

Implementation Process



HEALTH PLUS

YOUR PATH TO WELLNESS

Team: No Idea

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INTRODUCTION



To Build an interactive customer support tool tailored specifically for Rangsit University International College students



Providing comprehensive information, a user-friendly interface offers vital details about the university clinic's services

The screenshot shows a web browser window displaying the 'Health Plus' website. The header features the 'HEALTH PLUS' logo and the tagline 'YOUR PATH TO WELLNESS'. A navigation bar with links for 'Home', 'Our Vision', 'How To', and 'Get Started' is visible. The main content area is titled 'Brief Description' and contains a paragraph of text. To the right of the text is a graphic illustration of a doctor in a white coat and stethoscope, holding a pink folder with a white cross on it, while a patient's arm reaches out towards the folder. Below the illustration is a video player interface with play and pause buttons.

INFORMATION SYSTEM PLANNING

1. DEFINING THE BUSINESS GOALS:

- Discuss about what we want for our project.
- Define the approach for the project. (Choose Hybrid Approach to strike a balance that integrate both user-centric and technical considerations.)

2. ASSESSING THE CURRENT IT ENVIRONMENT:

- Analyze the existing system.
- Find out what is the core process of that system.
- Find out what are the weakness of that system.

3. IDENTIFYING THE GAP:

- Compare our project system with existing system.
(For instance: The existing system doesn't support multilingual but our "HEALTHPLUS" project can provide multilingual.)

INFORMATION SYSTEM PLANNING

4.DEVELOPING THE PLAN:

- Week 1: Discuss project idea, define goal and risk.
- Week 2: Separate task and plan the “HEALTHPLUS” system.
- Week 3-4: Gather resources and outline the prototype.
- Week 5-6: Implement the project with coding.
- Week 7-11: Finalize the project.
- Week 12-13: Surveying and reviewing the feedbacks.
- Week 14-16: Adjust and modify the project.

5.IMPLEMENTATION AND REVIEW:

- Gather user feedbacks.
- Analyze the feedbacks.
- Make the adjustment according to feedbacks.
- Gather user feedbacks again and repeat the process.

PROJECT ANALYSIS

Importance & Objectives

Optimizes systems for efficiency and aligns technology with goals.

Enhance efficiency, data accuracy, and decision-making.

- Identified **language barriers and information gaps** for students
- Solution: Integrate GPT API for **multilingual support**.

PROBLEMS & SOLUTION

- **Use Case and Activity Diagrams** aid in requirement analysis.
- Functional requirement: **Multilingual access** and response.

REQUIREMENT GATHERING

- Enhance **data flow understanding** of aimed **HealthPlus system**
- Lead to **precise decision-making** regarding system efficiency.

