



# CONCEPT IDEATION AND WIREFRAMING

Prepared for Interaction Design course lab 4-6

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# Introduction

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## Background

First and foremost, the research topic for the previous lab is “How do people discover what document or information they need to prepare before going to report a particular case at the police station” Since the COVID-19 pandemic is still going on, we do not want to be in a crowded place for too long. Therefore, I am working on an application that aims to help people discover what documents they need to prepare. So, they can finish their business as fast as possible. This report will present the application design process that is based on results from the previous lab along with a usability test.

## Focus

According to results from the previous lab, I have found that we can group our interviewees into 2 personas. Those 2 personas have different pain points and needs from our application. Here are some examples of needs and pain points from each persona.

### Persona 1: Nattawut Manothai

This is a persona that represents young users with high technology experience who live independently and have low severity cases. This kind of user prefers to do research by themselves to find out what documents they should prepare. In addition, this persona has several pain points such as information that they found on the internet may be incorrect or not up to date. Moreover, the information they found is also usually too vague.

### Persona 2: Rungnapa Udomrak

This is a persona that represents adult users with intermediate technology experience who live with their kids and family.

They usually have higher severity cases and prefer to consult someone to find out about the documents that they should prepare. However, they do not want to download any application to their device because they do not think that they will have to use it frequently. Therefore, they are looking for some application that they can use without downloading and the application should help them to consult someone.

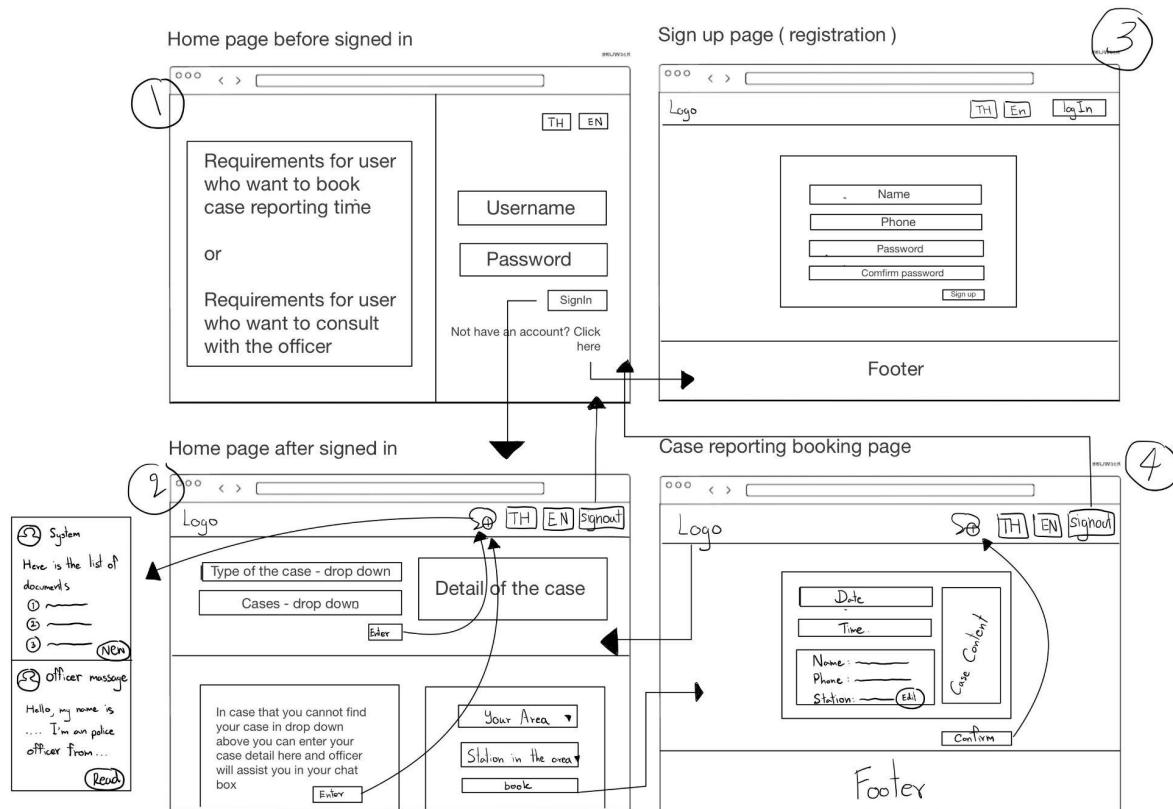
According to the needs and pain points of those 2 personas above, I have decided to focus on designing a web application that can give users a list of documents that the user should prepare before going to report a particular case at the police station. On the other hand, if the case that the user wants to report is classified as a high severity case, the user will be able to consult the police officer in a private chat room. This application must satisfy at least those 2 personas.

<b>The conclusion from the previous lab</b>	
Persona 1: Nattawut Manothai	Persona 2: Rungnapa Udomrak
high technology experience	intermediate technology experience
live independently	live with their kids and family
low severity cases	high severity cases
prefers to do research by themselves	prefer to consult someone to find out about the documents
information that they found usually incorrect and not up to date	do not want to download any application
information that they found usually too vague	Very busy not have a lot of time to spend at the station

# Sketching

Since I have some ideas on the application that I want to design, next step I will create a variety of sketches to elaborate my ideas and combine the best part of each sketch together to identify the most important requirements of the design.

## The first sketch



There are 4 different windows in the first sketch. Here are some additional details on each window.

### Window 1 - landing page(first page before login)

This is the first landing page where every user will see before login into the site. Users can log in with an existing account or create a new account by clicking on the link. There is also a session where users can find some required information in order to consult the police officer. Users are also able to switch between Thai and English versions by clicking on the button TH or EN at the top right corner. Moreover, if the username and password are correct, the user can click the sign-in button to navigate to window 2 which is the home page.

### Window 2 - home page(after login)

There are 3 sessions on this window. In the first session, users have to choose the type of case that the user wants to report and then pick a particular case from a dropdown box. After that, users can add more detail to inform the police officer as an optional step. The query result will be displayed in the user's private chat box next to the TH button. On the other hand, If a user can't find a suitable case, the user has to add a private message at the bottom left session, then the officer will reply back to the user. For the last session, users can make an appointment to save some time before going to the station. In order to do that, the user has to pick a particular station first and then click the book button. Users will navigate to window 4.

