

INF 353 Assignment 2

Mobile and Watch UIs

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1. Design Pitch

The medical clinic that subcontracted us wants a secure and easy to use platform for the convenience of their patients. Patients want their personal information to be secure and properly stored. They want to easily book, cancel, and reschedule COVID-19 test appointments, so a back-end framework that can validate the information provided by patients is necessary. Patients also want to easily access their test results. Patients would not want to input their medical information multiple times because the application does not store their information. Furthermore, patients are already struggling during the pandemic so we don't want patients to feel helpless or confused. The purpose of the app is to allow patients to regain a sense of control over their health during the pandemic. Our approach is to make the user interface as intuitive and straightforward as possible by developing an application that is simple to learn and use. To supplement this design process, we will interview patients who already did COVID-19 tests for shared or conflicting experiences.

Our mobile app will provide a quick and reliable way of storing, handling, and changing patient information. Prior to the COVID-19 pandemic, some clinics did not provide mobile apps to book appointments, which is a significant issue. To meet the high demand for COVID-19 testing, the application must be able to effectively assist patients in booking COVID-19 tests or obtaining a physician consultation appointment. Prior to mobile apps, it was inconvenient for patients to make appointments through phone calls and it added unnecessary work for clinic staff to have to manually record patient information into the clinic database. As the number of COVID-19 infections or people with suspected symptoms gradually increases, phone appointments can be cumbersome and time-consuming. Patients also need to call again if they want to change or cancel their appointments, which is time-consuming because the clinical staff has to verify the patient's identity and medical information. This significantly decreases the clinic's efficiency. Furthermore, clinic workers can easily make errors when manually entering a client's appointment details, such as

scheduling the wrong client with the same name. We must ensure that our app is less frustrating, less error prone, and less time consuming for patients.

Our design solutions focused on alleviating the health concerns of patients by making COVID-19 testing accessible. After patients log in, our application will show a page with simple instructions. Patients can book COVID-19 test appointments, find their appointment history, or check their test results. In the “Book appointment” module, we will strive to reduce all page changes during the appointment process and minimize medical information to not overwhelm patients. To make the appointment booking as easy and intuitive as possible, we will eliminate all unnecessary steps, pages, and details. We will make the available scheduling options clear to patients and make the process straightforward. In addition, we will implement many confirmation steps and use pop-ups to ensure that patients are instructed correctly to avoid accidental and unnecessary errors. To cancel an appointment that has already been scheduled, patients must deliberately press the delete or reschedule buttons as well as a confirmation process. We ensure that our patients can easily differentiate between available and unavailable test results as well as good and bad results. We will provide resources for patients who need assistance. When a customer receives a positive test result, we want to support them in scheduling an appointment with their doctor as soon as possible. We believe that as a result of the solutions we've introduced, patients will be satisfied with the fast service of our client, the medical clinic.

2. One proto - persona

Our prototype character is Sam, a student at the University of Toronto's Faculty of Information. A friend that he recently met has been infected with COVID-19. Recently, Sam the Student's body temperature has been very high so he is really worried about his health and his living situation makes him worried that he may put his family members in danger. He decides to schedule a COVID-19 exam.

When Sam the Student tried to make an appointment at a clinic near him, the clinic website indicated that he had to call to make an appointment. Sam the Student

tried calling 5 times and the line was busy. Sam the Student has a very busy work and school schedule so he could not stay on hold for too long. When Sam the Student finally got through, the clinic told him that there were no more spots left for the days that he wanted to make an appointment. He found the process and lack of accessibility very frustrating. When he was finally able to make an appointment for the test, he needed to call several times to find out if his test results were available or not. Unfortunately, his test results were also positive, and it drove him crazy that he needed to call the clinic again to make an appointment to see the doctor. Due to the demand for COVID-19 testing, it was impossible for Sam the Student to get through in one call.

Sam the Student hoped he could find a clinic that provided a mobile app for scheduling appointments so he could easily book appointments anywhere at any time. He wanted to be able to quickly alter or postpone his appointments and if necessary, see the doctor as soon as the test results are available. Our goal is for the app to assist patients with suspected infections, such as Sam the Student, in scheduling COVID-19 testing appointments in a timely and efficient manner and significantly improving the clinic's efficiency.

High Fidelity Proto-Persona Link (Preview on next page):

<https://app.mural.co/t/inf3527270/m/inf3527270/1615521777801/b4599bcd3051d6812676d5ff6ae4ac1deead5db7>

Persona Profile

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NAME:
Sam the Student

PORTRAIT:



"I want all my families are safe! "
"What do the test results mean?"
"What should I do if I get COVID-19?"