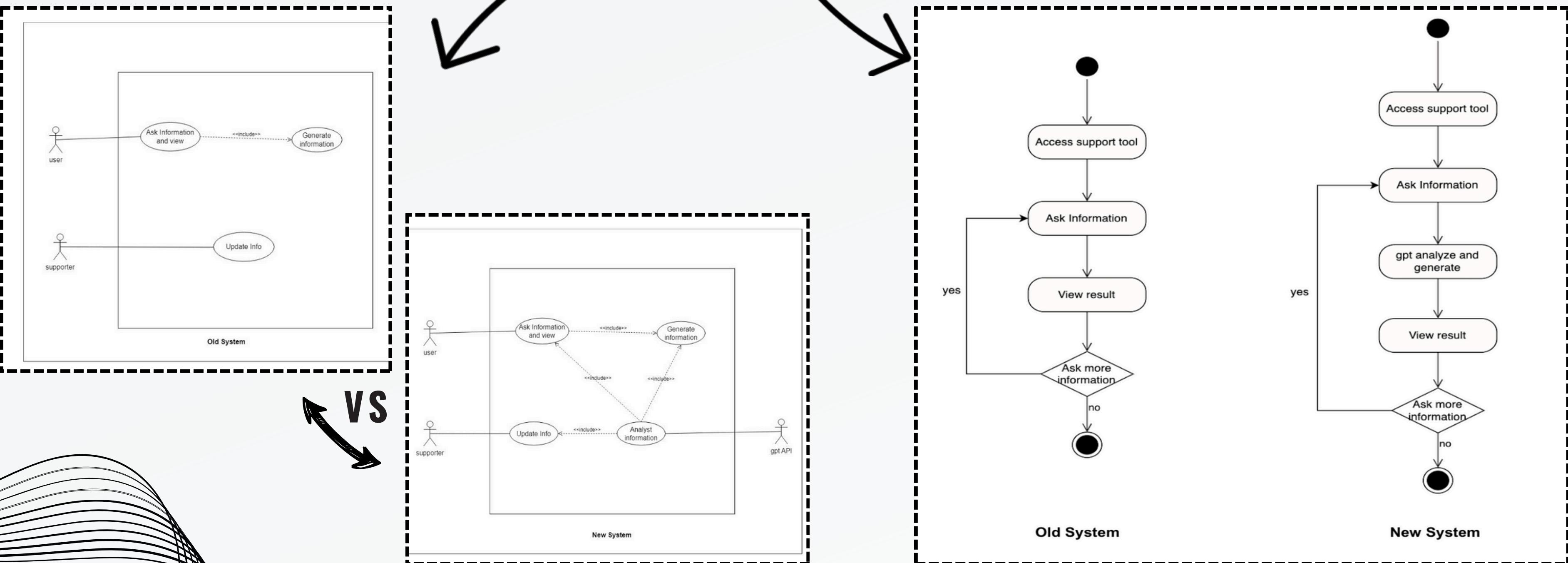
DATA ANALYSIS & EVALUATION

Diagrams → →

PROJECT ANALYSIS

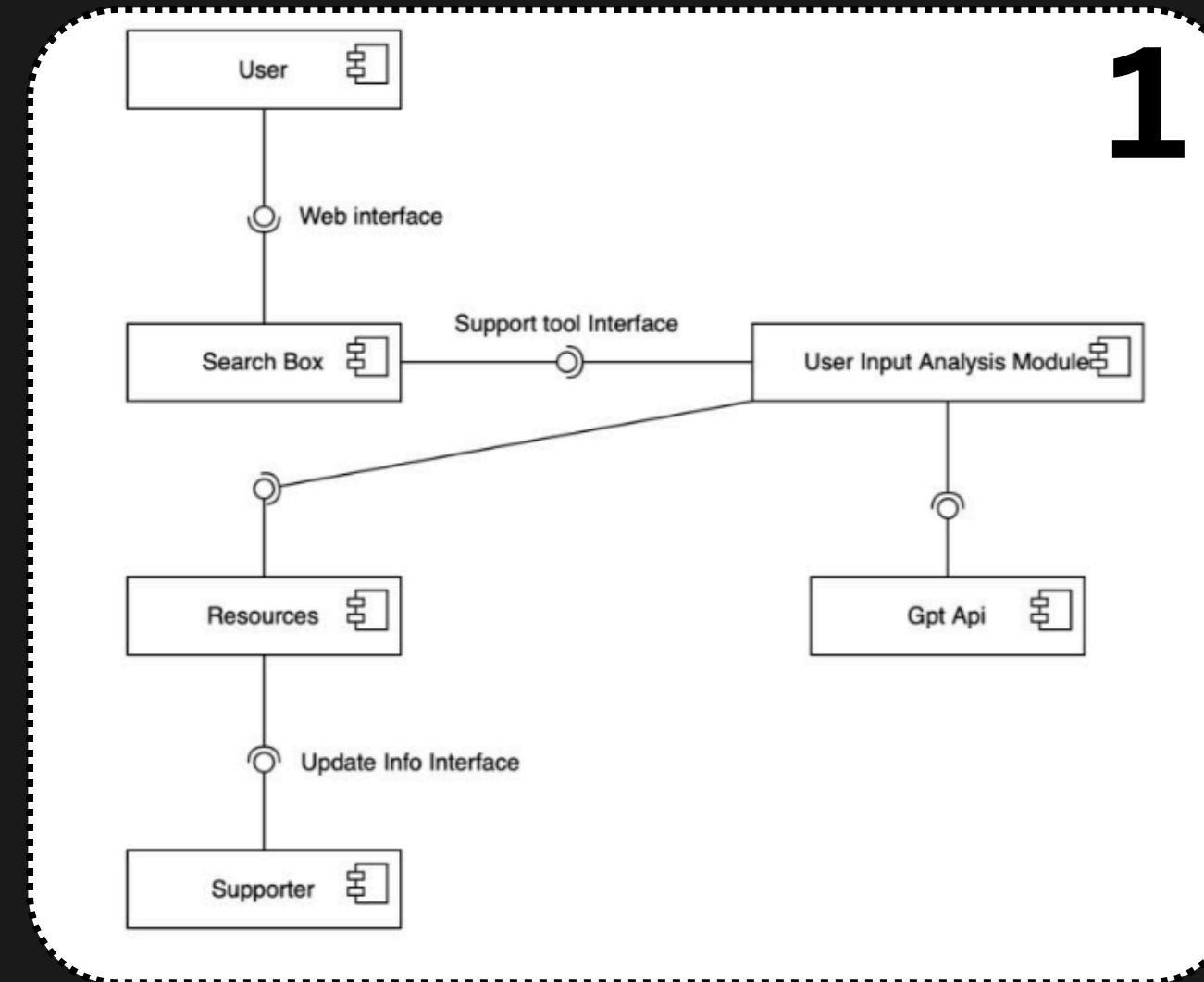
Comparison of Old & Proposed System

Use Case & Activity Diagram