### Window 3 - registration page

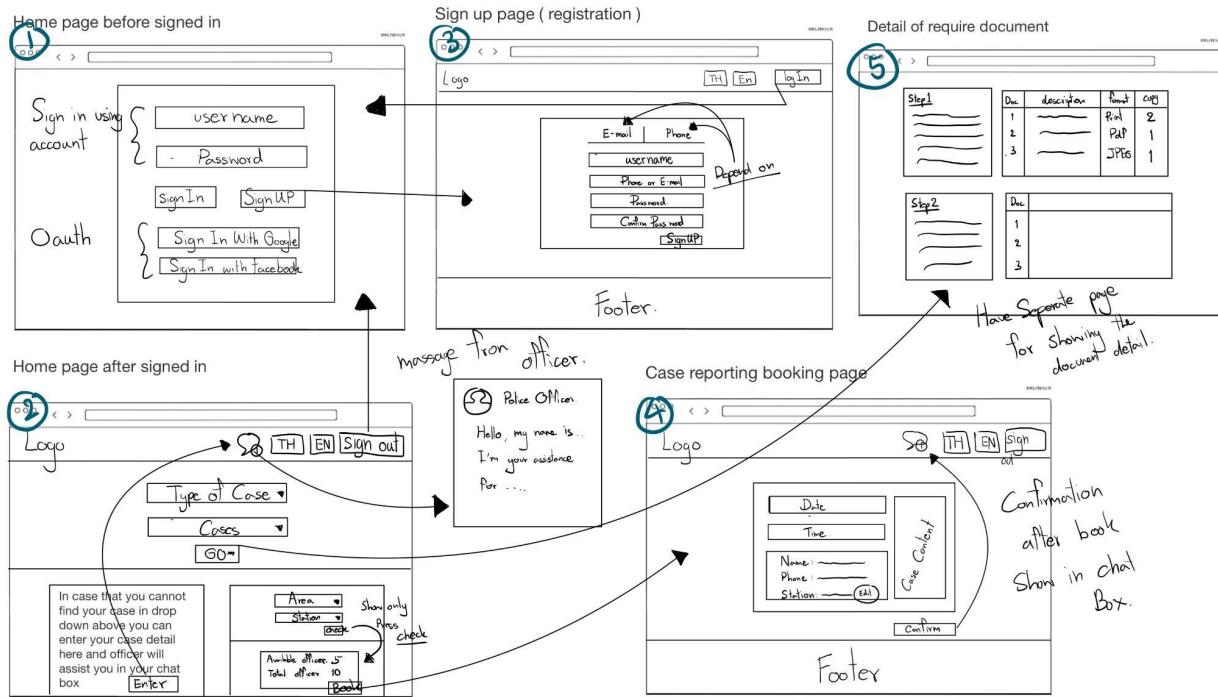
This is a basic registration page where users have to enter their name, family name, phone number, and password to create an account. In case the user changes their mind and wants to navigate back to the first landing page, the user can click on the login button or the logo at the top right corner and top left corner respectively.

### Window 4 - appointment making page

After the user selects a particular station from window 2, the user will be required to specify the booking date, time, and brief information about the case. Then, the user will receive a confirmation message from the station in the private chatbox.

<b>Positive aspects of the first sketch</b>
Users can request to see all required documents for a particular case. Which can satisfy both persona
Users can make an appointment before going to the station. Which can satisfy Rungnapa Udomrak's persona.
Users can request information about their case and be able to add some detail to it. Which can satisfy Rungnapa Udomrak's persona.
Users can consult with the police officer to get more data Which can satisfy Rungnapa Udomrak's persona.
<b>Negative aspects of the first sketch</b>
Users will not get very detailed information. Which can not satisfy Nattawut Manothai
Users are required to add some detail about the case before being able to request the information. This is not necessary and may not satisfy Nattawut Manothai

## The second sketch



There are 5 different windows in the second sketch. Here are some additional details on each window.

### Window 1 - landing page(first page before login)

This is the first landing page where every user will see before login into the site. There are several options for users to log in such as login with existing accounts, login in with Google, and log in with Facebook. Moreover, users also can create a new account by clicking on the link. If the user can log in successfully, the user will redirect to window 2.

### Window 2 - home page(after login)

There are 3 sessions on this window. In the first session, users have to choose the type of case that the user wants to report and then pick a particular case from a dropdown box. After clicking Go, the user will redirect to window 5. On the other hand, If a user can't find a suitable case, the user has to add a private message at the bottom left

sessions, then the officer will reply back to the user in the user's private chat box next to the TH button. For the last session, users can make an appointment to save some time before going to the station. In order to do that, the user has to pick a particular station first and then click the book button. Users will navigate to window 4. In addition, users are also able to click on a Check button to only check the status of each station without booking.

#### Window 3 - registration page

This is a basic registration page where users have to enter their name, family name, password, and either phone number or e-mail to create an account. In case the user changes their mind and wants to navigate back to the first landing page, the user can click on the login button or the logo at the top right corner and top left corner respectively.

#### Window 4 - appointment making page

After the user selects a particular station from window 2, the user will be required to specify the booking date, time, and brief information about the case. Then, the user will receive a confirmation message from the station in the private chatbox.

#### Window 5 - document detail page

In this window, the user will receive the most recent and detailed information about the document that the user has to prepare. The result must contain information such as what are the documents that the user has to prepare, what is the format of the document, how many copies that user should prepare.

<b>Positive aspects of the first sketch</b>
Users can request to see all required documents for a particular case. Which can satisfy both persona
Users can make an appointment before going to the station. Which can satisfy Rungnapa Udomrak's persona.
Users can consult with the police officer to get more data. Which can satisfy Rungnapa Udomrak's persona.
Users can sign in with various options such as Google or Facebook. Which can satisfy Nattawut Manothai's persona.
Users can choose to create an account with either a phone number or email. Which can satisfy Nattawut Manothai's persona.
Users can check the current status of the station and see how many available police officers are at the current time. Which can satisfy Nattawut Manothai's persona.
Users can receive detailed and up-to-date information. Which can satisfy Nattawut Manothai's persona.
<b>Negative aspects of the first sketch</b>
Users can not see all requirements before consulting with the police officer.
Users can not see all requirements before making an appointment.

