



Guardian: Go Out Safely During A Pandemic

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Project Brief:

In the midst of the Covid-19 pandemic, business owners and consumers are filled with uncertainty about the situation. Consumers are not comfortable eating out and shopping, and business owners need to be resilient to this ever changing situation. From researching the users' problems and concerns, we have come up with "Guardian", an application that allows consumers and business owners to interact with each other through an interactive map along with collections of useful information including news and articles for both types of users.

Team Members:

Yejin Han

- Proofreading and formatting
- Researching existing solutions
- Responsible for the starting pages including home, login, and dashboard

Laphon Premcharoen

- Video editing (Pitch video)
- Leading in user survey including user survey and interviews
- Responsible for accessibility design (home screen overlay) and the news and articles feature.

Lucy Zhu

- Researching existing solutions
- Responsible for designing the map and QR code interfaces.

Yuhang Liu

- Video editing (Presentations)
- Researching existing solutions.
- Responsible for designing the map and QR code interfaces.

Introduction

Our team started out with the concern that the Covid-19 pandemic has drastically shifted the ways people live, work and do businesses. There is a need for both business owners and consumers to shift toward this new norm. In our previous user survey and interview on business owners and customers, we have focused on Thailand, a country where the spread of COVID-19 has been minimized. However, since COVID-19 is yet to be eliminated, businesses and consumers are still cautious and need to prepare for new waves of outbreak at any time. We discovered that although people are mostly comfortable going outdoors now, they still expect high quality prevention measures to ensure their safety. Although there is an application that helps track and notify patients, users still cannot properly give feedback to business owners and see their travel history. Multiple check-in might cause glitches on this application. Consequently, we see the need for our new solution to have well-managed information that is accessible to all. In addition, we are also considering ways to protect user privacy in the new solution as we have seen many other existing solutions that are potentially privacy invading. For business owners, many of them have been losing a significant number of customers. Some are having trouble affording to follow the public health guidelines. We have also heard from a tour manager that tourists are sometimes not updated about the rules and regulations. Overall, our new solution has these following key goals to meet: assisting business owners and consumers during the pandemic, well-structured information features that protect users' privacy.

Solutions Considered

Solution 1: COVID-19 Information Website

This solution is a website (or an app) where users can access economics and business news and information. The home page will consist of overall important information and updates about Covid-19. Users can have specific updates in a specific region by using the filter function. The updates include Covid-19 statistics (i.e. numbers of patients) and economics news and statistics. Business owners can also access business tips and advice according to the types of business they are doing to cope with an economic crisis during a pandemic. For example, if business owners have limitations in establishing social distancing, there is information about alternative ways to reduce the spread of Covid-19. The site also gathers articles about business owners who successfully cope with their businesses during the Covid-19 crisis where other business owners can look up to them.

Solution 2 A Youtube Channel

This solution is to create a Youtube Channel and upload videos about our experience of hanging out during covid-19. To encourage others to try to go out, we can be a leader. We can create some vlog or videos that show the proper preparation before we go out and what the environment of the shopping mall and restaurant looks like. And we can make a review of that place and give the safety point of that place. It is hard to achieve because it takes a lot of time and effort.

Solution 3 A Tracking Application 1

This solution is to create an app. The app has the ability to locate users. When a user searches for a public place or when a user arrives at a public place, the app would notice the user and show the information of that place. The information is about the safety point of that place and the reviews from other users. Then it will ask if the user wants to get in the public place. It will only record if the user clicks yes so it can protect users' privacy. Also for the business owner, they can post some photos or description of their protection of covid-19 at their area on the app to attract more users to go there.

Solution 4 A Tracking Application 2

The solution is to create smartphone applications: one for business owners and another for consumers. Consumer's app generates a new QR code every 30 seconds which they can use to check into restaurants, cafes, bars, barbershops and hair salons, etc. Consumers can give feedback and rate the entrance process which involves scanning of QR code, hand sanitizing, and measuring temperature. consumers are able to scan QR codes with anyone they interact with to keep track of who they come in contact with. The QR codes will not contain any personal information. These processes are voluntary and the users' private information will not be collected in the central server. Business owners are able to view feedback and rating on how well they are following the guidelines; consumers have access to this information as well.