"I hope one day I can go out without wearing mask"
"When will this quarantine stop ?!!!"
"Why the rate of infected people still go up ?"

ATTITUDES:

Likes effortless navigation	Likes easy to understand information	Doesn't like COVID-19 scares
Likes time efficient processes	Likes straight forward processes	Likes thorough information
Likes Intuitive navigation	Does not like to guess meanings	Does not like medical jargon

GENERAL DESCRIPTION:

24 years	Information Major	Single	Undergrad	Part-time dog sitter
Living with parents during pandemic	Busy	Socially Distances	Needs Frequent COVID-19 tests	Virtual freelance
Impatient	Adept with tech	Alert	Mask wearer	Runs errands for parents

GOALS:

Consistently test for COVID-19	Maintain health	Keep friends and family safe
Abide by pandemic protocols	Stay aware of personal health status	Test outside of work schedule
Hassle free planning and testing	Don't miss any appointments	Stay up to date on Latest COVID-19 updates

Needs Frustrations

Needs			Frustrations		
Easy to understand	Accurate information	Secure and reliable platform	Unclear future	Inaccessible information	COVID-19 worries
Clear instructions	Information verify system	Link to user calender	Hard to navigate government information	Privacy concerns	Confusing testing instruction
Test Result Explanation	Schedule Reminders	Accessible (usable by everyone)	Family has high risk individuals	Financial worries from economy	Job security worries

Innovating for People | Activity Templates | Persona Profile

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3. One set of hand - Drawn low - fidelity sketches of the user interface

Mobile

(1) New Patient Registration

Home Page ①

RBC Clinic (H)
COVID Test

User name
password
Forgot User name / password?
No Account?

New patient registration ①

RBC Clinic (H)
Account Registration

First Name* Last Name*
first name last name
Email Address*
Email Address
Phone* Birthday*
Phone Birthday
Address
Address
Search here
Health Card Number
Health Card Number
User name*
User name
password*
password

New Patient registration ②

RBC Clinic (H)
Account Registration

First Name Last Name
First Name Last Name
Email Address
Email Address
Phone Birthday
Phone Birthday
Address
Address
Health Card Number
Health Card Number
User name
User name
password
password

(2) Appointment Booking

COVID Test Main Page:

RBC Clinic (H)
COVID Test

Appointment Booking
Appointment Management
Testing Results
Account Management

Appointment Booking ①

RBC Clinic (H)
Appointment Booking

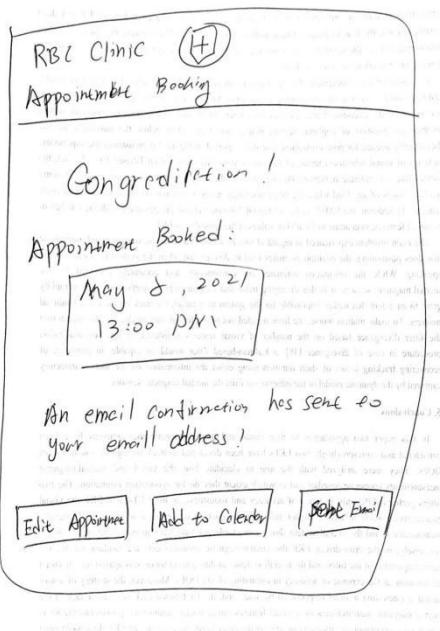
Select Date & Time
< May 2021 >
Sun Mon Tue Wed Thu Fri Sat
5 6 7 8 9 10 11
Wednesday, May 8, 2021
9:00 AM 10:00 AM 11:00 AM
12:00 PM 1:00 PM 2:00 PM
3:00 PM 4:00 PM 5:00 PM

Appointment Booking ②

RBC Clinic (H)
Appointment Booking

May 8, 2021
13:00 PM

Appointment Booking (3)



(3) Appointment Management

This section shows two hand-drawn sketches of appointment management interfaces.

The left sketch, titled "Appointment management (1)", shows a booking interface with "RBC Clinic (H)" at the top. It includes fields for "Appointment Booked:" (containing "May 8, 2021 13:00 PM") and buttons for "Reschedule" and "Cancel".

The right sketch, titled "Appointment management (2)", shows a cancellation interface with "RBC Clinic (H)" at the top. It includes a confirmation message "Confirmed!", a section for "Your appointment:" (containing "May 8, 2021 13:00 PM"), and a note "has been Cancelled!". It also includes a "Reserve Again", "Edit Calendar", and "Send Email!" button, along with a note "An cancellation email has been sent to [redacted] your email address!"