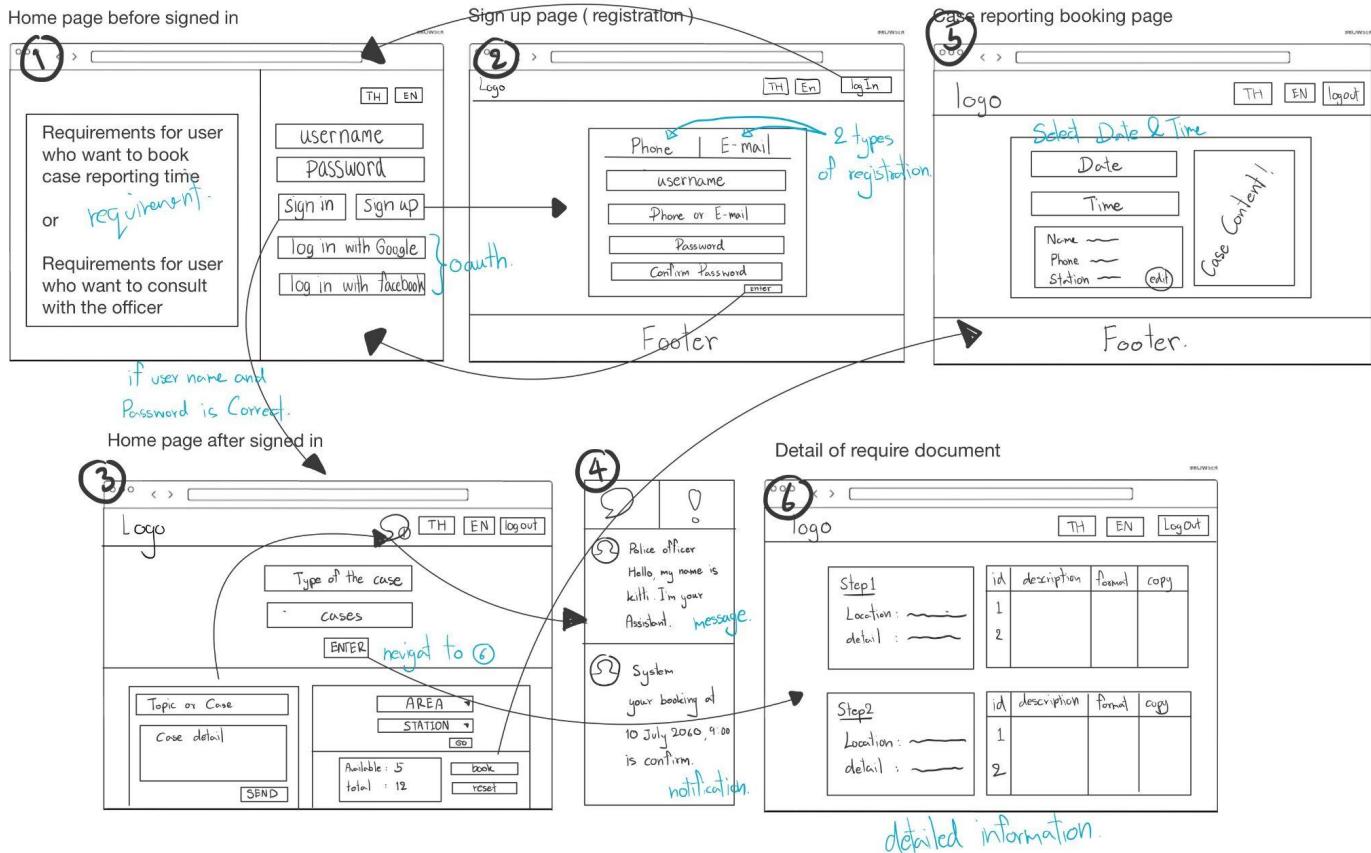
## The final sketch

For the final sketch I have decided to combine the best parts from the first and second sketch together and get rid of all of the unnecessary features. Here is the list of the most important requirements that should be included in the design in order to satisfy both personas.

- Application should be a web application so users can use it without downloading.

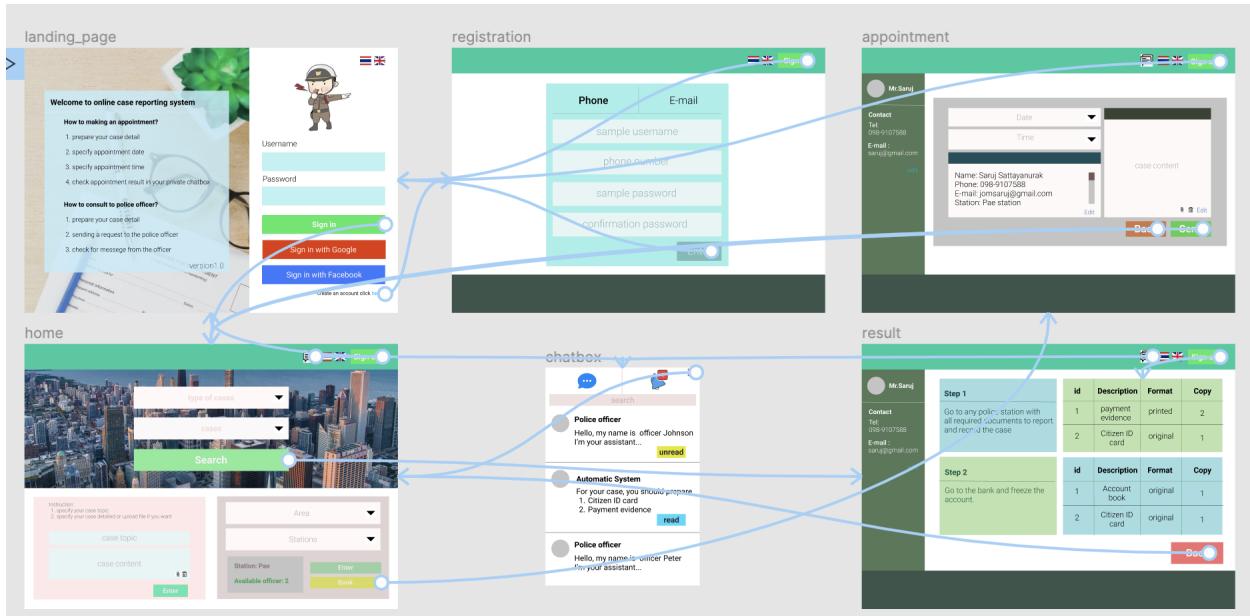
- Application must present the list of all required documents automatically.
- Users who got a high severity case that required some explanation must be able to consult a police officer.
- Application must present the most recent information.
- Application must present detailed information.
- Application must state every step of case reporting from start to finish.
- Users should have a variety of options to log in to the site.
- Users must be able to make an appointment.
- Users must be able to check for available officers at the station at the current time.
- Users must be able to read the instructions on how to make an appointment and instructions on how to consult the officer.