| | Solution 1 | Solution 2 | Solution 3 | Solution 4 |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Description | A website containing useful business and economic information for business owners to cope with covid-19 as well as consumers to know any updates. | A Youtube channel about hanging out during covid-19. Post some video of protection and environment outside | An app that helps users get information about the public places they want to visit. It aims to help business owners attract more consumers. | An app that generates and scans QR code as well as collects consumers' feedback on businesses' prevention measures. Both business owners and consumers have access to the ratings. |
| Advantages | <ul style="list-style-type: none"> - provides a big database. - business owners can access information based on their needs. | <ul style="list-style-type: none"> - Attractive, entertaining media with easy access | <ul style="list-style-type: none"> - Business owners and customers can interact with each other. - Business owners can customize their advertisement. - Keeps tracks of people without overly collecting private data and invading privacy - Having a screen overlay for more accessibility | |
| Disadvantages | <ul style="list-style-type: none"> - It might not serve consumers that much. - Does nothing to keep track and notify patients. - Not handy. | <ul style="list-style-type: none"> - Cannot include a lot of places - Takes a lot of time and effort | <ul style="list-style-type: none"> - Relies on voluntary participation of users. May not be effective if users choose not to participate. | |

Selected Solution

According to our user research, we have certain key goals to meet including protecting users' privacy, making consumers feel comfortable going out and helping business owners cope with the economic crisis and maintain their businesses during the Covid-19 pandemic. We have considered that our solution needs to be able to track and notify confirmed individuals while providing other helpful information at the same time. Our solution cannot lack one of them. Consequently, we have considered an application that is a combination of an informative website and a tracking application. An application that comes with a mobile device is definitely better in notifying the user as well as tracking if the user allows the location service. An application can also provide the user with useful collections of news, updates, and articles. For instance, our surveyed business owners see the need of having proper prevention measures in their businesses. However, some are concerned that these measures can be costly. This feature will provide advising articles for these business owners. As opposed to a YouTube channel or merely an informative website that only allows one way of communication, an application will allow business owners and customers to interact with each other both ways. For instance, customers can rate and review restaurants on COVID-19 prevention measures. In addition, we might expand the user interface to serve more users with lower accessibility such as elders.

Solution Description

Our application aims to reduce concerns that may come up with going back outside during the COVID-19 pandemic. This application will have QR code features which allow users to scan and generate QR codes for safe contact tracing purposes without collecting or storing any personal information. This is to ensure user privacy according to our findings that the existing solutions have had users concerned about their privacy since they asked for too much personal information when users register. However, there is a trade-off to this privacy protection. With these features, our application might not be able to track users as efficiently as having sufficient user information. Therefore, our application makes up this drawback with other information-related features

Since some business owners in our survey were not able to sufficiently give updates to their customers, we see the need for our application to act as a platform where both parties can interact. Business owners can inform and advertise while consumers are able to give and access ratings on how businesses are doing in terms of following public health guidelines and making efforts to minimize the spread of COVID-19 within businesses like restaurants, bars, hair salons, shopping malls, etc.

Users have access to COVID-19 stats and updates in their regions as well as news and articles related to the current situations that are helpful to know. The interactive map

feature allows users to locate and look up businesses and what specifically they are doing to minimize the spread. Ratings are also viewable on the map feature. Users are able to switch accounts between consumer and business, change the location, and account information on the “settings” menu. Businesses can edit information displayed on the map feature on the settings as well.

Product Features

Primary Features

QR code features: This smartphone application allows the users to generate and scan QR codes that are used to enter the restaurants, coffee shops, shopping malls, hair salons, etc. QR codes can also be scanned among consumers in order to keep track of who the users have been in contact with. The users are notified when an individual they interacted with decides to notify that he/she has been confirmed with COVID-19; however, the users cannot access their personal information in any way.

Rating businesses: Upon scanning of QR codes at the entrance, the consumers are directed to rate and give feedback on how businesses handle the entrance process. The questions include “Does this restaurant have hand sanitizers available to use?”, “Were you able to physically distance yourself from other customers?”

News and articles: This feature allows users to navigate news updates and articles including latest COVID-19 related updates, business models, guides and tips based on their needs by either searching keywords or selecting tags (categories). Both consumers and business owners are able to access this feature. The users are able to get a notification when important updates or articles are posted in their region.

Interactive Map: Users can search places on the map and get the direction to it. It will also include more information about that place and how they handle covid-19. Users could also share their experiences with others by writing reviews.

