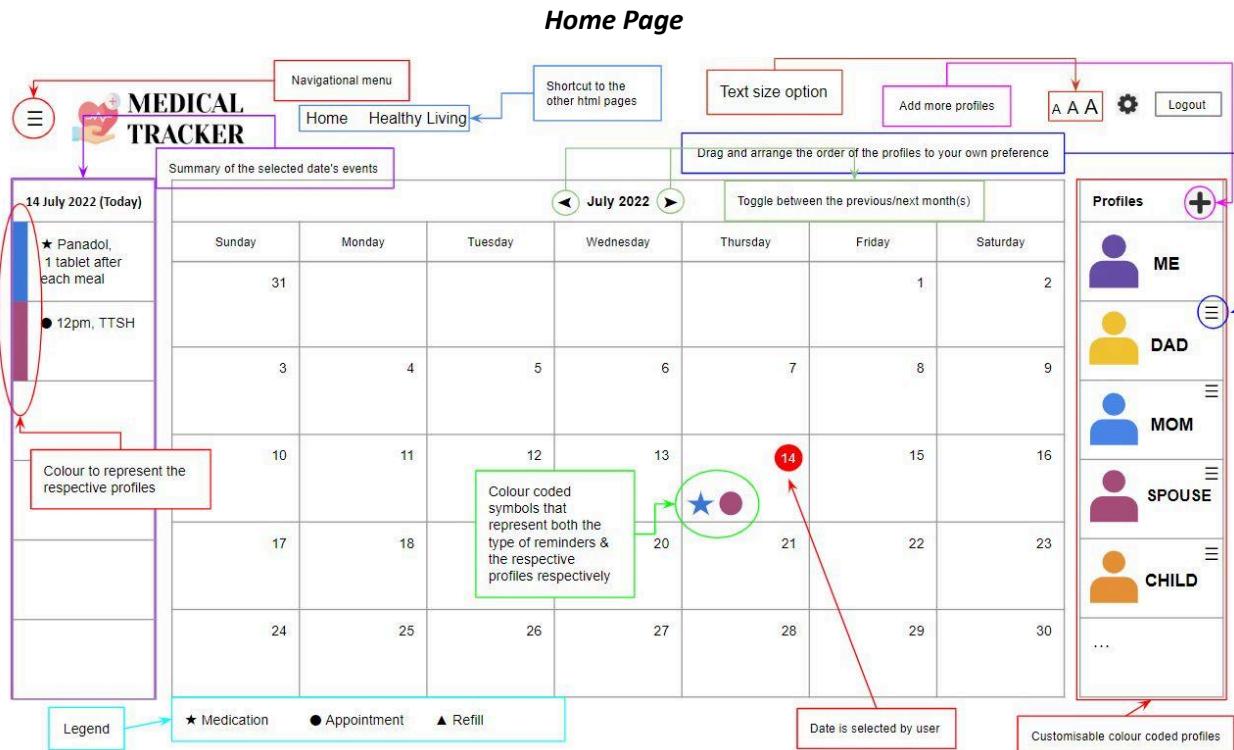
- To allow easier navigation of the page a navigation bar was added at the top of the content of each page containing the main functions of the website.

4) Changes to colour coding and categorization of profiles and events

- To ensure consistency between the pages colour coding of the profiles while the symbols were used to represent the various events and reminders. Each page was edited to ensure that this was maintained throughout to prevent confusion.

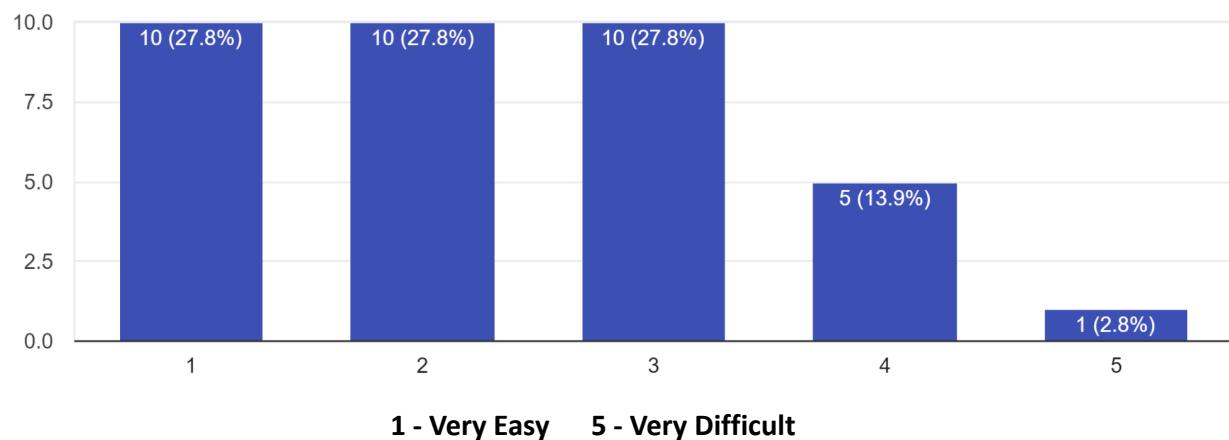
Prototype III Final Survey Wireframe

Taking into consideration user feedback from the previous iterations as seen above, the final wireframes were created. The wireframes were then commented on and sent out for user feedback and the following responses were received regarding each page.