The final sketch will keep all of the positive aspects from each sketch and aims to get rid of all negative aspects. Here is the final sketch.



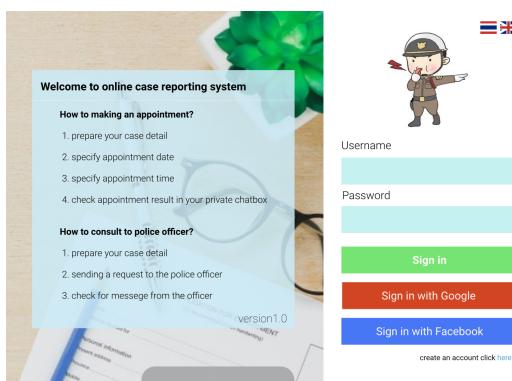
# Wireframing

According to the final sketch, I'm going to develop wire flow using a tool called Figma. The design is based on the final sketch from the last chapter. Here is the first look at our wire flow.



wire flow version 1.0

Next, we're going to analyze each wireframe one by one. Start with the initial landing page.



This is the first landing page where every user will see before log in into the site. There are several options for users to log in such as login with existing accounts, login in with Google, and log in with Facebook. Moreover, users also can create a new account by clicking on the link, and then the user will redirect to the registration page. If the user can log in

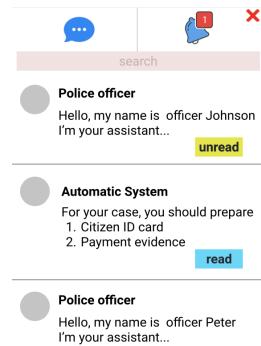
successfully, the user will redirect to the home page. Lastly, there are also some instructions on how to consult the officer and instructions on how to make an appointment.

This is a basic registration page where users have to enter their name, family name, password, and either phone number or e-mail to create an account. Once the user has filled in all of the required information then the user can click enter to create an account. In case that the user changes their mind and wants to navigate back to the first landing page, the user can click on the sign-in button at the top right corner. Users will be redirected to the first landing page as mentioned above.

There are 3 sessions on this wireframe. In the first session, users have to choose the type of case that the user wants to report and then pick a particular case from a dropdown box. After clicking Search, the user will redirect to the result page. On the other hand, If a user can't find a suitable case, the user has to add a private message at the bottom left sessions, then the officer will

reply back to the user in the user's private chat box next to the ENG button. For the last session, users can make an appointment to save some time before going to the station by clicking on the Book button. In order to do that, the user has to pick a particular station first and then click the book button. Users will navigate to the appointment-making page. In addition, users are also able to click on an Enter button to only check the status of each station without booking. If the user clicks the Sign out button, the user will be redirected to the first landing page.

This is a user's private chat box, where the user can find the message sent by a police officer. In addition, our application can filter messages from police officers or messages from the system. In conclusion, users can find their unread messages and reply to those messages here.



In this wireframe, the user will receive the most recent and detailed information about the document that they have to prepare before going to report the case at the station. The result must contain information such as what are the documents that the user has to prepare, what is the format of the document, how many copies that user should prepare. Moreover, our application should specify every single step from start to finish and

provide that information to our users.

After the user selects a particular station from the home page and clicks the book button. The user will be redirected to this appointment-making page. Then, the user will be required to specify the booking date, time, and brief information about the case. After that, the user will receive a confirmation message from the station in the private chat box. Therefore, users can go to the station on their appointment date and time.

# Usability Testing

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Since we already got our first wire flow. Now, we're going to let our users test our design. First of all, we're going to develop a pre-test questionnaire to learn more about the knowledge and experience of our users. We're going to do it by reusing some questions from the previous lab and adding some new questions. Here is the list of questions that we're going to ask in the survey.

## Pre-test

1. How old are you?
2. What is your occupation?
3. Do you have any experience with case reporting?
4. How often do you report the case?
5. How do you find out what documents that you should prepare before going to the station?
6. From the last question, How confident are you with your research result?
7. Do you have any problems with case reporting?
8. Do you have any electronic devices that can connect to the internet?
9. What device do you usually use?
10. How often do you use the internet

This question will help me to distinguish between each user and have a better idea of their action on my product. I have decided to execute the test with 4 users and some of them are my interviewee from the previous lab. Here are the pre-test results.

<b>id</b>	<b>Age</b>	<b>Occupation</b>	<b>Experience</b>	<b>How often</b>	<b>Research</b>	<b>How confident</b>	<b>Problem</b>	<b>Electronic device</b>	<b>Mostly use</b>	<b>internet</b>
1	47	business	yes	not often	consult to a lawyer	confident	do not want to go to the station	yes	smartphone	every day
2	51	business	yes	quite often	the internet and consult to a lawyer	confident	no parking at the station	yes	smartphone	every day
3	21	student	yes	not often	internet	not confident	not sure that the document is up to date or not	yes	laptop	every day
4	21	student	yes	not often	internet	not confident	wrong document format	yes	smartphone	every day

Basically, the first 2 users can represent Rungnapa Udomrak persona. On the other hand, third and fourth users can represent the Nattawut Manothai persona.