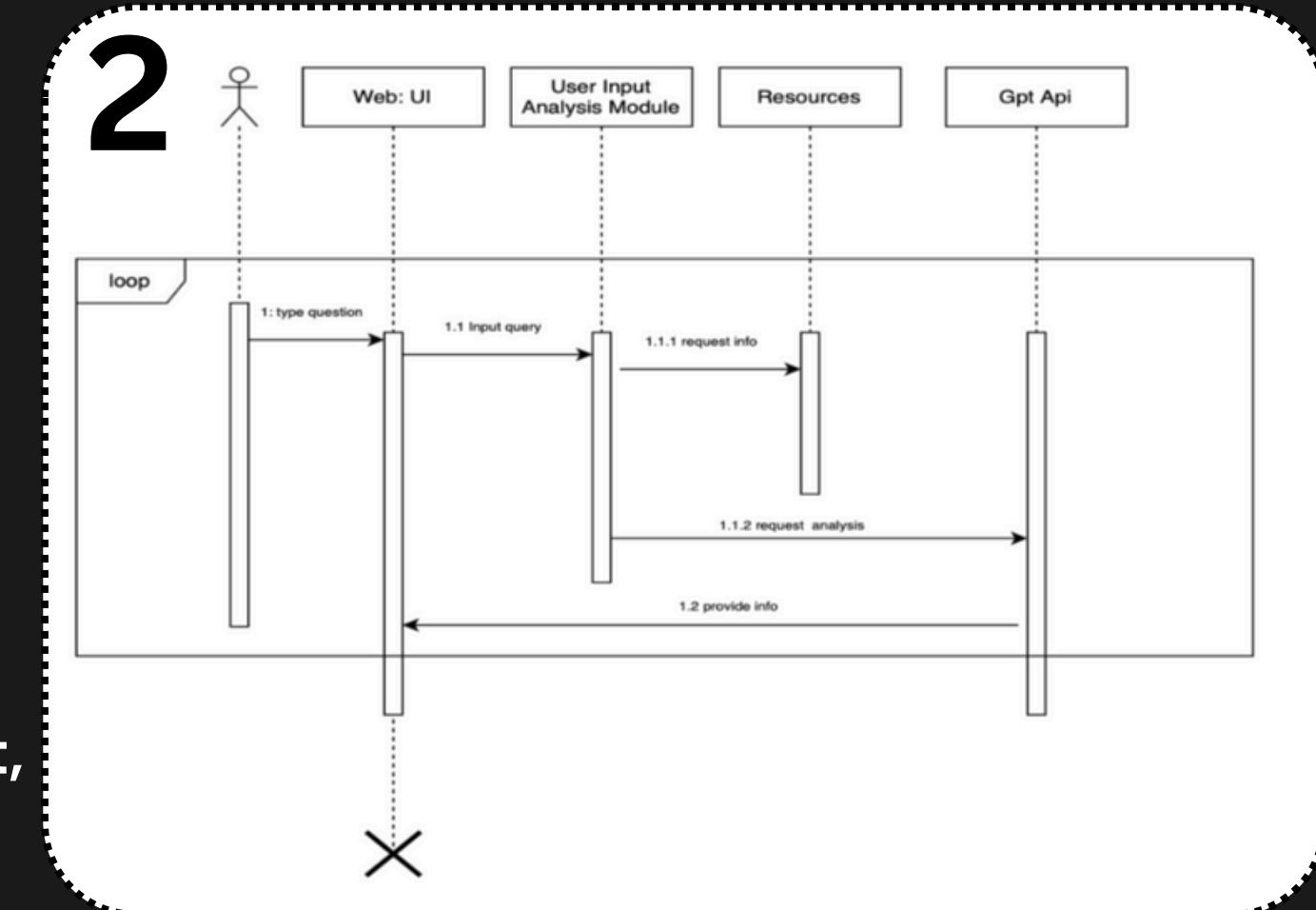
DESIGN

Redefine user interactions through a comprehensive information system.



1. Architecture (Component Diagram)