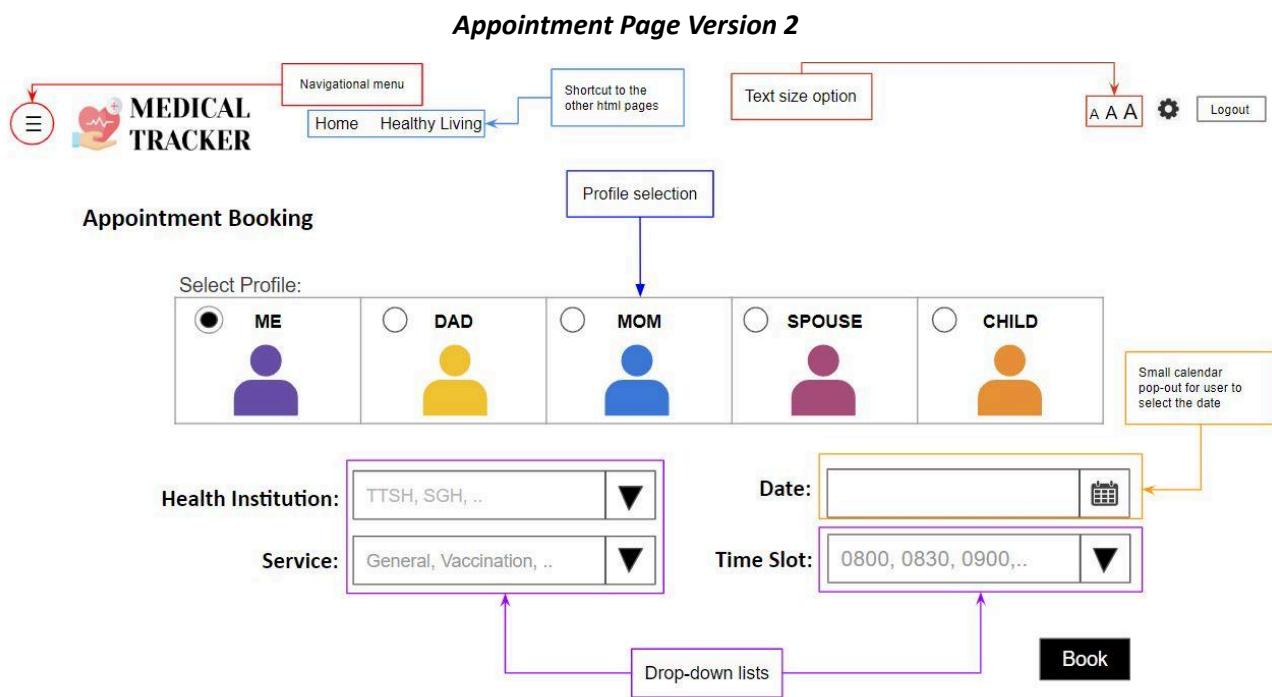
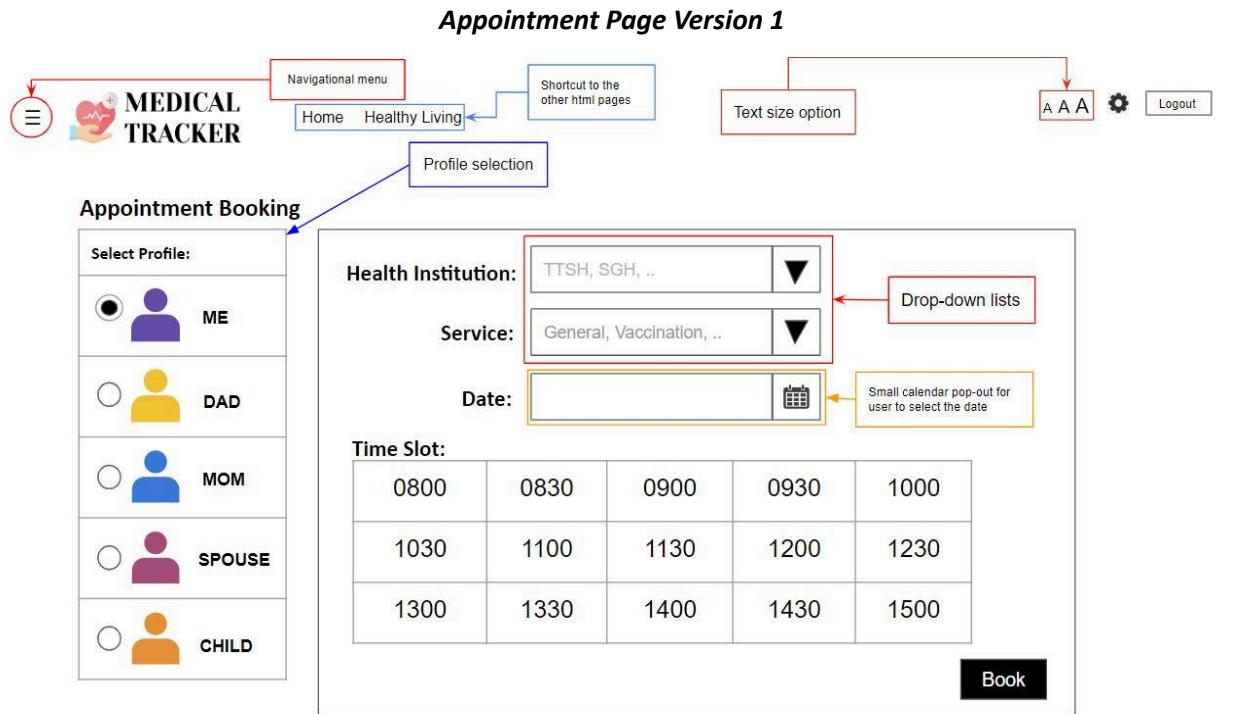


Home Page On a scale of 1 to 5, how easy was it to understand the page above?

36 responses



As seen from the survey responses, only about 17% of the respondents found the page difficult to understand in comparison to the previous 27%.

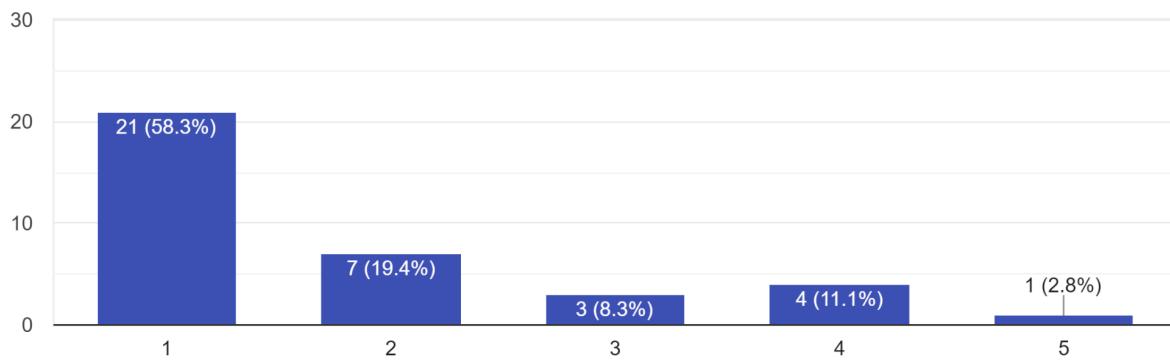


As seen from the data below, when shown both versions of the appointment page, the majority of users found version 1 more intuitive and stylistically better. With 50% of respondents finding version 1 easy to understand in comparison to 33% for version 2.