(4) Testing Results

Testing Result ①

RBC Clinic (⊕)

Testing Result

Test Result

Test History

Back

Test Result ②

RBC Clinic (⊕)

Test Results

Test Code []

User Name []

Health card Number []

Back

Appointment Booking ③

RBC Clinic

Test Results

No test found!
There is ~~is~~ no credible information associate with the test information provided.

Back

Test Result ④

RBC Clinic

Test Result

Nucleic Acid: [N/A]

Ig M: [+Positive]

Ig G: [-negative]

* The result for tests are still awaiting test results!

Back

Test Result ④

RBC Clinic (⊕)

Test Result

Nucleic Acid: [-negative]

Ig M: [-Negative]

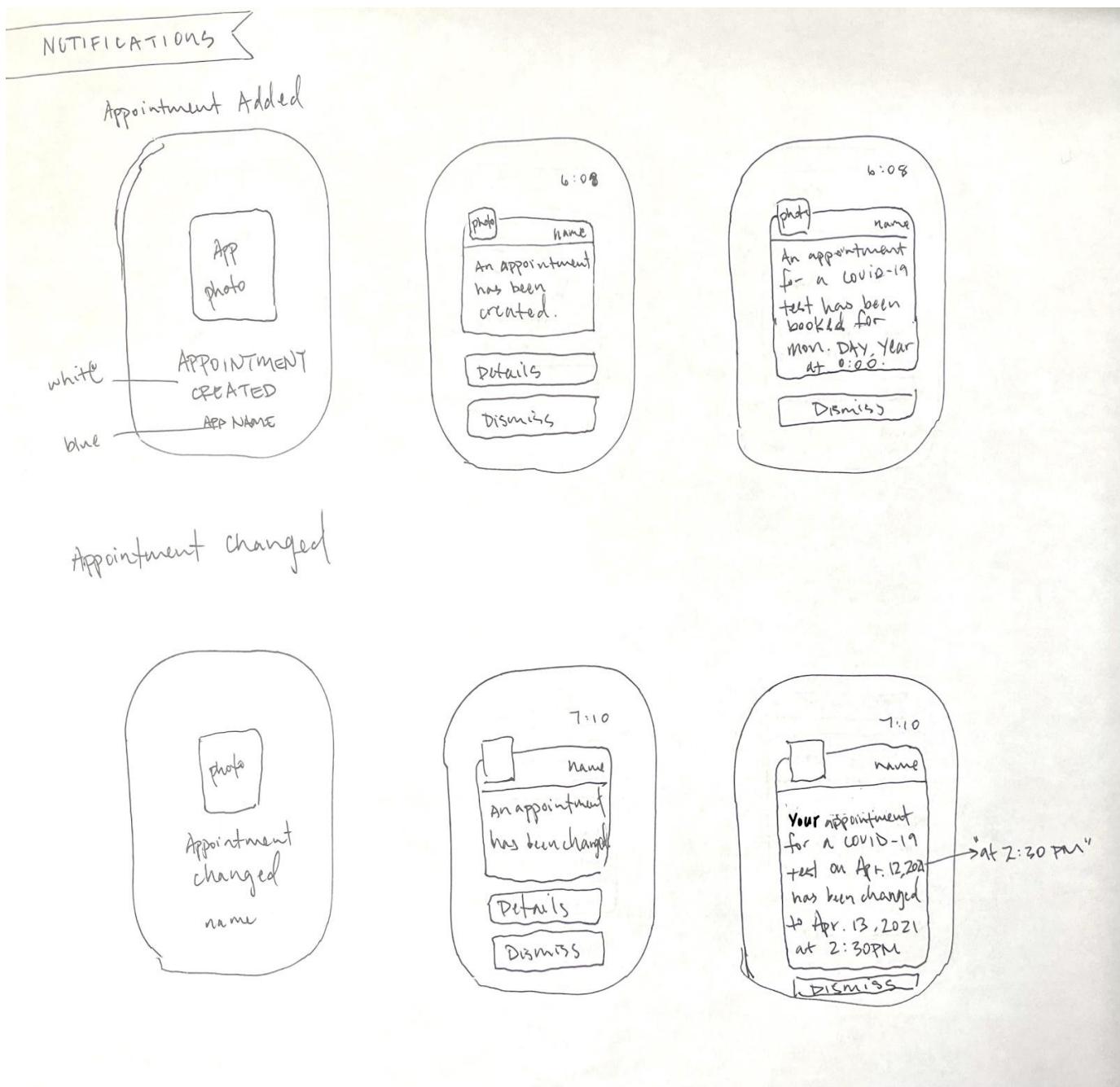
Ig G: [-negative]

You did not get infected by COVID-19.