## Task scenarios

Once we know who our user is, we're going to develop some task scenarios. Here are our task scenarios.

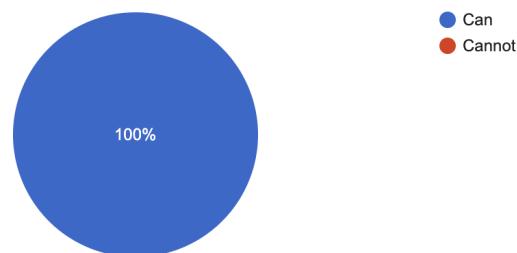
1. Landing page: enter username and password then sign in to the site?
2. Landing page: create a new account?
3. Sign-up page: create an account with a mobile phone number?
4. Sign-up page: create an account with an e-mail?
5. Home page: request to see all documents that are required in order to report a case?
6. Home page: request to consult the police officer about your case?
7. Home page: check the status of the police station to see how many available police officers are at this moment?

8. Home page: make an appointment with a specific police station?
9. Chatbox: open up your private chatbox?
10. Chatbox: filter only messages from a police officer?
11. Chatbox: filter only notification messages from the system?
12. Appointment page: specify date and time of your appointment.
13. Appointment page: edit your personal data
14. Appointment page: specify your case detail and then make an appointment.

These scenarios will help me to get some feedback from our end-user. Here are the results of this test.

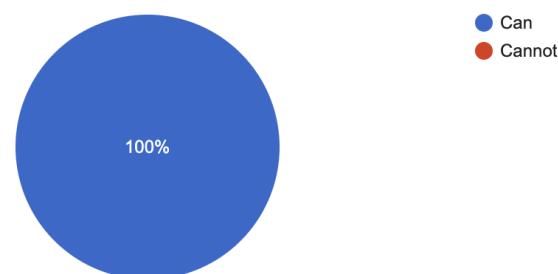
Landing page: enter username and password then sign in to the site?

4 responses



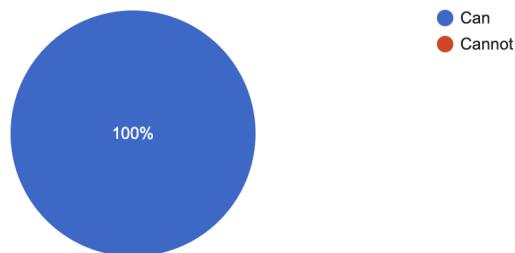
Landing page: create a new account?

4 responses



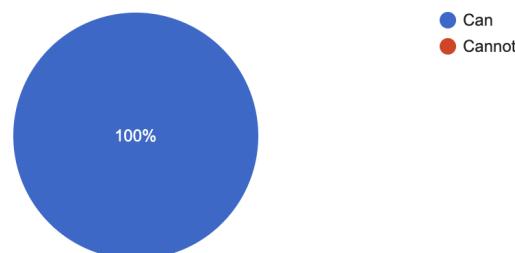
Sign up page: create an account with a mobile phone number?

4 responses



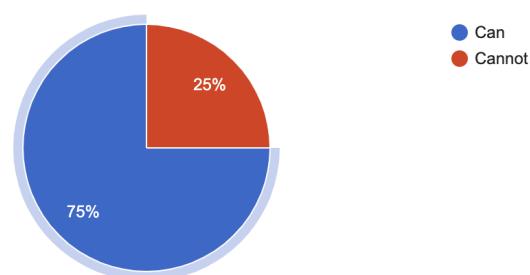
Sign up page: create an account with an e-mail?

4 responses



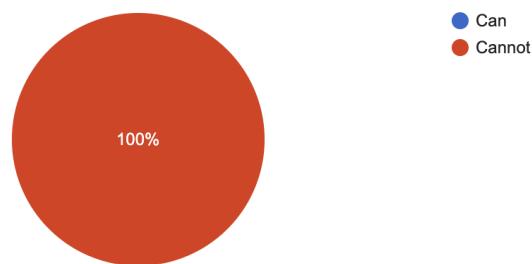
Home page: request to see all documents that are required in order to report a case?

4 responses



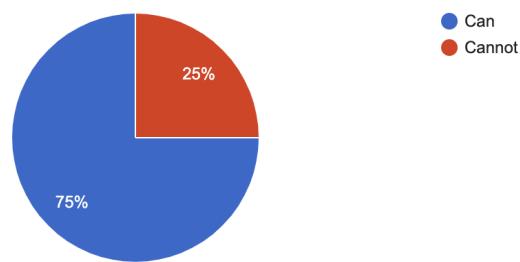
Home page: request to consult to the police officer about your case?

4 responses



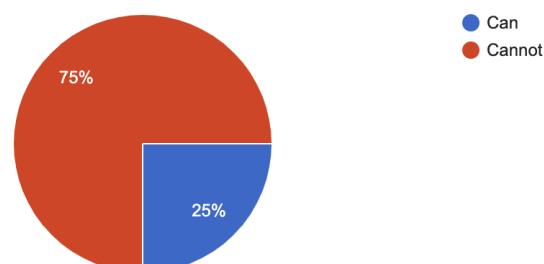
Home page: check status of the police station to see how many available police officers at this moment?

4 responses



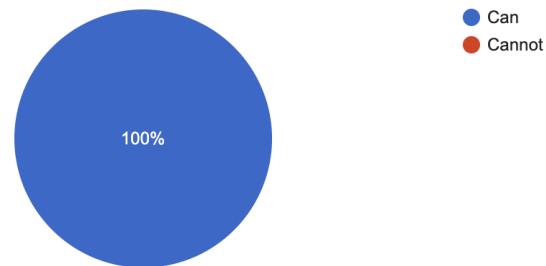
Home page: make an appointment with a specific police station?