Secondary Features

Home Screen Overlay: This function is proposed to be an accessible design that serves both general users and the users who are not comfortable or familiar with navigating the app such as elders. This function provides an overlay button on the mobile’s home screen where the user can tap and see only important updates about Covid-19 related to their region.

Settings: The application provides a setting page for users to manage their accounts, turn on or off location services and a screen overlay

Design Language / Style Guide

Font

We picked a sans font “Roboto” for high legibility along with a modern, clean, and approachable look.

Hello, World.

An Adaptable Foundation

OVERLINE
Headline 6

Apparently we had reached a great height in the atmosphere, for the sky was a dead black, and the stars had ceased to twinkle. By the same illusion which lifts the horizon of the sea to the level of the spectator on a hillside, the sable cloud beneath was dished out, and the car seemed to float in the middle of an immense dark sphere, whose upper half...

Headline 4

Headline 5

By the same illusion which lifts the horizon of the sea to the level of the spectator on a hillside, the sable cloud beneath was dished out, and the car seemed to float in the middle of an immense dark sphere, whose upper half was...

Body 1
Caption

By the same illusion which lifts the horizon of the sea to the level of the spectator on a hillside, the sable cloud beneath was dished out...

96 / -1.5 letter-spacing / 144 line-height

H1 / Roboto Light

60 / -.5 letter-spacing / 90 line-height

H2 / Roboto Light

48 / 0 letter-spacing / 72 line-height

H3 / Roboto Regular

34 / .25 letter-spacing / 51 line-height

H4 / Roboto Regular

24 / 0 letter-spacing / 36 line-height

H5/ Roboto Regular

Font choice for Guardian

Colors

The color class we used for Guardian is teal which is a blue color. As our primary goal of our application is to make business owners and consumers feel more comfortable and safe, green is the right color that gives calming and refreshing attributes. Since our application is also a platform containing useful information users can rely on, blue gives the sense of trust and responsibility. Together, we have decided that this tone is the most suitable for our application.

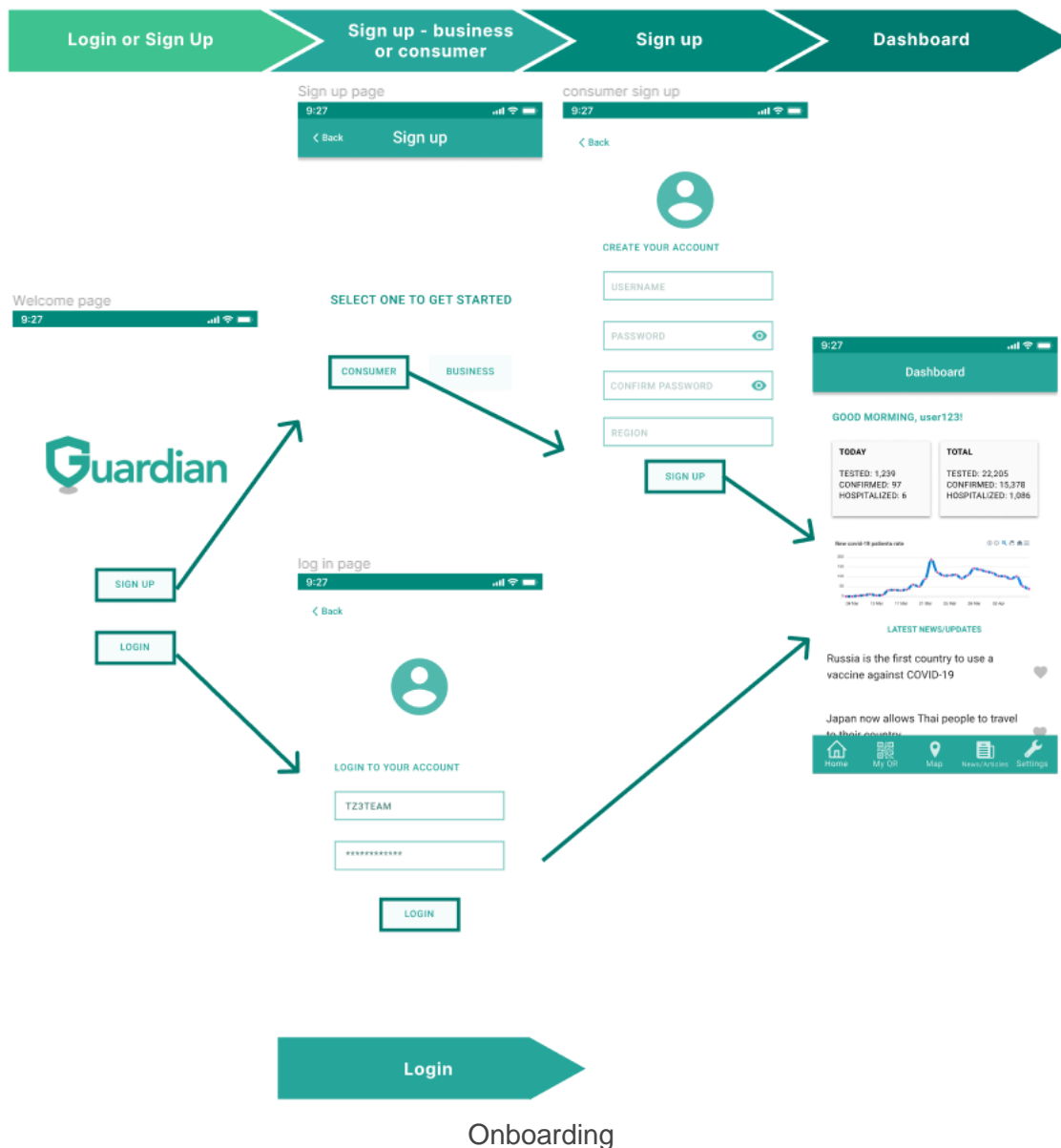
| | |
|------|---------|
| Teal | |
| 500 | #009688 |
| 50 | #E0F2F1 |
| 100 | #B2DFDB |
| 200 | #80CBC4 |
| 300 | #4DB6AC |
| 400 | #26A69A |
| 500 | #009688 |
| 600 | #00897B |
| 700 | #00796B |
| 800 | #00695C |
| 900 | #004D40 |
| A100 | #A7FFEB |
| A200 | #64FFDA |
| A400 | #1DE9B6 |
| A700 | #00BFA5 |