Survey Feedback:

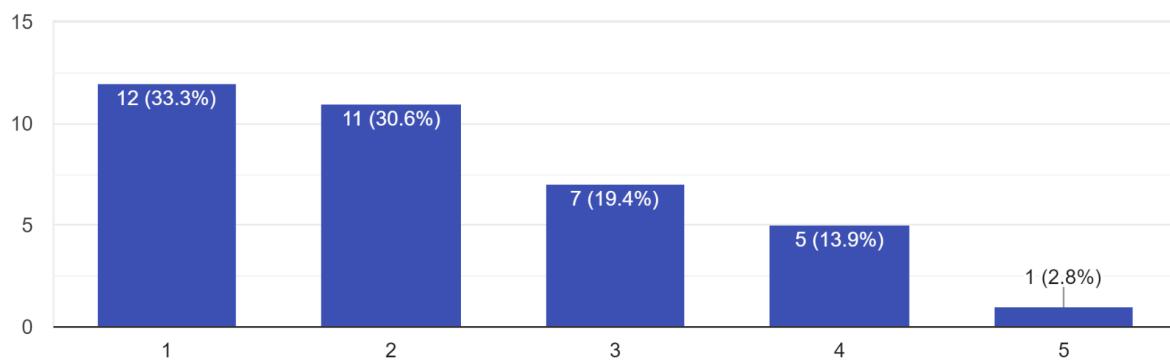
Appointment Booking Page [Version 1] On a scale of 1 to 5, how easy was it to understand the page above?

36 responses



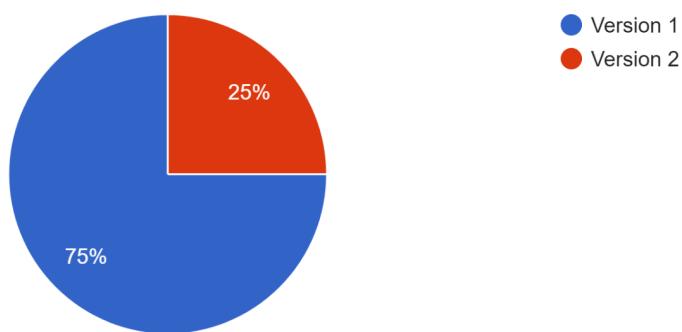
Appointment Booking Page [Version 2] On a scale of 1 to 5, how easy was it to understand the page above?

36 responses



Appointment Booking Page Between the two versions shown above, which do you prefer?

36 responses



Profile Page Version 1

The screenshot shows the 'Profile Page Version 1'. At the top left is the 'MEDICAL TRACKER' logo. To its right are the 'Home' and 'Healthy Living' links, a 'Profile selection' dropdown, and a 'Text size option' with three 'A's. On the far right are 'Logout' and a gear icon. Below the header is a sidebar titled 'Manage Profiles' containing five profile items: 'ME' (purple), 'DAD' (yellow), 'MOM' (blue), 'SPOUSE' (pink), and 'CHILD' (orange). To the right of the sidebar is a 'New Profile' form. It includes fields for 'First Name', 'Last Name', 'Gender' (set to 'Male'), 'Date of birth', and 'Relationship'. A large text area is labeled 'Medical History'. Below the text area is a row of colored circles representing profile colors, with a 'Save' button to its right. A 'Profile color' label with an arrow points to the color row.

Profile Page Version 2

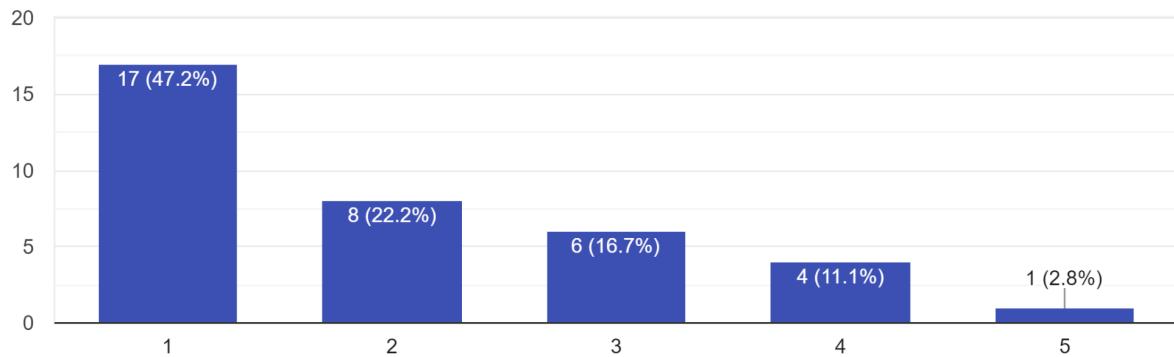
The screenshot shows the 'Profile Page Version 2'. The layout is similar to Version 1, with the 'MEDICAL TRACKER' logo at the top left and 'Home' and 'Healthy Living' links. The 'Text size option' and 'Logout' links are also present. The 'Profile selection' dropdown is located below the header. The 'Manage Profiles' sidebar has been simplified, showing five profile icons in a grid: 'ME' (purple), 'DAD' (yellow), 'MOM' (blue), 'SPOUSE' (pink), and 'CHILD' (orange). Below the sidebar is a 'New Profile' form. It includes fields for 'First Name', 'Last Name', 'Nickname', 'Gender' (set to 'Male'), 'Date of Birth' (with a calendar icon), 'Relationship' (set to 'Father'), and 'Medical History'. A 'Profile Colour' section shows a row of colored circles. A 'Save' button is located at the bottom right of the form.

As seen from the data below, though both versions of the page received similar responses regarding how easy they are to understand. Version 1 was highly preferred when it came to styling, with about 63% of respondents choosing it over version 2.

Survey Feedback:

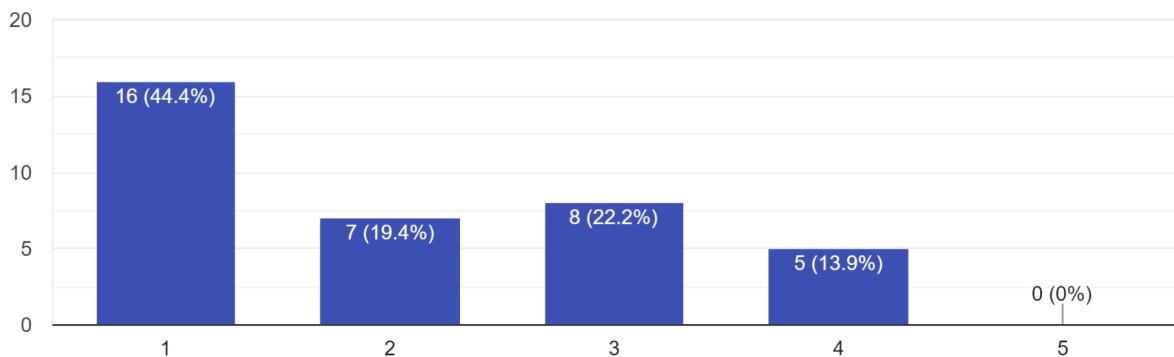
Profile Manager Page [Version 1] On a scale of 1 to 5, how easy was it to understand the page above?