4 responses



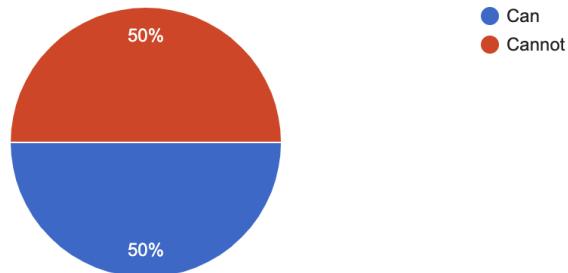
Chatbox: open up your private chatbox?

4 responses



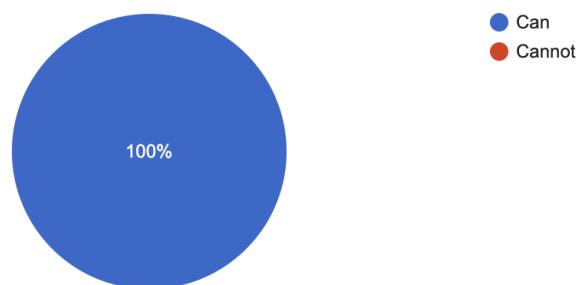
Chatbox: filter only message from police officer?

4 responses



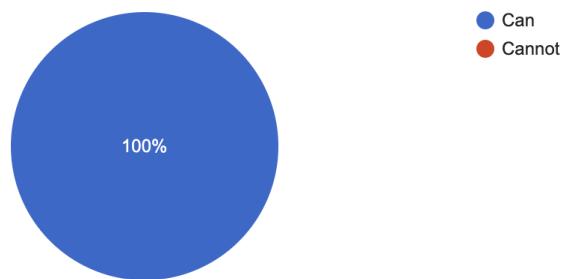
Chatbox: filter only notification message from the system?

4 responses



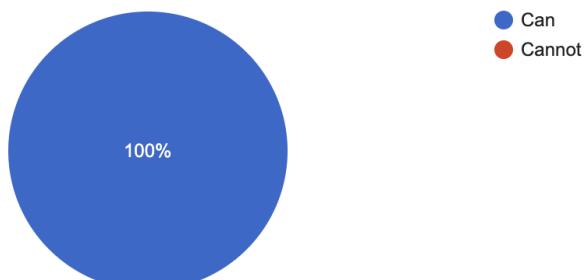
Appointment page: specify date and time of your appointment?

4 responses



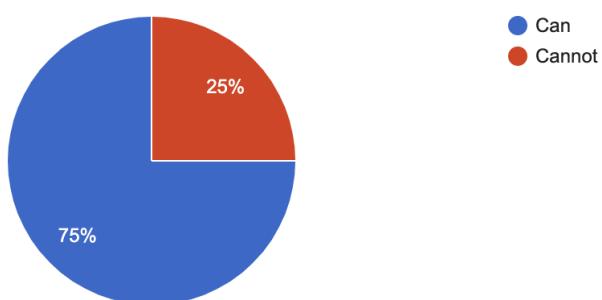
Appointment page: edit your personal data

4 responses



Appointment page: specify your case detail and then making an appointment.

4 responses



According to the result, there are 6 tasks that users can not complete. Which are tasks 5,6,7,8,10 and 12. Therefore, we have to redesign and let users evaluate our design again. However, we have to find out more about what are the reasons that made those users unable to finish the task. Here are our Post-test questions.

### **Post-test**

1. What are the tasks that you can not complete?
2. What are the difficulties in each task that you can not complete?
3. How would you change the design in order to improve and get rid of those difficulties?
4. Are there any extra features that you would like to have?
5. What was your overall impression of our design?
6. Are there any suggestions?

Here are the post-test results that we got from the interview.

### **Post-test result user 1**

She can't complete tasks 6, 8, and 10. One of the difficulties that she found when trying to complete the task is that the home page is too confusing. There are no labels that can identify the objective of each session. Another difficulty is that the message filter button does not look like a button at all, so she does not know how to filter the message. In conclusion, she would like to have a label to identify the objective of each session and change the way that I represent the filter button. There are no extra features that she wants because all of the features that I got right now can satisfy her needs.

### **Post-test result user 2**

She can't complete tasks 5, 6, 7, and 14. Since the home page has 3 sessions she does not know where to start in order to complete the task. The home page does not have any label to tell you what this session is about. Some of the button locations are weird and not well designed. She would like to have a label on the home page to specify what this

session is all about and she wants me to redesign the location of the Book button at the bottom right corner. At the moment she said it was hard to discover that the Book button is associated with the Area and Station dropdown box. Moreover, she suggested that once users have made an appointment. There should be a page where users can check the status of their own appointment and also should be able to cancel it.

### **Post-test result user 3**

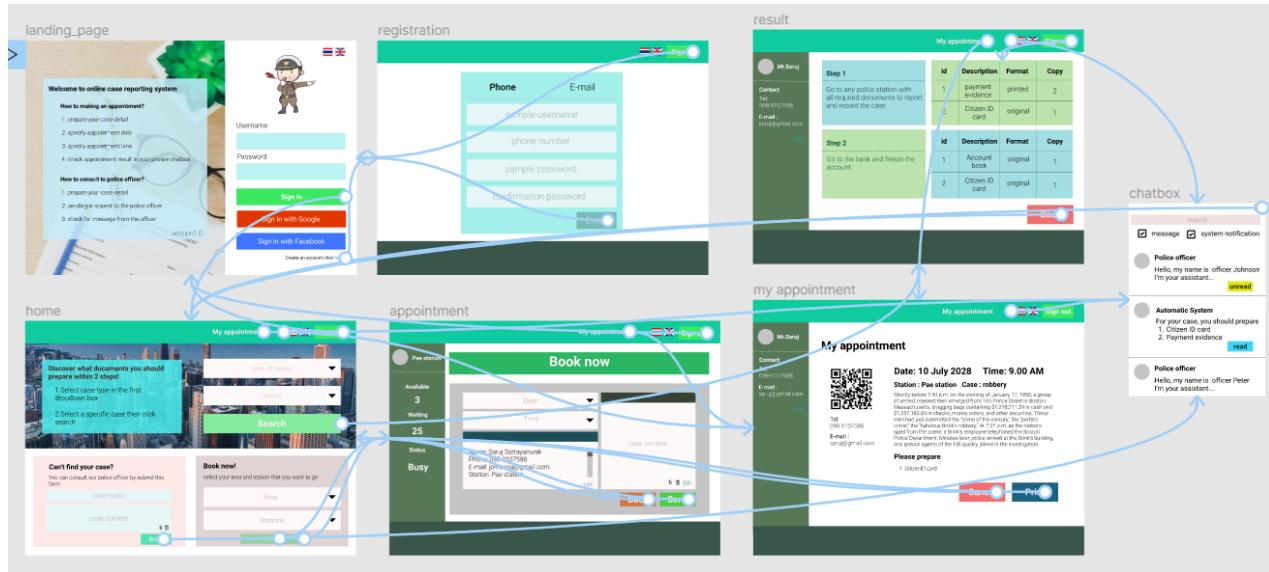
He can't complete tasks 6, 8, and 10. He thought all sessions are related to each other and he has to use all of the sessions to complete a single task. Moreover, he said that our logo for filter messages is poor. He prefers me to redesign the way to represent the filter feature and try to add more instruction on how to use the home page.