- Components: User, Search box, User input analysis, Resource, Supporter, GPT API.
- Flow: User query → Analysis → Solution → Display.



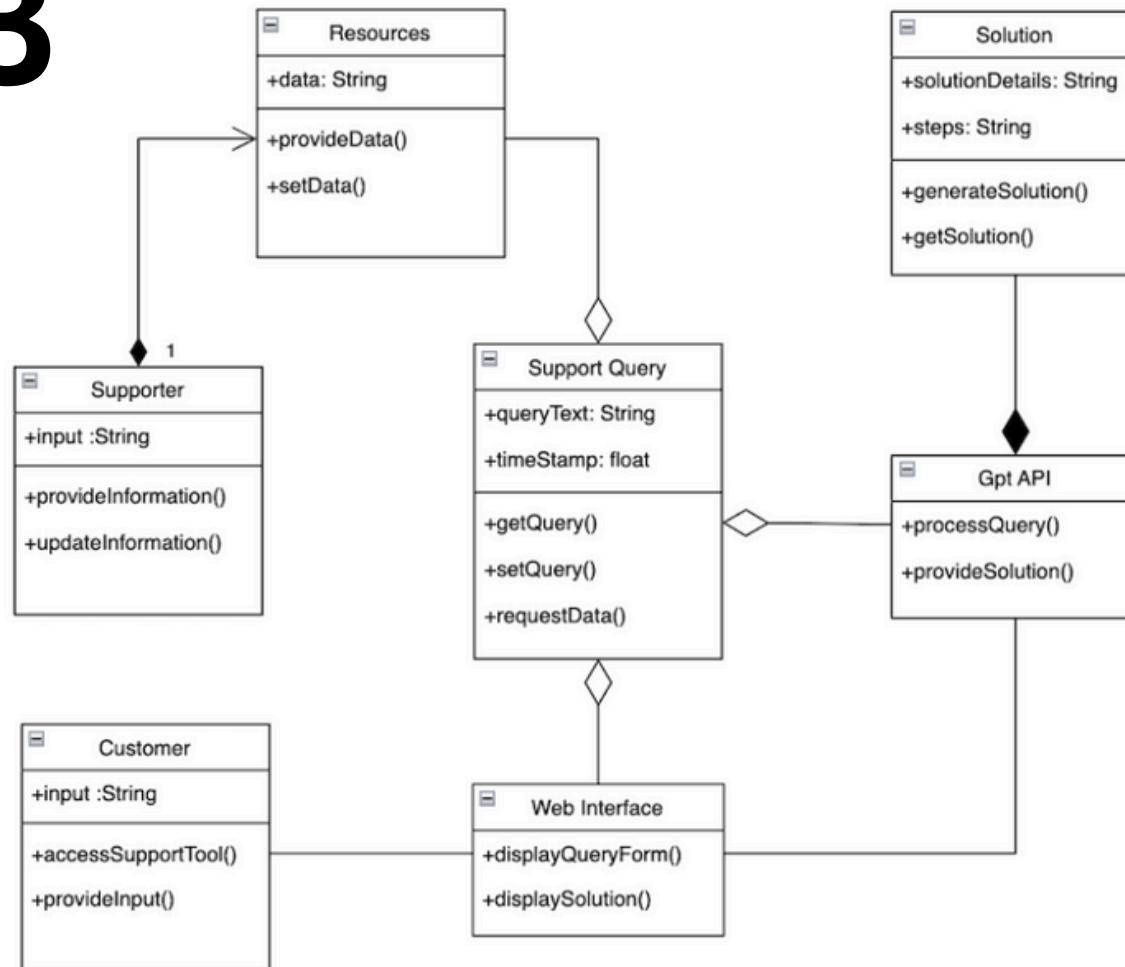
2. User Interface (Sequence Diagram)