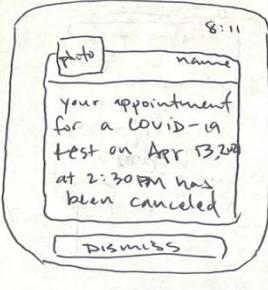
Back Print Cancel

Watch

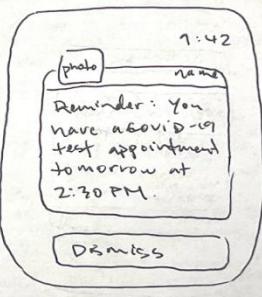
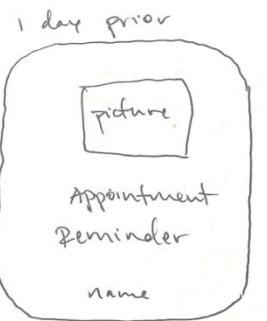
(1) Notifications



Appointment canceled



Appointment Reminder

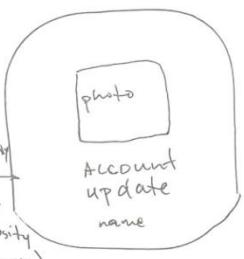


1 hour prior

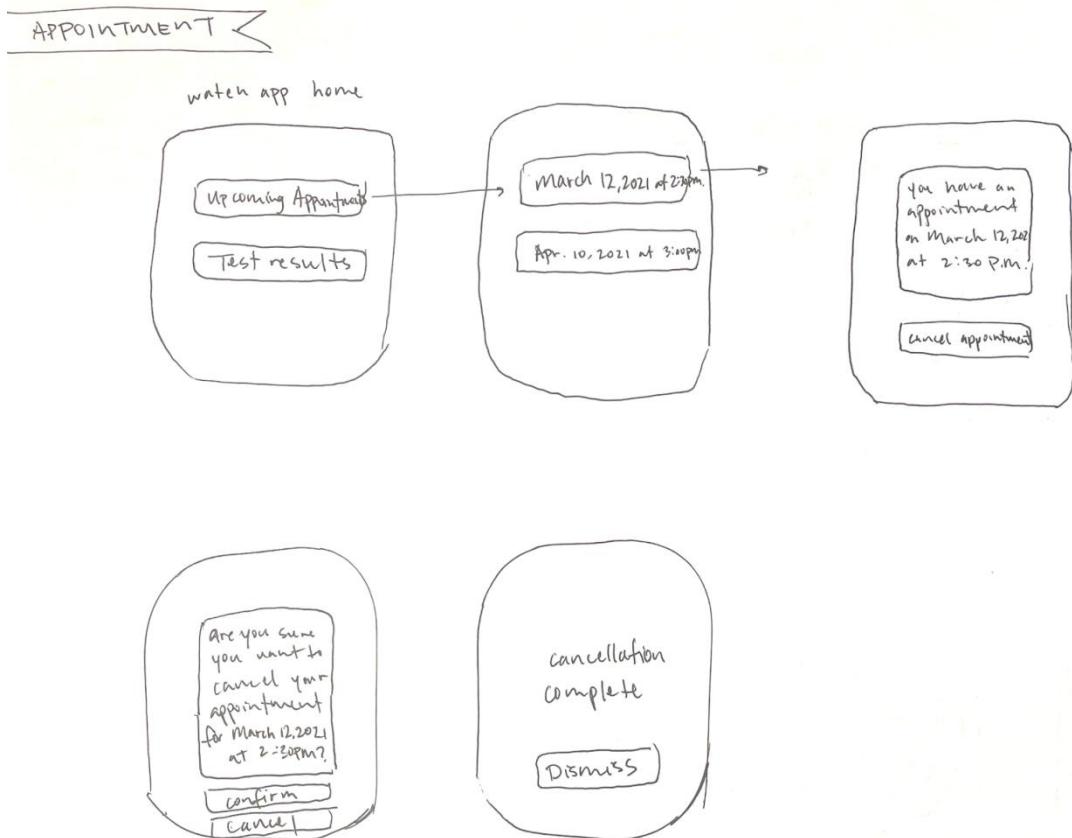


Test Results

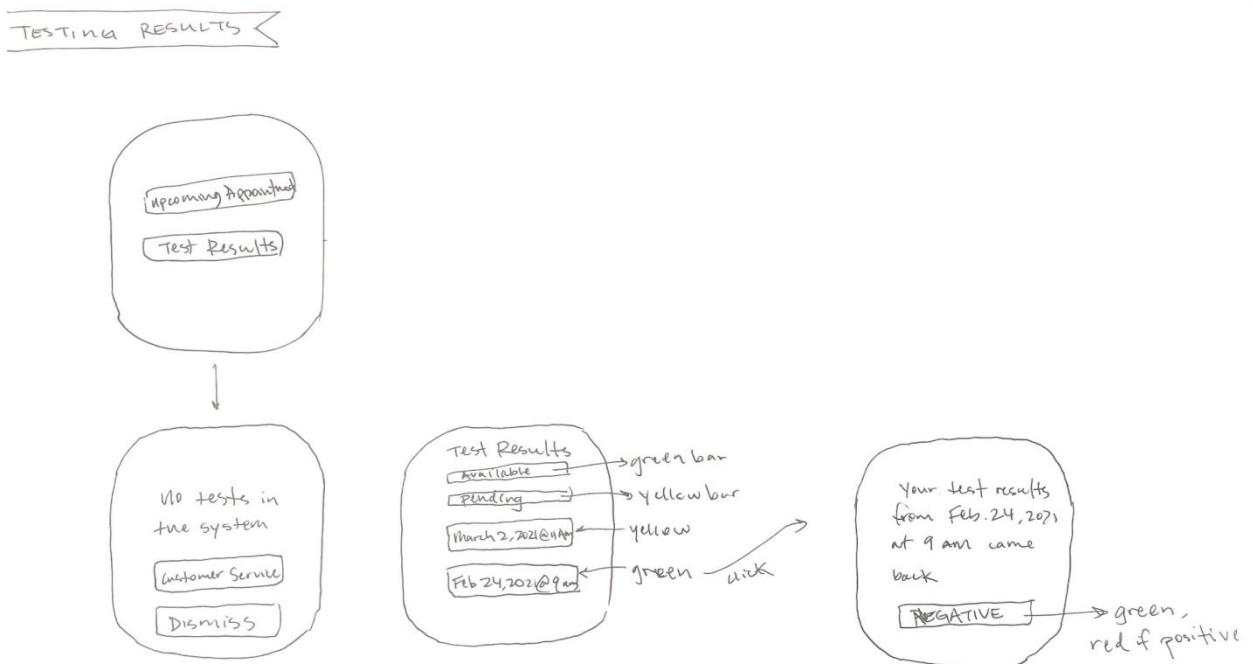
name intentionally
kept vague to
avoid bystander
panic or curiosity
(privacy concern)