### **Post-test result user 4**

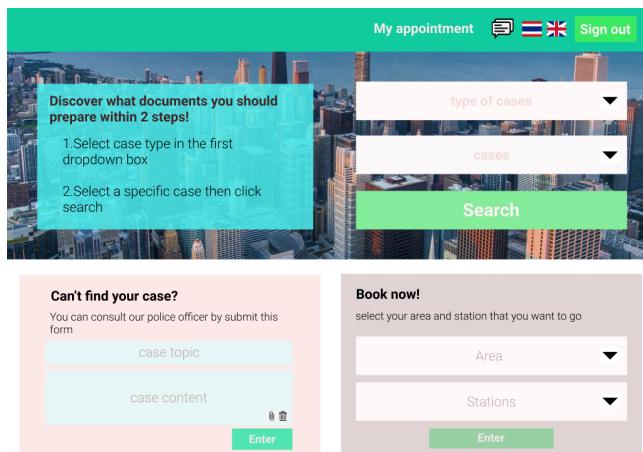
He can't complete tasks 6 and 8. He does not know how to use the home page in the way that I expected. In order to complete a specific task, he does not know which box he should fill in. Basically, he does not know that each session has a different objective and he does not have to use it all to complete a single task. He would prefer to have one session per page so users will know directly that each session is independent of the other.

## Corrective actions

Since we got some feedback from our users, we're going to improve our application design. Here is our new wire flow.



### What news?

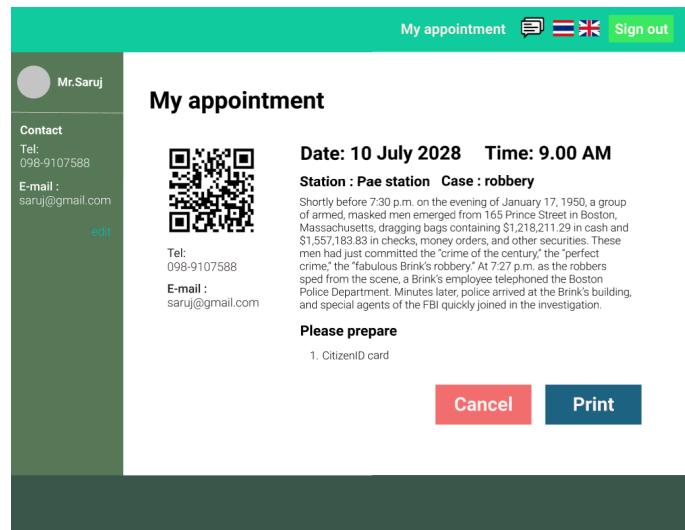
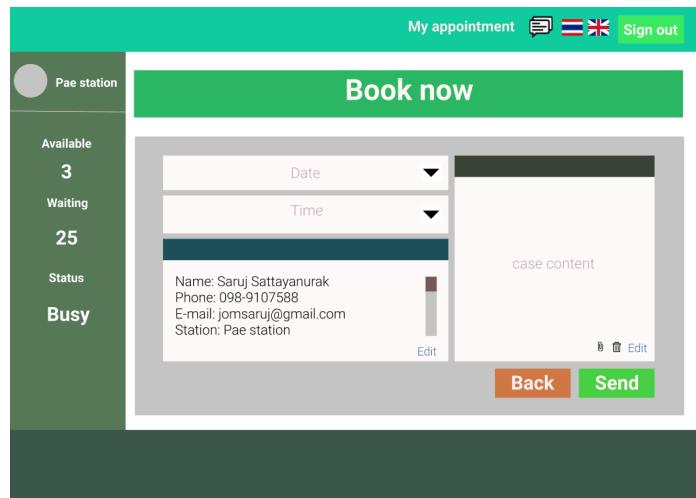


### Home page modification

I have modified, home page by adding instructions and labels for each session. So users will know exactly what each session can do. In addition, I have moved the Book button to another page.

## Booking page modification

Once the user clicks Enter in the book now session at the home page. Users will be redirected to this page. Users will also see the status of the station at the particular moment and be able to make an appointment on the available time slot.

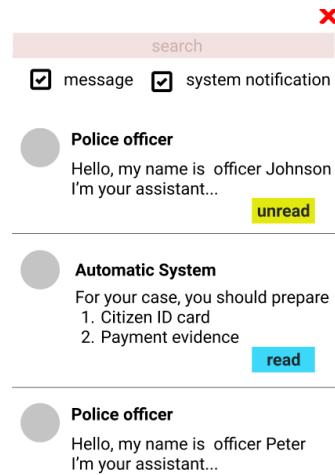


New page called "my appointment page"