- User action: Access tool, input query.
- System response: Query analysis, resource request, solution generation.

DESIGN

Redefine user interactions through a comprehensive information system.

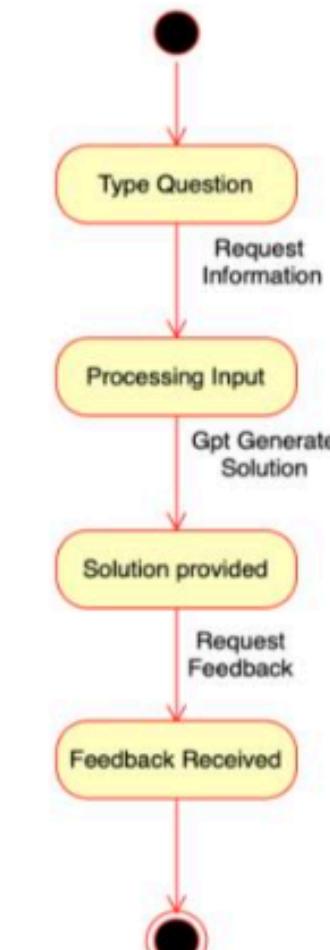
3



3. Data Design (Class Diagram):

- Relationships: Customer, Web Interface, GPT API, Resources, Support Query, Solution.
- Dependencies: Web Interface-GPT API, Solution-GPT API, Supporter-Resources.

4

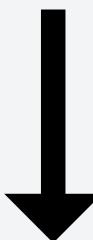


4. Process Design (State Machine Diagram):

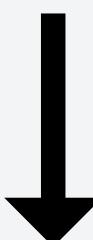
- States: Type Question, Processing Input, Solution Provided, Feedback Received.
- Flow: User input → Processing → Solution → Feedback loop.

SYSTEM DEVELOPMENT

Set up Environment



Get Gemini API key from GOOGLE AI for Developer



Implement the code in the Integrated Development Environment (IDE), VScode

```
chatbox.html    webbs.html
Users > maykhinesoe > Downloads > webbs.html > {} "webbs.html"
1  <!DOCTYPE html>
2  <html lang="en">
3  <body>
4  <script type="module">
5  import { GoogleGenerativeAI } from "@google/generative-ai";
6
7  const API_KEY = "AIzaSyBRF0kHitN5T8Znv0qMexY7MZiIepQu9GK";
8
9  const genAI = new GoogleGenerativeAI(API_KEY);
10 document.querySelector('.sendMessage').addEventListener('click', ()=>{
11   sendMessage();
12 })
13
14 async function sendMessage() {
15   const userInput = document.getElementById("userInput").value;
16   displayMessage(userInput, 'user');
17   const model = genAI.getGenerativeModel({ model: "gemini-pro" });
18   const chat = model.startChat({
19     history: [
20       { role: "user", parts: userInput },
21       { role: "model", parts: "Hello!" },
22       { role: "user", parts: userInput },
23       { role: "model", parts: "it is in pathum thani" },
24       { role: "user", parts: userInput },
25       { role: "model", parts: "Location is G,11,12/ RSU Tower, 571 Soi 31 SUKUMVIT Rd., Klong Ton Nua Wai, Bangkok, Thailand." },
26       { role: "user", parts: userInput },
27       { role: "model", parts: "The open hours are Monday - Friday 7:00 AM - 5:00 PM. Saturday - Sunday afternoons." },
28       { role: "user", parts: userInput },
29       { role: "model", parts: "The doctor present today are A, B,C ,D. Would you like to make appointment?" }
30     ]
31   });
32 }
```