(2) Appointment



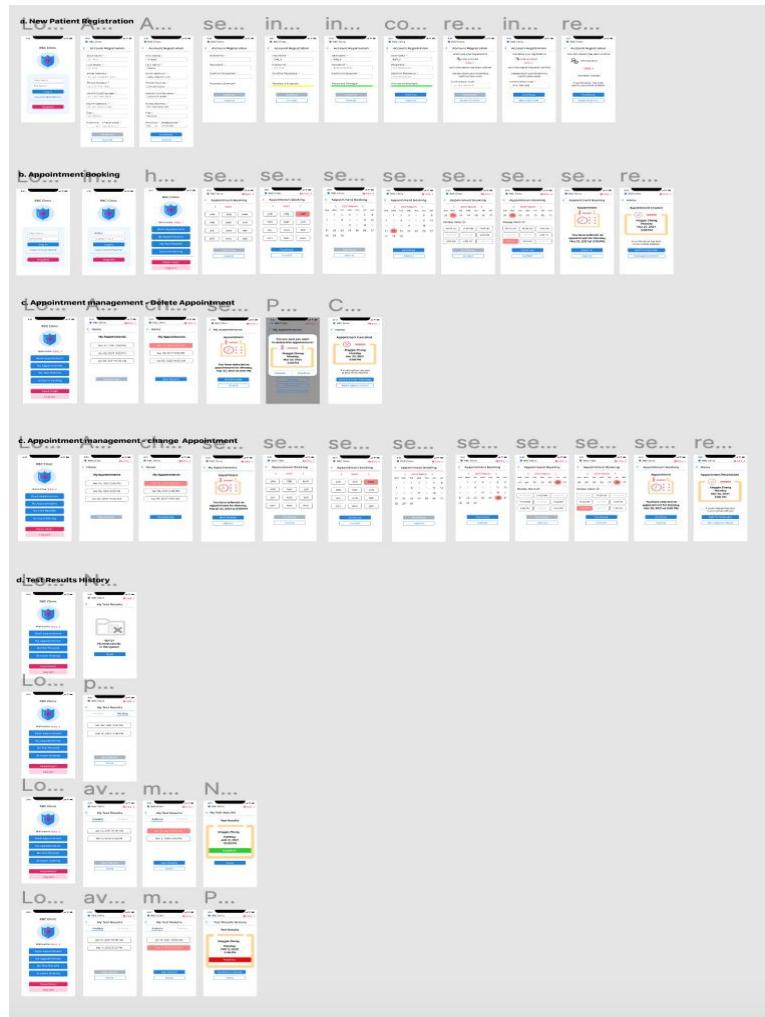
(3) Testing Results



4. Figma clickable high - fidelity prototype

Please follow this FIGMA link for the clickable high - fidelity prototype, the fourth draft is our final version:

(<https://www.figma.com/file/L3sHXvKGU5fz4hNTRmgWFk/Mobile-Watch?node-id=0%3A1>)



5. High - fidelity prototype

Please follow this MURAL link for the clickable high - fidelity prototype sequential storyboard:

- iPhone :(<https://app.mural.co/t/inf3527270/m/inf3527270/1616384132414/74bc2d17820ea5433ed30e9ae2a27fea6e0f546a>)
- iWatch :(<https://app.mural.co/t/inf3527270/m/inf3527270/1616382056245/633cc2e8eb84c00cda28037b6bb99cf9901eb84c>)

Mobile High Fidelity Story Board

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New Patient Account Registration

Start process to create account by clicking on the **Register** button

Fill in the required account information

Continue registration by clicking on the **Continue** button

Fill in the required username and password

Get notice to increase Password Strength

Extend the length of the password to increase the Password Strength

Enter password again under Confirm password to confirm password

Appointment Booking

Fill in the Confirmation Code that was received by verified email

Confirm account creation by clicking on the **Continue** button

Navigate to the home page after account registration by clicking the **Continue** button

Make a COVID-19 test appointment by clicking the **Book Appointment** button

Choose the desired appointment month by clicking on the **MAR** button

Navigate to date page by clicking on the **Continue** button

Choose the desired appointment date by clicking on the **22** button

Appointment Management

Navigate to time page by clicking on the **Continue** button

Choose the desired appointment time by clicking on the **3:00 PM** button

Navigate to appointment selection summary page by clicking on the **Continue** button

Confirm to book appointment by clicking on the **Confirm** button

Confirm to add appointment reminder by clicking on the **Add To Calendar** button

Check the Booked appointment by clicking on the **My Appointments** button

Choose the desired appointment by clicking on the **Mar 22, 2021 3:00 PM** button

Reschedule Appointment

Continue to see the appointment details by clicking on the **See Details** button

Get pop up reminder window by clicking on the **Delete** button

Confirm to delete appointment by clicking on the **Confirm** button

Confirm to remove appointment schedule by clicking on the **Remove from calendar** button

Check the Booked appointment by clicking on the **My Appointments** button

Choose the desired appointment by clicking on the **Mar 22, 2021 3:00 PM** button

Continue to see the appointment details by clicking on the **See Details** button

Test Results

Reschedule the test appointment by clicking on the **Reschedule** button

Choose the desired appointment month by clicking on the **MAR** button

Navigate to date page by clicking on the **28** button

Choose the desired appointment date by clicking on the **28** button

Navigate to time page by clicking on the **Continue** button

Choose the desired appointment time by clicking on the **3:00 PM** button

Navigate to appointment selection summary page by clicking on the **Continue** button

No Tests in the System

Check No Test Results by clicking on the **My Test Results** button

Go Back to the login home page by clicking the **Back** button

Check Pending Test Results by clicking on the **My Test Results** button

Go Back to the login home page by clicking the **Done** button

Tests Awaiting Results

Confirm to reschedule appointment by clicking on the **Confirm** button

Confirm to add appointment schedule by clicking on the **Add To Calendar** button

Check No Test Results by clicking on the **My Test Results** button

Go Back to the login home page by clicking the **Back** button

Check Pending Test Results by clicking on the **My Test Results** button

Go Back to the login home page by clicking the **Done** button

Available Test Results

Choose the desired appointment by clicking on the **Jan 13, 2021 10:00 AM** button