Color palette used for Guardian

High-Fidelity Wireframes

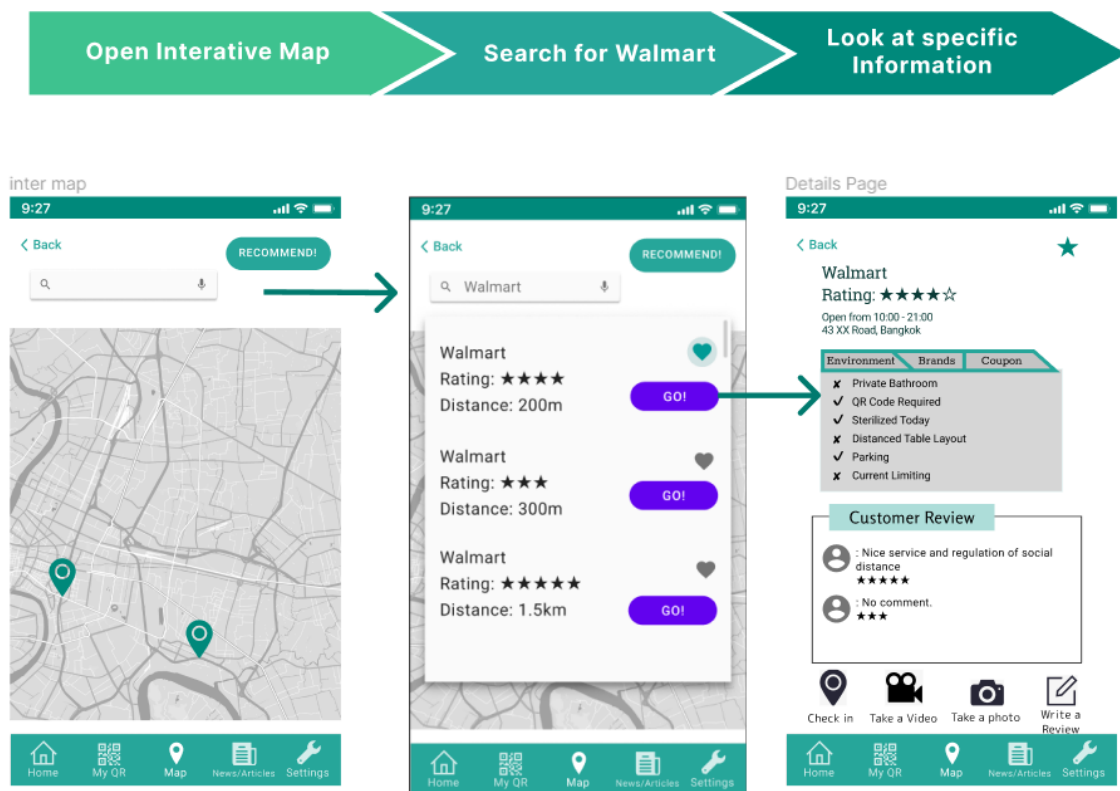
Onboarding:

To get started, a user has two options to sign up: as a consumer or as a business owner. As a consumer the user only needs to create a username and a password, and select a region. As a business owner, they need to also enter a business name, and business profiles can be added afterward. Once the user has signed up or logged in, they will be linked to the dashboard showing Covid-19 statistics and updates.



Usage Scenario 1: Interactive Map

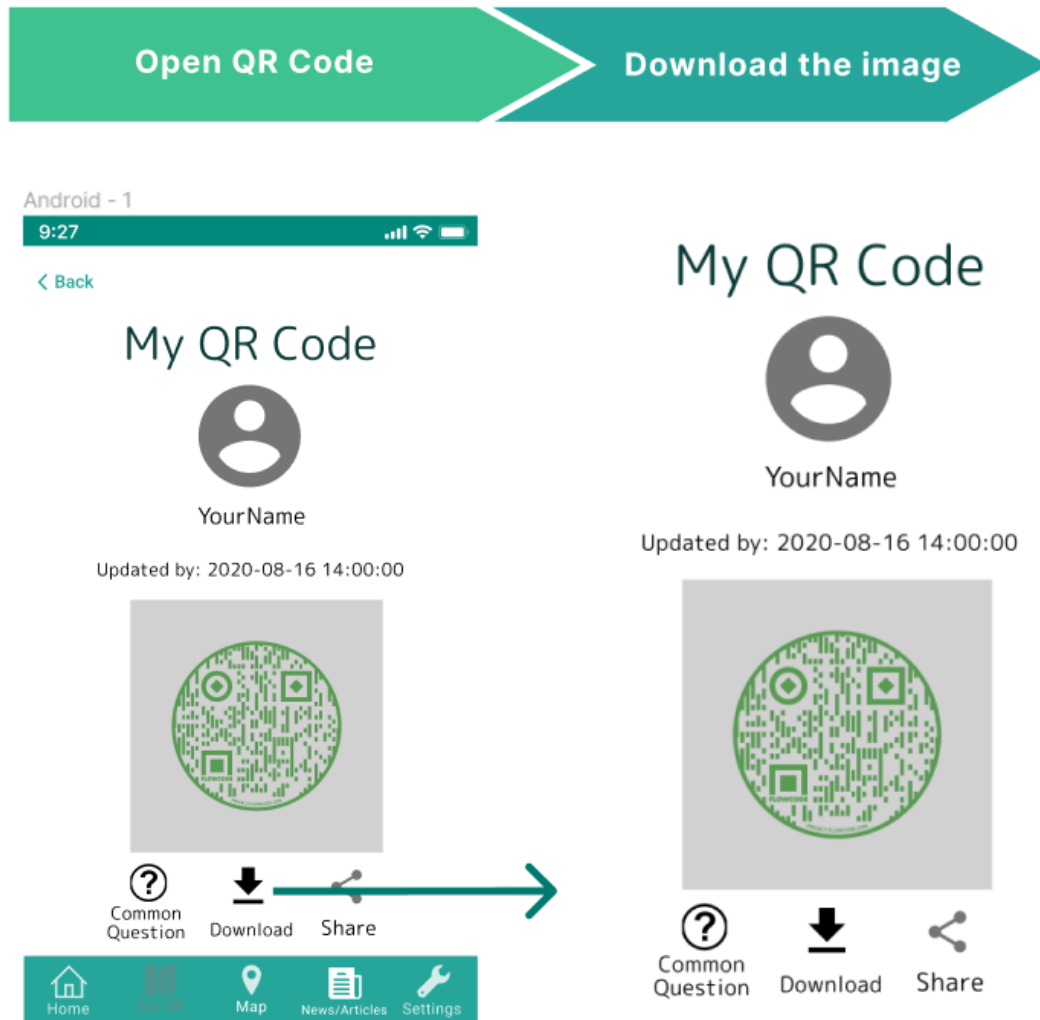
When a user wants to go to a Walmart nearby but he doesn't know if there is strong regulation for covid-19 pandemic and safe environment, he can use the interactive map in the Guardian app. First, he opens the interactive map page by tapping on the “map” at the bottom. A map shows on the screen. Then he searches “walmart” on the searching bar, and gets a drop list of nearby walmart. He can see the rating of each Walmart and he taps “Go!” and gets more specific information about the Walmart he wants to go to. It shows which regulation the Walmart has and also some other customer review of that Walmart. He can also make his review after he goes to that Walmart.