The screenshot shows a portion of a website titled "Gemini API Cookbook". It features a blue header bar with the text "Get the new Gemini API Cookbook!". Below the header, there's a section titled "Examples" containing some code snippets. To the right, there's a large, semi-transparent circular overlay containing several sections of text:

- "with the Gemini API in applications" (with a bookmark icon)
- "how to access the Gemini API for your Node.js application"
- "how to do the following:"
- "including your API key"
- "text-only input"
- "text-and-image input (multimodal)"
- "conversations (chat)"
- "cluster interactions"
- "embedding text"
- "as well as options for controlling content generation."

At the bottom of the page, it says "This page was generated by the Gemini API Documentation Generator".

SYSTEM DEVELOPMENT

Use HTML, JS, CSS to get the basic structure of the chatbox



Train AI for responsive answers to the user questions

The screenshot shows a browser window titled "project301 stage2". The main content area displays a chatbot interface with a dashed border. The interface consists of several message bubbles:

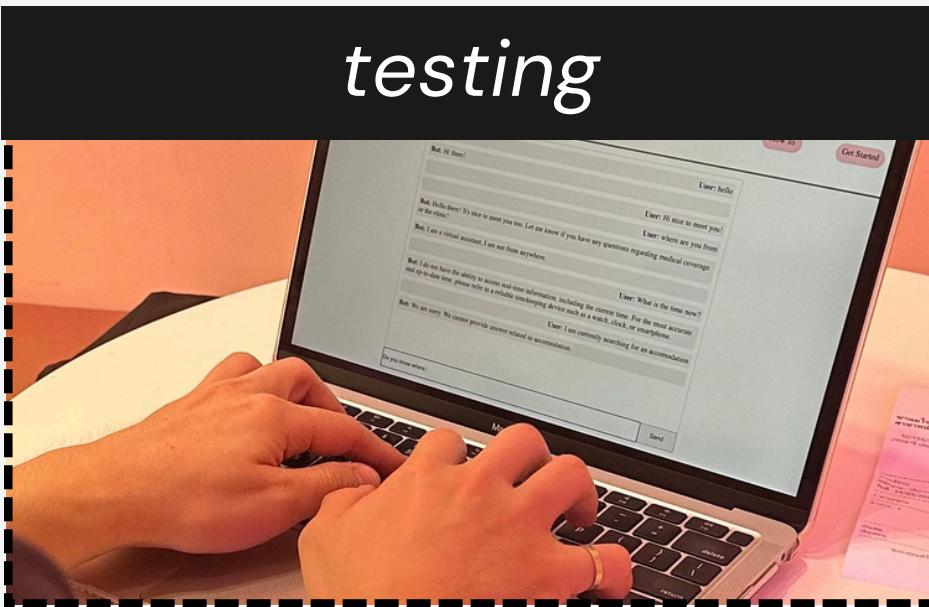
- User: hello
- Bot: Hello, how can I assist you today?
- User: what are the opening hour?
- Bot: monday – friday 7:00 am – 5:00 pm saturday – sunday and public holidays 7:00 am – 4:00 pm
- User: where is the clinic located?
- Bot: The clinic is located at No. 52/347, Building 12/1 (Rangsit Prayoonsak 2), 2nd floor, Room 216, Mueang Ake Village, Ek Prachim Road, Lak Hok Subdistrict Mueang Pathum Thani District Pathum Thani Province 12000.
- User: oky thank you

At the bottom of the interface is a text input field with placeholder text "Type your message..." and a "Send" button. Below the input field is a URL bar containing "file:///Users/maykhinesoe/Downloads/webbs.html".