Check test result by clicking on the **See Details** button

Go Back to the login home page by clicking the **Done** button

Check the Available Test Results by clicking on the **My Test Results** button

Choose the desired appointment by clicking on the **Dec 3, 2020 3:30 PM** button

Check test result by clicking on the **See Details** button

Go Back to the login home page by clicking the **Done** button

Negative Result

Choose the desired appointment by clicking on the **Jan 13, 2021 10:00 AM** button

Check test result by clicking on the **See Details** button

Go Back to the login home page by clicking the **Done** button

Check the Available Test Results by clicking on the **My Test Results** button

Choose the desired appointment by clicking on the **Dec 3, 2020 3:30 PM** button

Check test result by clicking on the **See Details** button

Go Back to the login home page by clicking the **Done** button

Positive Result

Choose the desired appointment by clicking on the **Jan 13, 2021 10:00 AM** button

Check test result by clicking on the **See Details** button

Go Back to the login home page by clicking the **Done** button

Check the Available Test Results by clicking on the **My Test Results** button

Choose the desired appointment by clicking on the **Dec 3, 2020 3:30 PM** button

Check test result by clicking on the **See Details** button

Go Back to the login home page by clicking the **Done** button

Test Results History

Confirm to Contact a Doctor by clicking on the **Contact a Doctor** button

We didn't design the calendar page, only design the 'Add to Calendar' function

Check the Available Test Results by clicking on the **My Test Results** button

Go Back to the login home page by clicking the **Done** button

Check Pending Test Results by clicking on the **My Test Results** button

Go Back to the login home page by clicking the **Done** button

Check the Available Test Results by clicking on the **My Test Results** button

Go Back to the login home page by clicking the **Done** button

We didn't design the calendar page, only design the 'Add to Calendar' function

Watch High Fidelity Story Board

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6. Evidence of iterative feedback throughout the process

<u>Participant #1</u>	
Things that worked	Everything looks really good and clear!!
Things to change	Add an “back button” on “My Test Results” Add one page to fill account information
Questions	Will the “contact a doctor” go another action? There is no button after log in to show how to contact a doctor.
New Ideas	Add a section on the pending result screen to show the estimated time for getting results.

<u>Participant #2</u>	
Things that worked	Everything - worked as expected well
Things to change	Nothing
Questions	When adding to the calendar, which calendar options are available? I think usuals are outlook, icalendar, and google calendar
New Ideas	Above

7. Design specifications that document all

- a) font sizes and their purpose font sizes and their purpose

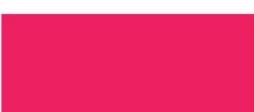
iPhone	
CATEGORY / ROLE	FONT SAMPLE
<ul style="list-style-type: none"> • Appointment selected for change page text • Popup text • Information about appointment selected text • Appointment change confirmation page Subtitle text • No test results page text 	SF Compact Rounded 24 Semibold
<ul style="list-style-type: none"> • RBC Clinic title • Page titles • Username text (qqq_z) 	SF Compact Rounded 24 Medium
<ul style="list-style-type: none"> • Popup window button text 	SF Compact Rounded 21
<ul style="list-style-type: none"> • Login page button text • Cancel button text • Confirm button text • Book Appointment button text • My Appointments button text • My Test Results button text • Account Setting button text • Need Help? button text 	SF Compact Rounded 21 Medium

<ul style="list-style-type: none"> ● Log out button text ● See Details button text ● Reschedule button text ● Delete button text ● Add to Calendar button text ● Remove from Calendar button text ● Back button text ● Home page ● welcome text 	
<ul style="list-style-type: none"> ● Appointment Booking Subtitle text (ex. 2021, 2021 March) 	SF Compact Rounded 20 Semibold
<ul style="list-style-type: none"> ● Login page “Username” and “Password,” ● Filled in Login information text ● Title of text box (example: First Name*) ● Confirmation page text, My test results page available and pending button title text 	SF Compact Rounded 20
<ul style="list-style-type: none"> ● Written out date button text ● Number date button text 	SF Compact Rounded 19
<ul style="list-style-type: none"> ● Text box Suggestions (examples: ex. John) ● “RBC Clinic” at the top of every page 	SF Compact Rounded 18 Medium
<ul style="list-style-type: none"> ● Text box Suggestions 	SF Compact Rounded 18

(examples: ex. John), Filled in text on registration pages	
● Time button text	SF Compact Rounded 17
● Login page “Forgot Username/Password ?”	SF Compact Rounded 14

iWatch	
CATEGORY / ROLE	FONT SAMPLE
● Notification title text ● Dismiss button text ● Details button text ● Snooze button text ● Appointment button text ● Test Results button text ● FAQ button text ● Help button text	SF Compact Rounded 13
● Notification content text ● Cancel button text ● Cancel Appointment text ● Confirm button text ● Available button text ● Pending button text ● Back button text	SF Compact Rounded 12
● App name on notification text ● back button text ● Date button text	SF Compact Rounded 11
● Notification content app name text	SF Compact Rounded 10