36 responses



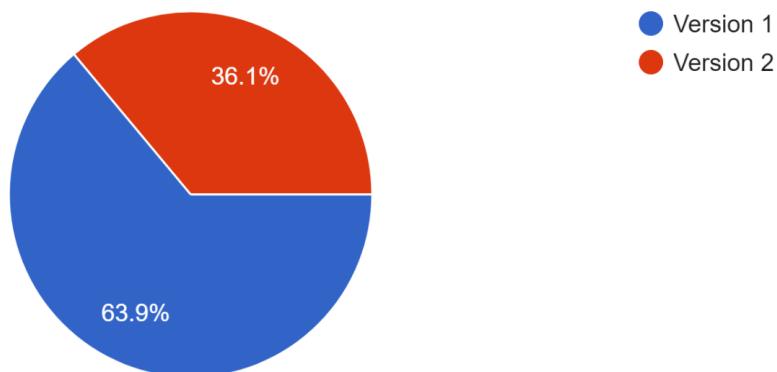
Profile Manager Page [Version 2] On a scale of 1 to 5, how easy was it to understand the page above?

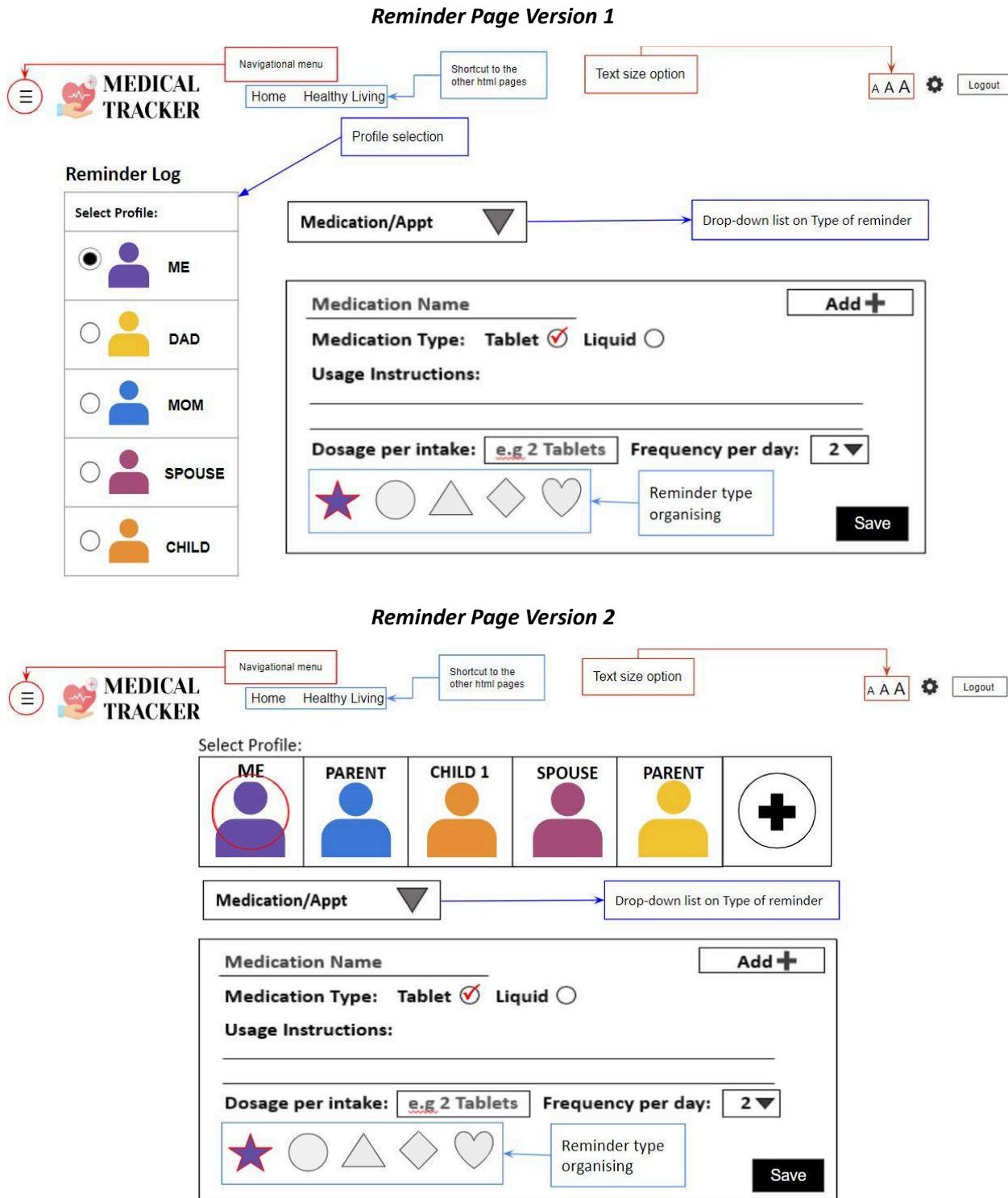
36 responses



Profile Manager Page Between the two versions shown above, which do you prefer?

36 responses



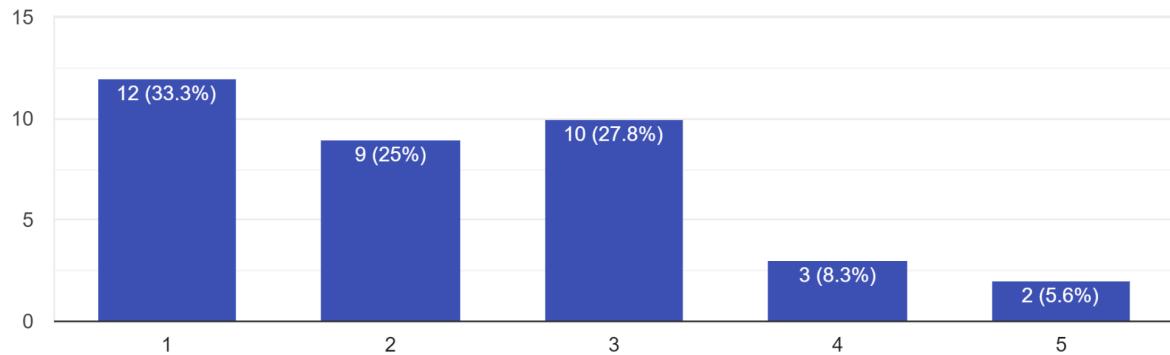


As seen from the data below, though both versions of the page received similar responses regarding how easy they are to understand. Version 1 was highly preferred when it came to styling, with about 63% of respondents choosing it over version 2.