The top right corner of the browser window shows the source code of the page:

```
1  <!DOCTYPE html>
2  <html lang="en">
3  <body>
4  <script type="module">
5  import { GoogleGenerativeAI } from "@google/generative-ai";
6
7  const API_KEY = "AIzaSyBRF0kHitN5T8Znv0qMexY7MZilepQu9Gk";
8
9  const genAI = new GoogleGenerativeAI(API_KEY);
10 document.querySelector('.sendMessage').addEventListener('click', ()=>{
11   sendMessage();
12 })
13
14 async function sendMessage() {
15   const userInput = document.getElementById("userInput").value;
16   displayMessage(userInput, 'user');
17   const model = genAI.getGenerativeModel({ model: "gemini-pro" });
18   const chat = model.startChat({
19     history: [
20       { role: "user", parts: userInput },
21       { role: "assistant", parts: "Hello!" },
22     ],
23   });
24   const response = await chat.generate();
25   displayMessage(response.message, 'assistant');
26 }
27
28 function displayMessage(message, role) {
29   const messageElement = document.createElement('div');
30   messageElement.textContent = message;
31   if (role === 'user') {
32     messageElement.classList.add('user');
33   } else {
34     messageElement.classList.add('assistant');
35   }
36   const messagesContainer = document.querySelector('.messages');
37   messagesContainer.appendChild(messageElement);
38 }
```

SYSTEM TESTING



- Begin with team members testing
- Identify problem regarding insufficient information
- Modify the AI again
- Repeat the problem identification process
- Assemble representative to test the system

- Prepare user survey on
- Convenience of support tool
 - Utilization & navigation of user interface
 - System beneficiary
 - Overall performance
 - User feedback