A Journey Map for Interactive Map

Usage Scenario 2: QR code

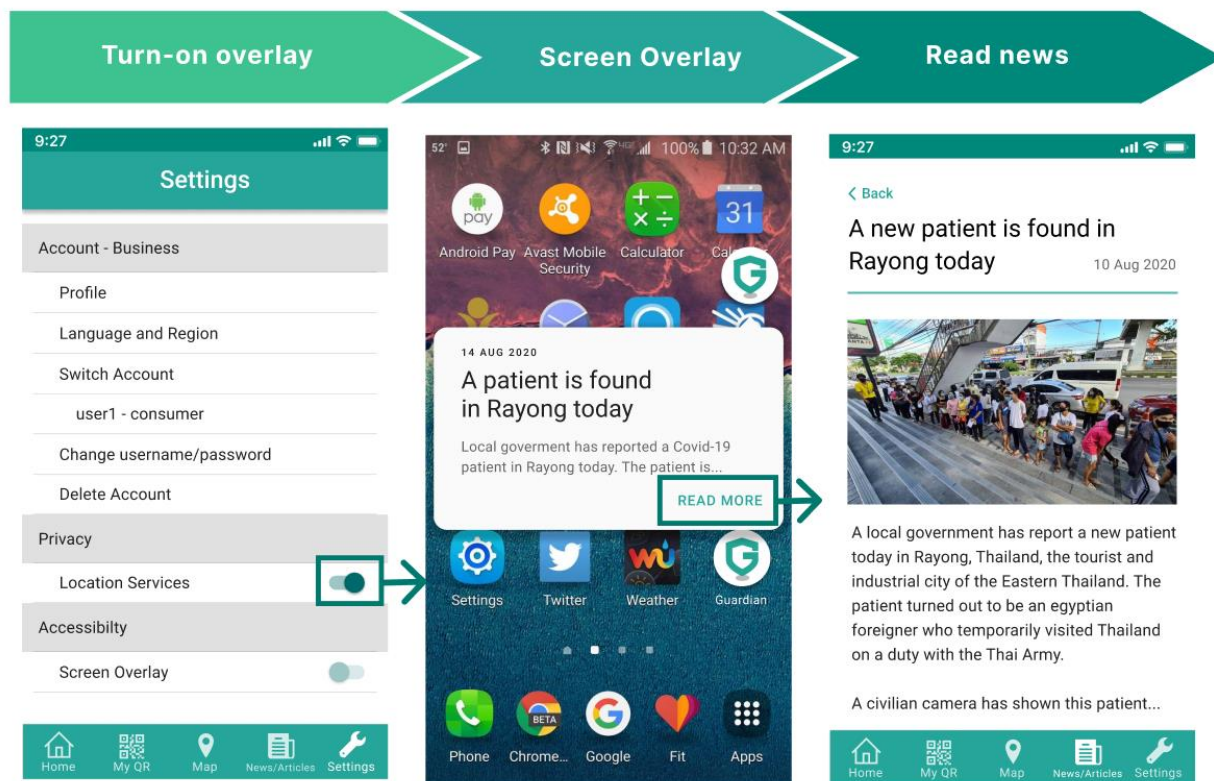
In Guardian, the user can generate a QR code to help him check in on a public place. The user can go to the QR code by tapping on “My QR” at the bottom navigation bar. Then the app will generate a QR code for him. He can tap the download button to save the image of his QR code. When he checks in on a public place, he can show his image to the staff there for their scanning.