Survey Feedback:

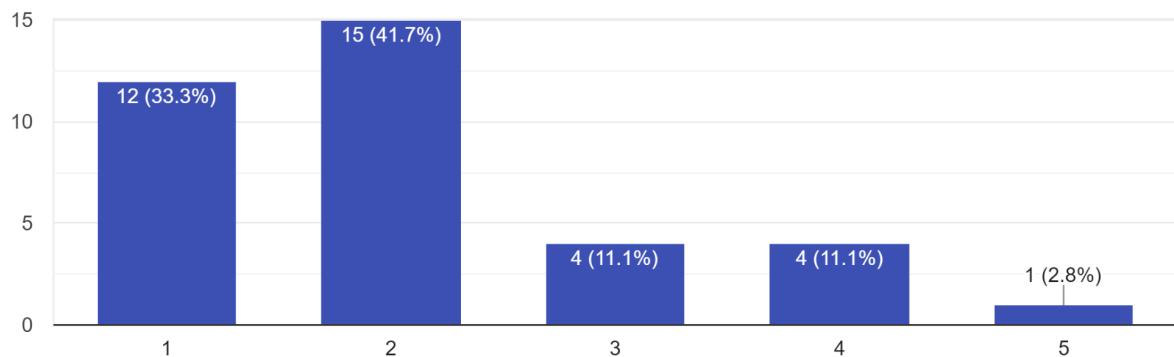
Reminder Log Page [Version 1] On a scale of 1 to 5, how easy was it to understand the page above?

36 responses



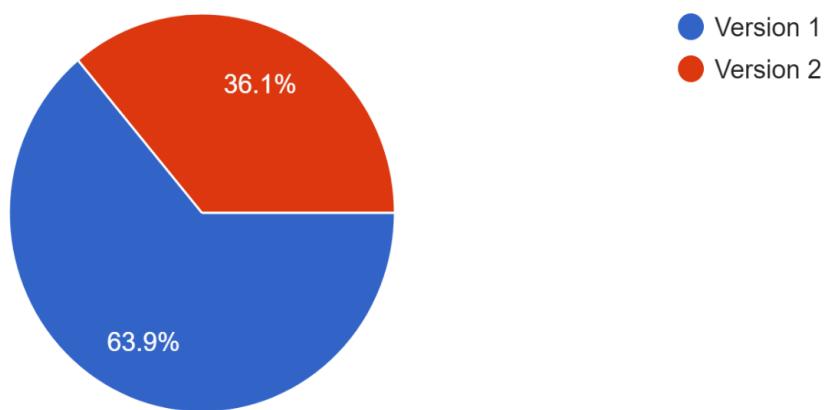
Reminder Log Page [Version 2] On a scale of 1 to 5, how easy was it to understand the page above?

36 responses



Reminder Log Page Between the two versions shown above, which do you prefer?

36 responses



Iteration 2 Conclusion

With the changes to the pages' consistency, feedback regarding the pages' intuitiveness decreased; this is in line with the general decrease in the percentage of respondents that find the pages difficult to understand.

Additionally, with the responses regarding the styling of the pages, the final design of the page was decided.

In conclusion, generally, the information on each page was generally kept the same whilst the styling was changed according to not only the preferred style of the respondents but was also changed with the consideration of keeping the styling between the various pages consistent. This can be seen in the design sector of the report.

5.0 Design

With the wireframe finalised, a high-fidelity design was created with the addition of the navigation bar and a colour theme that represents our purpose.

Each page is designed with a large navigation bar for easy access to the functions of the website, as well as a font adjustor to control the size of the font of the pages. A pink theme was chosen for the pages as pink is a calming colour that is often associated with care. It was also chosen to allow a high contrast with darker colours as well as the colour of the text. This is so that the legibility of the site will remain despite being coloured.

Home Page

◀ July 2022 ▶						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
26	27	28	29	30	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	1	2	3	4	5	6

★ Medication ● Appointment ❤ Refill

The home page contains the calendar along with the profile selector that allows users to control the various information present in the calendar. A larger daily view of the calendar is placed on the left for easier viewing of daily reminders and events.

Reminder Page

The reminder page consists of a profile selector as well as an alert creator. It allows users to create reminders for various events for the selected profile. This includes reminders for appointments, medication intake and medication refills as well.

This is done so that the calendar is easily customisable to fit each user's needs whether they are under a different country's healthcare system or choose private or public healthcare they can still add reminders according to their needs without needing to depend on access to various databases to add information.

Each reminder can also be customised to a symbol that will appear on a calendar so that users are able to tell which events will be occurring that day more easily.

Profile Page

The profile page consists of a side column to manage all the profiles with the main area that collects data from users to create new profiles. This allows users to create profiles for their elderly parents or children that may have difficulty or are unable to do so for themselves.

Each profile is colour coded into the colour selected during the creation of the profile. This allows users to be able to easily tell which events belong to which profile, helping them to better keep track of which person may have an upcoming appointment or is currently taking medication.

Appointment Page

Appointment Booking

Select Profiles

- ME**
- DAD**
- MUM**
- SON**

Health Institution: Dropdown

Service: Dropdown

Date:

Time Slots:

0700	0730	0800	0830	0900	0930
1000	1030	1100	1130	1200	1230
1300	1330	1400	1430	1500	1530
1600	1630	1700	1730	1800	1830
1900	1930	2000	2030	2100	2130

Book

The appointment page consists of a side column displaying all the profiles created and also the main section that displays and collects data. The drop-down bars allow users to select a clinic, the respective service they require and the date at which they wish to make an appointment. The available time slots will change according to what is selected.

When the user has selected all the respective data and chooses a valid appointment date, the appointment will be made for the respective selected profile. The appointment reminder will also be added to the calendar for easy tracking and viewing.