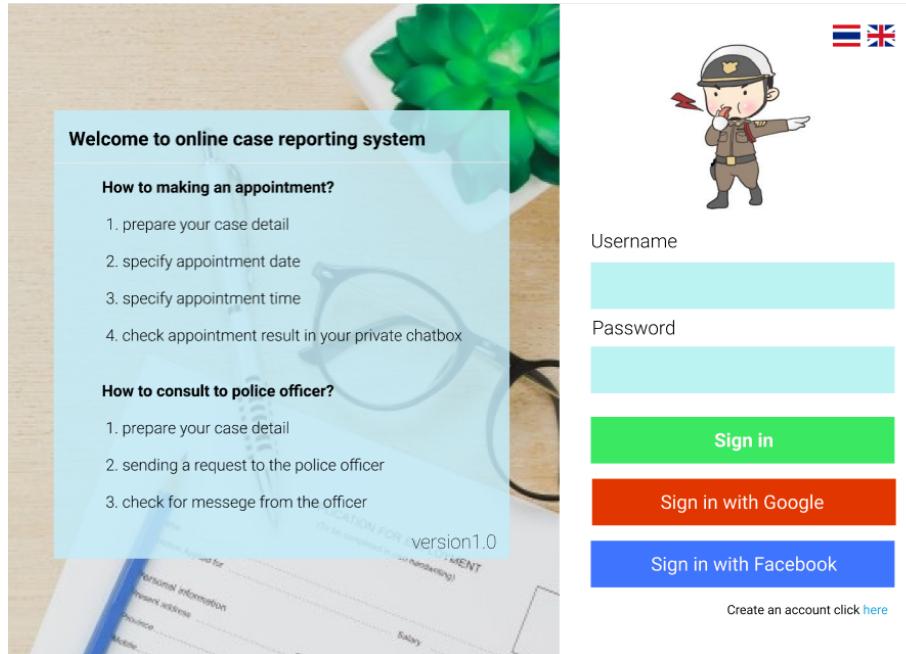
Since one of the feedback said, I should add a page that shows the user's appointment detail and cancellation feature. My appointment page is a page that is based on that feedback.

## Chatbox modification

Most of our user can not filter the message because of bad icon selection. Now, I have modified the icon From picture to checkbox. This can help solve the problem



# Miscellaneous



Landing page(login)

Phone	E-mail
sample username	
phone number	
sample password	
confirmation password	
Enter	

Registration page

The screenshot shows the home page of a mobile application. At the top, there is a navigation bar with "My appointment" and "Sign out" buttons, along with language selection icons for Thai and English. Below the navigation bar is a large banner featuring a city skyline. Inside the banner, a teal-colored callout box contains instructions: "Discover what documents you should prepare within 2 steps!" followed by two numbered steps: "1. Select case type in the first dropdown box" and "2. Select a specific case then click search". To the right of the banner are two dropdown menus: "type of cases" and "cases", both with downward arrows indicating they are dropdowns. A large green "Search" button is positioned below these menus. Below the banner, there are two sections: "Can't find your case?" and "Book now!". The "Can't find your case?" section includes a form with fields for "case topic" and "case content", each with a "Enter" button. The "Book now!" section includes a form with fields for "Area" and "Stations", each with a "Enter" button.

## Home page

The screenshot shows the booking page of the mobile application. At the top, there is a navigation bar with "My appointment" and "Sign out" buttons, along with language selection icons for Thai and English. On the left side, there is a sidebar with a circular profile picture and the text "Pae station". Below the profile picture, there are three sections: "Available" with the number "3", "Waiting" with the number "25", and "Status" with the status "Busy". In the center, there is a large green "Book now" button. Below the button is a form for booking an appointment, which includes dropdown menus for "Date" and "Time", and a text input field for "case content". Below the input field is a "Edit" button. At the bottom of the form are "Back" and "Send" buttons. The entire booking form is set against a dark gray background.

## Booking page

My appointment    Sign out

 <b>Mr.Saruj</b>  <b>Contact</b> Tel: 098-9107588  E-mail : saruj@gmail.com  <a href="#">edit</a>	<b>Step 1</b> Go to any police station with all required documents to report and record the case	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">id</th> <th style="width: 40%;">Description</th> <th style="width: 20%;">Format</th> <th style="width: 30%;">Copy</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>payment evidence</td> <td>printed</td> <td>2</td> </tr> <tr> <td>2</td> <td>Citizen ID card</td> <td>original</td> <td>1</td> </tr> </tbody> </table>	id	Description	Format	Copy	1	payment evidence	printed	2	2	Citizen ID card	original	1
id	Description	Format	Copy											
1	payment evidence	printed	2											
2	Citizen ID card	original	1											
	<b>Step 2</b> Go to the bank and freeze the account.	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">id</th> <th style="width: 40%;">Description</th> <th style="width: 20%;">Format</th> <th style="width: 30%;">Copy</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Account book</td> <td>original</td> <td>1</td> </tr> <tr> <td>2</td> <td>Citizen ID card</td> <td>original</td> <td>1</td> </tr> </tbody> </table>	id	Description	Format	Copy	1	Account book	original	1	2	Citizen ID card	original	1
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## Result page

My appointment    Sign out

 <b>Mr.Saruj</b>  <b>Contact</b> Tel: 098-9107588  E-mail : saruj@gmail.com  <a href="#">edit</a>	<h3>My appointment</h3> <p><b>Date: 10 July 2028 Time: 9.00 AM</b></p> <p><b>Station : Pae station Case : robbery</b></p> <p>Shortly before 7:30 p.m. on the evening of January 17, 1950, a group of armed, masked men emerged from 165 Prince Street in Boston, Massachusetts, dragging bags containing \$1,218,211.29 in cash and \$1,557,183.83 in checks, money orders, and other securities. These men had just committed the "crime of the century," the "perfect crime," the "fabulous Brink's robbery." At 7:27 p.m. as the robbers sped from the scene, a Brink's employee telephoned the Boston Police Department. Minutes later, police arrived at the Brink's building, and special agents of the FBI quickly joined in the investigation.</p> <p><b>Please prepare</b></p> <p>1. CitizenID card</p> <p style="text-align: right;"><a href="#">Cancel</a> <a href="#">Print</a></p>
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## My appointment page

search X

message  system notification

**Police officer**  
Hello, my name is officer Johnson  
I'm your assistant... unread

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**Automatic System**  
For your case, you should prepare  
1. Citizen ID card  
2. Payment evidence read

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**Police officer**  
Hello, my name is officer Peter  
I'm your assistant...

## chatbox