A Journey Map for QR Code

Usage Scenario 3: Important Updates

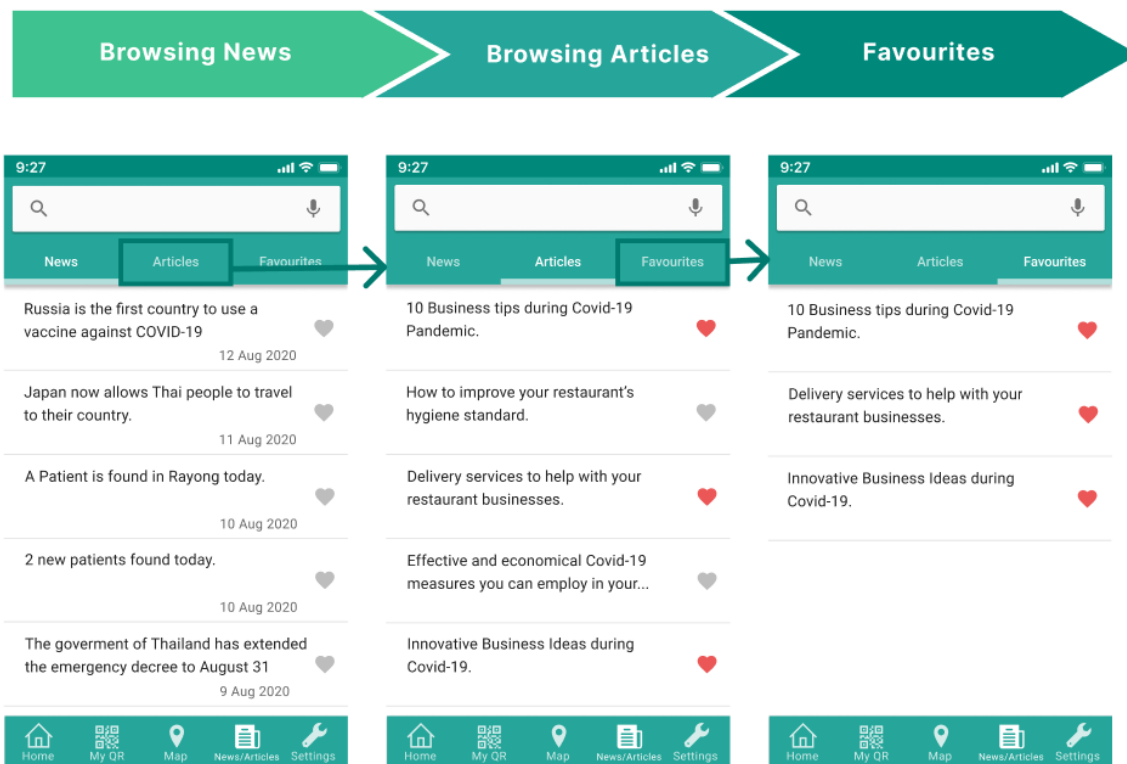
In this app, the user can choose to turn on a home screen overlay. When a patient is found in the area, the app Guardian will notify this patient through the home screen overlay. Without having to navigate the whole application to reach that news article, the user can tap on the “Read more” button to link to that article right away. This feature is intended to provide more accessibility to users who are not comfortable navigating the whole application and also to save users’ time.



A Journey Map for Home Screen Overlay

Usage Scenario 4: Business Articles

When a business owner needs any information such as how to provide proper prevention measures and how to save budget in doing so, they can find related articles by searching keywords. If not, the page will show top articles by default. The user can also bookmark articles to favourites for reading later.



A Journey Map for News and Articles

Interactive Prototype

Since our solution is an application, we built our interactive prototype on Figma.

Link to the interactive prototype:

<https://www.figma.com/file/yQ2yWCSovfgqInPEgZzPRW/Guardian-Prototype?node-id=131%3A112>

References

About The AuthorCameron Chapman is a professional Web and graphic designer with over 6 years of experience. She writes for a number of blogs and is the author of The Smashing ...More aboutCameronChapman..., & Author, A. (2010, January 28). Color Theory for Designers, Part 1: The Meaning of Color. Retrieved August 20, 2020, from <https://www.smashingmagazine.com/2010/01/color-theory-for-designers-part-1-the-meaning-of-color/>

Appendix

Link to cleaned datasets and data visualization from the survey

https://github.com/laphon/info200_final_project

Images:

<https://static.dezeen.com/uploads/2019/09/american-shopping-mall-aaron-betsky-opinion-dezeen-sq-1704x959.jpg>

<https://www.healthline.com/health/your-coronavirus-fear-is-my-year-round-reality-covid-19>

<https://connectedremag.com/wp-content/uploads/2020/03/walmart-5G-connected-real-estate.png>