Healthy Living Page

The screenshot shows the 'Healthy Living' section of the Medical Tracker application. At the top, there's a navigation bar with the 'MEDICAL TRACKER' logo, user profile icons, and links for Home, Booking, Reminder, Profile, and Healthy Living. The main content area has a pink header with the title 'Healthy Living'. Below the title are three article cards, each featuring an image and placeholder text.

- Article 1:** Shows a family of three smiling. Placeholder text: 'Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam vulputate justo urna, nec sagittis sapien ullamcorper et. Mauris nec tempor odio. Duis mollis lectus justo, in rhoncus felis faucibus eu. Mauris orci ligula, bibendum et lobortis nec, tempus bibendum lectus.'
- Article 2:** Shows hands holding strawberries. Placeholder text: 'Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam vulputate justo urna, nec sagittis sapien ullamcorper et. Mauris nec tempor odio. Duis mollis lectus justo, in rhoncus felis faucibus eu. Mauris orci ligula, bibendum et lobortis nec, tempus bibendum lectus.'
- Article 3:** Shows a container of blueberries. Placeholder text: 'Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam vulputate justo urna, nec sagittis sapien ullamcorper et. Mauris nec tempor odio. Duis mollis lectus justo, in rhoncus felis faucibus eu. Mauris orci ligula, bibendum et lobortis nec, tempus bibendum lectus.'

The healthy living page consists of articles that promote a healthy lifestyle. Various articles are accessible on the website to allow users to learn good habits to lead a healthy lifestyle or to learn more about common diseases so that they can be more aware of potential health risks they are currently or may need to face.

Login Page

The screenshot shows the 'Login Page' of the 'MEDICAL TRACKER' application. At the top, there is a navigation bar with icons for Home, Booking, Reminder, Profile, and Healthy Living, along with a settings gear icon. Below the navigation bar, there are two main sections: 'Login' on the left and 'Sign Up' on the right.

Login Section:

- Email:** Input Field
- Password:** Input Field
- Login** button

Sign Up Section:

- First Name:** Input Field
- Last Name:** Input Field
- Email:** Input Field
- Confirm Email:** Input Field
- Password:** Input Field
- Confirm Password:** Input Field
- Click here after you have read and agree to our terms of service and privacy policy.
- I want to receive weekly health newsletter by email.
- Sign Up** button

The login page consists of two sections one that allows users to log in and one that allows people to sign up. Each form intakes users' information and compares it against the accounts stored, invalid information or missing information will prompt users in the respective fields that have the incorrect data.

6.0 System Development

During the development of the software, the goal of the software was to achieve the pages shown earlier in [design](#). In order to achieve the pages in design, we need to implement a few core components for the system. The languages used for our project are HTML, CSS and php. The database used was MySql from wampserver.

6.1 Core Components of System

Components in the Folder	Function
Navigation bar/ hamburger menu	To help users navigate through the website. In case users are accessing the website on a smaller screen a hamburger menu is provided for navigation.
Website Form	These forms are found on the appointment booking, medication, reminder, profile, login and sign up pages.
Form Field	These are the fields on the form that users can interact with and input data into them. These fields vary from text box to dropdown menu depending on the kind of data required from the users.
Calendar	A calendar on the main menu screen to help show users when all their appointments are.
Legends	To indicate which event on the calendar belongs to which profile under the user for clearer depiction and understanding
Sign Up/Login	A sign up and login page so that the users' account's private pieces of information are protected
Website Buttons	For users to submit and confirm an action or help interact with the website
Profile List	To display the profiles under the user account on the side of the screen.

6.2 Experience with TDD

TDD is a very helpful method with the progress of implementing the functions to our website. Getting the basic layout of the page is generally the easy part as we have the CSS to aid in the styling of the website. However, implementing functions can be very daunting and challenging as they have to interact with the corresponding component of the website as well as the database being set up in the back end. That's when the TDD method makes it relatively manageable. We start off with a single function at a time, code it in and debug it when there are issues and once it is fixed we will make another function. As we test the newly implemented function we have to test the previously implemented function as sometimes the previous function will face some issues and cease to work. If that were to happen we have to review the newly added function and see what is causing the issue. TDD makes it easier to debug codes as it gives a systematic approach.

6.3 Code Approach and Building Process

As mentioned above we approach the codes differently for the based aesthetic and placement of each element on the website was handled through the CSS codes. The functions were approached in a more systematic order by taking smaller steps and implementing each function slowly and one at a time. To ensure an easier time at debugging and finding the source of the issue in the codes.

One of the interesting things we experienced while coding for our website was when we were implementing the forms. As our website consists of many forms. We discovered that the fields in the form cannot have a “null” data as it would not be inserted into the database for our website. The fix for this problem was to make all fields have a “required” attribute. This will prevent any “null” data hence allowing the entry to be implemented into our website database.

6.4 Code Description

This project's minimal viable product consists of the website's 3 main functions. The code produced aims to achieve these 3 main functions through 3 main pages: Index.html which covers the calendar, appointment.html which allows users to book appointments and reminder.html that allows users to create reminders.

The following code is the code we have managed to put into place while creating this software.

Navigational Bar



```
<nav>
  <ul class="main-menu">
    <div id="img">
      
    </div>
    <li><a href="index.html" title="index">Home </a></li>
    <li><a href="booking.html" title="booking">Booking </a></li>
    <li><a href="#" title="reminder">Reminder </a></li>
      <li><a href="profile.html" title="profile">Profile </a></li>
    <li><a href="living.html" title="living">Healthy Living </a></li>
  </ul>
</nav>
```

Above are the codes to create a navigational menu.

The navigational menu was to be used on all the pages on our website to help users navigate the website with ease.

It contains links to the main functions of the page: calendar tracking page, reminder creator, appointment booking page as well as an information page.