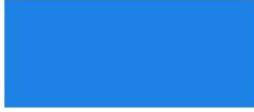
b) colours you used and their purpose

iPhone		
Swatch	Hex Code	Purpose
	1C82E6	<ul style="list-style-type: none">● Login Button● Horizontal lines
	FFD1E0	<ul style="list-style-type: none">● Logout button
	FF0051	<ul style="list-style-type: none">● Logout button text
	ED2162	<ul style="list-style-type: none">● Register button● Appointment Booking lines● Appointment Booking subtitles
	FF8181	<ul style="list-style-type: none">● Selected buttons● Appointment icon color
	FFD693	<ul style="list-style-type: none">● Appointment icon color

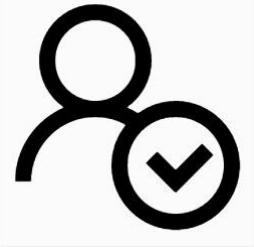
	FFFF00	<ul style="list-style-type: none">● Weak password indicator
	00FF00	<ul style="list-style-type: none">● Strong password indicator
	DB0909	<ul style="list-style-type: none">● Required star
	2AD12A	<ul style="list-style-type: none">● Negative test result bar
	FF0000	<ul style="list-style-type: none">● Positive test result bar
	FF0051	<ul style="list-style-type: none">● User account name text

	A5B6C8	<ul style="list-style-type: none"> ● Not clickable buttons
	767272	<ul style="list-style-type: none"> ● Text suggestion
	0B2238	<ul style="list-style-type: none"> ● Forgot Username/Password? Text
	000000	<ul style="list-style-type: none"> ● Page titles ● Text box titles
	FFFFFF	<ul style="list-style-type: none"> ● Blue button text ● Red button text ● Grey button text

iWatch		
Swatch	Hex Code	Purpose
	1C82E6	<ul style="list-style-type: none"> ● Back button

	4B4B4A	<ul style="list-style-type: none"> ● Not clickable date buttons
	1C82E6	<ul style="list-style-type: none"> ● Clickable date buttons
	000AFF	<ul style="list-style-type: none"> ● Clicked page indicator (Under Available and pending in test results)
	5E5E5C	<ul style="list-style-type: none"> ● Appointments button ● Test Results button ● FAQ button ● Help button ● Dismiss button ● Pending test result date button
	2793FD	<ul style="list-style-type: none"> ● Contact a Doctor button ● Cancel button
	FF0000	<ul style="list-style-type: none"> ● Positive test result bar
	00FF00	<ul style="list-style-type: none"> ● Negative test result bar
	7ABA9	<ul style="list-style-type: none"> ● Back button text (next to ⏪)
	FFFFFF	<ul style="list-style-type: none"> ● All button text ● All text except back button text

c) and cite all external assets you have used.

iPhone				
Icon	Name	Author	License	Purpose
	Medical shield logo	Memed Nurrohmard	Pixabay License Free for commercial use No attribution required	Clinic Logo
	ic:baseline-arrow-back-ios	Material Design Authors	Apache 2.0	Back indicator
	bi:chevron-downn	The Bootstrap Authors	MIT	Pull up option
	la:user-check	Icons8	MIT	Account Registration Success
	mdi:account-circle	Austin Andrews	Open Font License	Account Profile

	clarity:date-line	VMware	MIT	Calender Icon
	mdi:clock-time-eight-outline	Austin Andrews	Open Font License	Calender Icon
	bi:check-circle	The Bootstrap Authors	MIT	Appointment Created
	dashicons:no	WordPress	GPL 2.0	<ul style="list-style-type: none"> ● Appointment Canceled ● No test Result
	ant-design:file-done-outlined	HeskeyBaozi	MIT	No test Result
	fluent:folder-28-regular	Microsoft Corporation	MIT	No test Result

iPhone

Icon	Name	Author	License	Purpose

	Medical shield logo	Memed Nurrohmard	Pixabay License Free for commercial use No attribution required	Clinic Logo
	ic:baseline-arrow-back-ios	Material Design Authors	Apache 2.0	Back indicator
	iWatch Home Screen	Marc Saltzman	APPLE INC. APPLE watchOS SOFTWARE LICENSE Single Use License	iWatch Home Screen