Login.html

<p>Login</p> <p>NRIC : <input type="text" value="eg S1234567A"/></p> <p>Password : <input type="password"/></p> <p><input type="button" value="Login"/></p>	<p>Sign up</p> <p>First name : <input type="text"/></p> <p>Last name : <input type="text"/></p> <p>Email : <input type="email"/></p> <p>NRIC: <input type="text"/></p> <p>Password : <input type="password"/></p> <p>Confirm Password : <input type="password"/></p> <p><input type="button" value="Login"/></p>
--	---

```
<div id="wrapper">
    <div id="login">
        <form id="login" action="checkLogin.php">
            <h2>Login</h2>
            <label>NRIC : </label>
            <input type="text" id="nrictlogin" placeholder="eg S1234567A" required />
            <br>
            <label>Password : </label>
            <input type="password" id="loginpw" required />
            <br>
            <input type="submit" value="Login"/>
        </form>
    </div>
    <div id="register">
        <form id="register" action="register.php">
            <h2>Sign up</h2>
            <label>First name :</label>
            <input type="text" id="firstName" required />
            <br>

            <label>Last name :</label>
            <input type="text" id="lastName" required />
            <br>
            <label>Email :</label>
            <input type="email" id="emailAddress" required />
            <br>
            <label>NRIC: </label>
            <input type="text" id="nrict" required />
            <br>
            <label>Password : </label>
            <input type="password" id="pw" required />
            <br>
            <label>Confirm Password : </label>
            <input type="password" id="cfmPW" required />
            <br>
            <input type="submit" value="Login"/>
        </form>
    </div>
</div>
```

The above code is for the login page. The page consists of the login form and the register form. The forms are categorised accordingly with the login form under the id of 'login' and the register form under 'register'. The login page is also linked to a related php page that checks the login information of the user and brings them to the home page of the website.

Index.html

The screenshot shows a web application interface for managing medical appointments. On the left, there is a sidebar titled "Appointment" containing a table with three rows of data:

Date	Venue
17/09	Dorcas checkup @ SGH
21/09	Amanda checkup @ CGH
30/09	Hui Ling checkup @ TTSH

The main area displays a monthly calendar for September 2022. The days of the week are labeled at the top: Sun, Mon, Tue, Wed, Thu, Fri, Sat. The dates are numbered from 28 to 1. A yellow box highlights the date 5, which corresponds to the Amanda checkup. A blue box highlights the date 17, which corresponds to the Dorcas health check. Another blue box highlights the date 24, which corresponds to the Amanda health check. A blue box also highlights the date 30, which corresponds to the Hui Ling health check. The right side of the calendar has a "Profile" section with three entries: Dorcas, Amanda, and Hui Ling.

```

<html>
    <link rel="stylesheet" type="text/css" href="index.css"/>
<head>
    |   <!-- CSS for full calender -->
    <link href="https://fullcalendar.io/js/fullcalendar-3.8.2/fullcalendar.min.css" rel="stylesheet" />
    <!-- JS for jQuery -->
    <script src="https://cdnjs.cloudflare.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>
    <!-- JS for full calender -->
    <script src="https://cdnjs.cloudflare.com/ajax/libs/moment.js/2.20.1/moment.min.js"></script>
    <script src="https://cdnjs.cloudflare.com/ajax/libs/fullcalendar/3.8.2/fullcalendar.min.js"></script>
    <?php
        session_start();

        $conn = mysqli_connect("localhost", "root", "", "project" );
    ?>

```

Above are some references used for the website such as the stylesheet and script code.

Code for events on the calendar

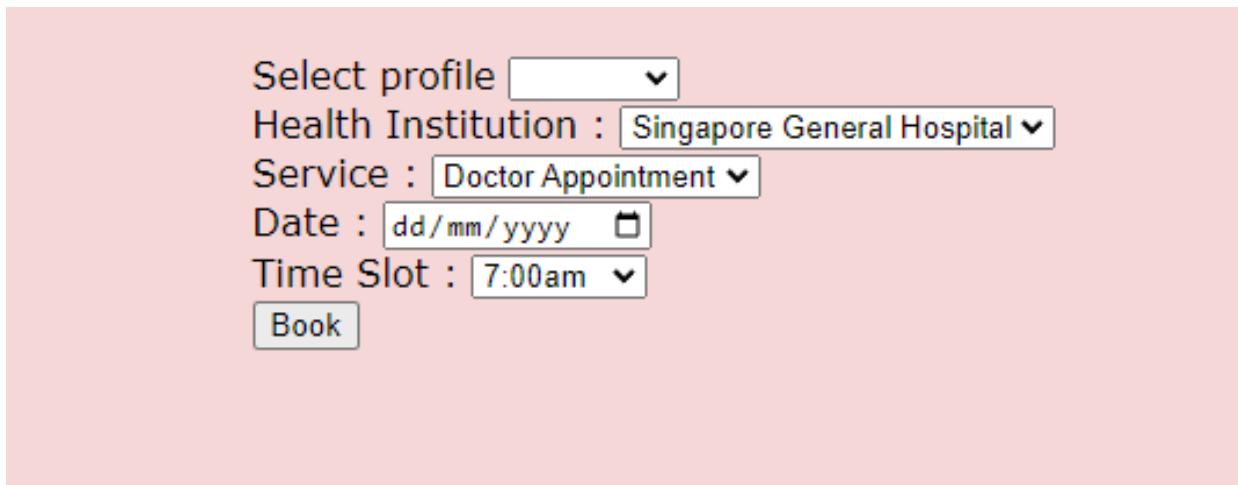
```
defaultView: 'month',
events: [
  {
    title: 'Amanda health checkup',
    start: '2022-09-21' // change with current date
  },
  {
    title: 'Dorcas health checkup',
    start: '2022-09-17'
  },
  {
    title: 'Hui Ling health checkup',
    start: '2022-09-30'
  }
]
```

Code for events on the calendar daily view

```
<caption>Appointment</caption>
<tr>
  <th>Date</th>
  <th>Venue</th>
</tr>
<tr>
  <td>17/09</td>
  <td>Dorcas checkup @ SGH</td>
</tr>
<tr>
  <td>21/09</td>
  <td>Amanda checkup @ CGH</td>
</tr>
<tr>
  <td>30/09</td>
  <td>Hui Ling checkup @ TTS&H</td>
</tr>
```

Profile selector on home page

```
<div id="calendar"></div>
<div id="profiles">
    <table>
        <caption>Profile</caption>
        <tr>
            <td><a href="profile.html%20dorcas">Dorcas</a></td>
        </tr>
        <tr>
            <td><a href="profile.html%20amanda">Amanda</a></td>
        </tr>
        <tr>
            <td><a href="profile.html%20huiling">Hui Ling</a></td>
        </tr>
    </table>
</div>
</div>
```

Booking.html

The screenshot shows a user interface for booking a medical appointment. It consists of several input fields and dropdown menus:

- A dropdown menu labeled "Select profile" with a downward arrow.
- A dropdown menu labeled "Health Institution : Singapore General Hospital" with a downward arrow.
- A dropdown menu labeled "Service : Doctor Appointment" with a downward arrow.
- A date input field labeled "Date : dd/mm/yyyy" with a calendar icon.
- A dropdown menu labeled "Time Slot : 7:00am" with a downward arrow.
- A blue "Book" button at the bottom left.

```
<div id="wrapper">
    <form id="form1" action="addAppointment.php">
        <label>Select profile</label>
        <select name="profile" id="profile" required>
            <option value=""></option>
            <option value="dorcus">Dorcus</option>
            <option value="amanda">Amanda</option>
            <option value="huiling">Hui Ling</option>
        </select>
        <br>
        <label>Health Institution : </label>
        <select name="hospital" id="hospital">
            <option value="sgh">Singapore General Hospital</option>
            <option value="ttsh">Tan Tock Seng Hospital</option>
            <option value="cgh">Changi General Hospital</option>
            <option value="nuh">National University Hospital</option>
        </select>
        <br>
        <label>Service :</label>
        <select name="service" id="service">
            <option value="appointment">Doctor Appointment</option>
        </select>
        <br>
        <label>Date : </label>
        <input type="date" id="date" value=selected required />
        <br>
        <label>Time Slot :</label>
        <select name="timeslot" id="timeslot">
            <option value="0700">7:00am</option>
            <option value="0800">8:00am</option>
            <option value="0900">9:00am</option>
            <option value="1000">10:00am</option>
            <option value="1100">11:00am</option>
            <option value="1200">12:00pm</option>
            <option value="1300">1:00pm</option>
            <option value="1400">2:00pm</option>
            <option value="1500">3:00pm</option>
            <option value="1600">4:00pm</option>
            <option value="1700">5:00pm</option>
        </select>
        <br>
        <input type="submit" value="Book" />
    </form>
</div>
```

Reminder.html

Select profile

Select medication type : tablet Liquid

Dosage per intake :

Frequency per day :

Special medication note :

```
<div id="wrapper">
    <form id="form1" action="addReminder.php">
        <label>Select profile</label>
        <select name="profile" id="profile" required>
            <option value=""></option>
            <option value="dorcas">Dorcas</option>
            <option value="amanda">Amanda</option>
            <option value="huiling">Hui Ling</option>
        </select>
        <br>
        <label>Select medication type : </label>
        <input type="radio" id="medicationType" value="tablet">
        <label>tablet</label>
        <input type="radio" id="medicationType" value="liquid">
        <label>Liquid</label>
        <br>
        <label>Dosage per intake : </label>
        <input type="text" id="dosage" placeholder="e.g 2 tablets/tablespoon">
        <br>
        <label>Frequency per day :</label>
        <input type="number" id="frequency" min="0">
        <br>
        <label>Special medication note :</label>
        <br>
        <textarea id="specialNote" rows="4" cols="40"></textarea>
        <br>
        <input type="submit" value="Book" />
    </form>
</div>
```

Above are the codes for the form that users will fill up when they are adding medication reminders to their profiles/account.

7.0 Analysis / Outcomes

7.1 User Analysis

To learn how effective the website will be, our group conducted a survey regarding the User Interface (UI) and implementations of the website and allowed users to provide responses and comments. Snippets of the website wireframe were included in the survey for the user to have better visual aids of the website.

Feedback was generally similar across responses with responses requesting more information describing the wireframe and certain responses providing specific feedback as mentioned in 5.3 assumption testing.

8.0 Evaluation

The overall process of creating our website was tougher than we expected. Though planning, research and design went smoothly, which enabled us to finalise our scope, ideas and functions for our website , we faced bumps when conducting our iterations. This is because during our user interface survey not all feedback received in the survey was helpful or useful, fortunately there was a few helpful constructive feedback to help us improve our user interface to be more friendly however we question whether our design is truly as user friendly as we aimed it to be. After this hurdle was crossed things went more smoothly.

Coding was also a tough hurdle for our team, in addition to the common problems one will always face such as difficulty while debugging the codes, the interconnectedness of our web pages also increased the difficulty of our project and slowed down our progress.

A brief summary of our project members:

Scrum Master

Dorcas is our scrum master to help facilitate our progress and relay instructions to the rest of the team. She ensures we get things done on time. She also updates and optimises the backlog planning.

Team

The team consists of Amanda, Hui Ling and Zi Hao. From within the team Zi Hao is the lead coder, he handles mainly coding tasks. Amanda and Hui Ling handle more on the UI and documentation related tasks.

The prototype we created has the core functions that we wanted inside. It can definitely be further improved on and optimised to achieve what we had envisioned in our minds.

8.2 Future Work & Improvement

- **Editing of Appointment**

Currently we are aware of users being able to add appointments however, there isn't a function for the user to edit or delete the appointment in case of any last-minute cancellation or rescheduling of the appointment. This will be added in the future.

- **Removing of Existing Profiles**

Users are able to add profiles to help them monitor multiple people. They are able to edit profiles but are unable to remove profiles. A function will be implemented for this in the future.

- **Reminder to Refill Medication**

Help the users to be reminded of refilling their necessary medications before it runs out.

- **Ordering and Delivery of Medication**

Singapore is a fast paced country, it is common for the people living in the country to have a very busy and packed schedule. Currently our website has no way to order medications for those who are on constant medication nor do we have a delivery service. Implementing this function will greatly assist the users in ensuring they get their medications on time despite how busy they are.

- **Customisable display names**

Able to edit the display names of profiles under the user account this will help users to identify profiles easier and for a clearer and cleaner UI. This is especially so if the name is very long.

9.0 Conclusion

In conclusion our group was able to achieve what we set out to do. Our goal was to make a health tracker website which includes functions for users to add medication and booking of reminders, adding of other profiles under the user account, booking of an appointment, signing up and logging in. These are the main core functions we had set for ourselves for this project and we were able to accomplish them in the prototype that we have built. As stated in [evaluation](#), there could be a lot more improvements made to the prototype for it to help the busy lives of our targeted audience.

9.1 Self Reflection

10.0 Appendix

10.1

<https://www.moh.gov.sg/resources-statistics/singapore-health-facts/principal-causes-of-death>

10.2:

<https://www.singstat.gov.sg/find-data/search-by-theme/population/death-and-life-expectancy/latest-data>

10.3:

This is the link to the results from our survey responses: [+ Health App questionnaire \(Responses\)](#)

This is the link to the results from our prototype survey responses: [+ Website Survey \(Responses\)](#)

This is the link to the results for our UI survey responses

[+ Healthcare Tracker UI preference \(Response\)](#)

10.4 Prototype Demo:

<https://app.uizard.io/p/434d7a77>