user survey

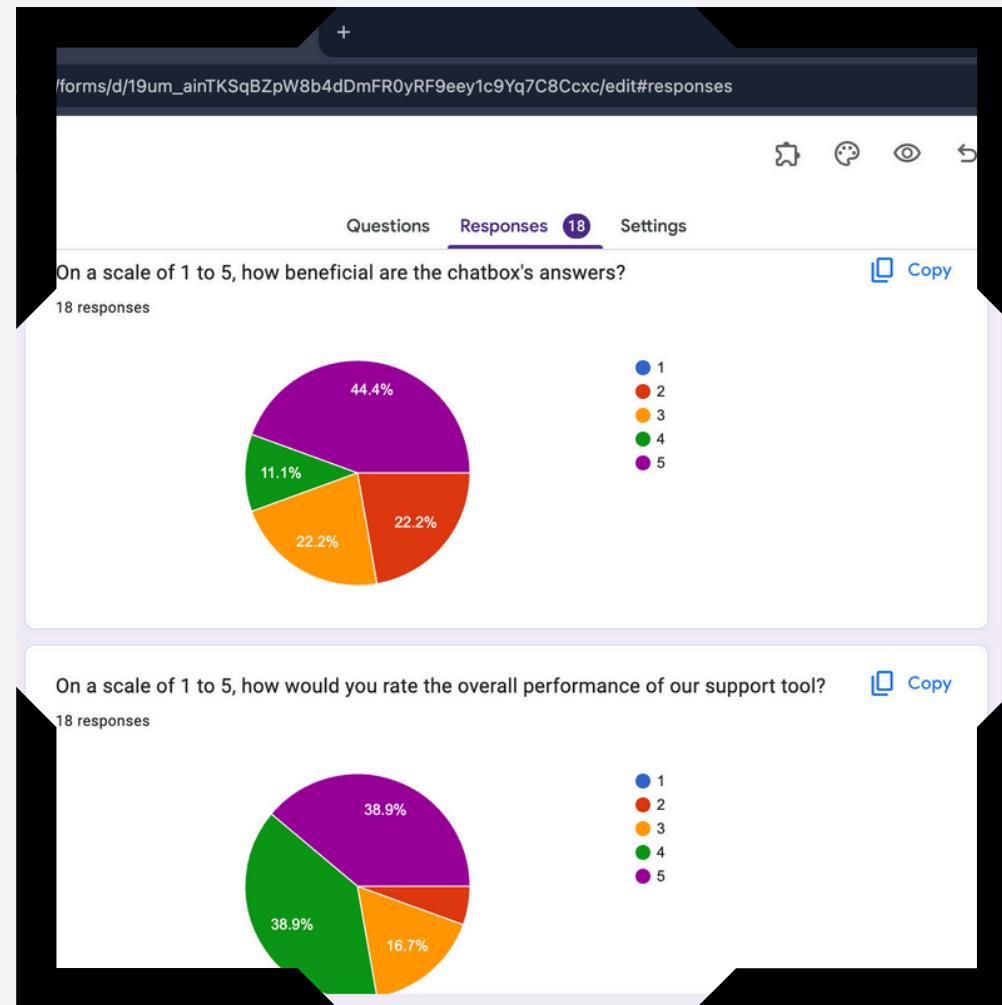
ICT301: Interactive Customer Suppo

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Form description

What is your nickname? *

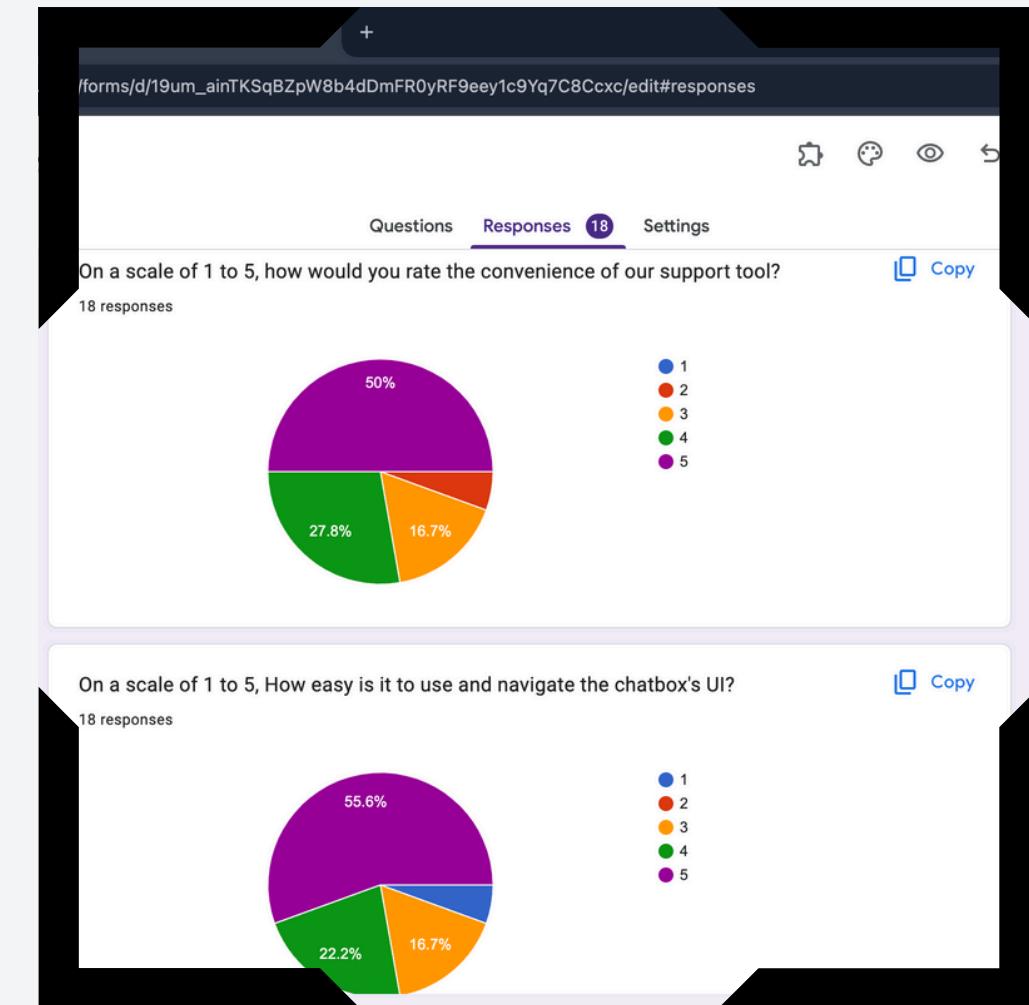
SYSTEM TESTING ANALYSIS ON SURVEY RESULT



Any feedback on our service? If yes, please write below.(optional)

11 responses

- Chatbot is a little bit slow and need to improve to give answers more precisely
- Chatbot answers are not accurate.
- Nice
- Good q3
- Nope
- It's good and easy to use.
- It's good
- Add more questions and some UI design
- Please add more content. Cannot find information about insurance and stuffs.

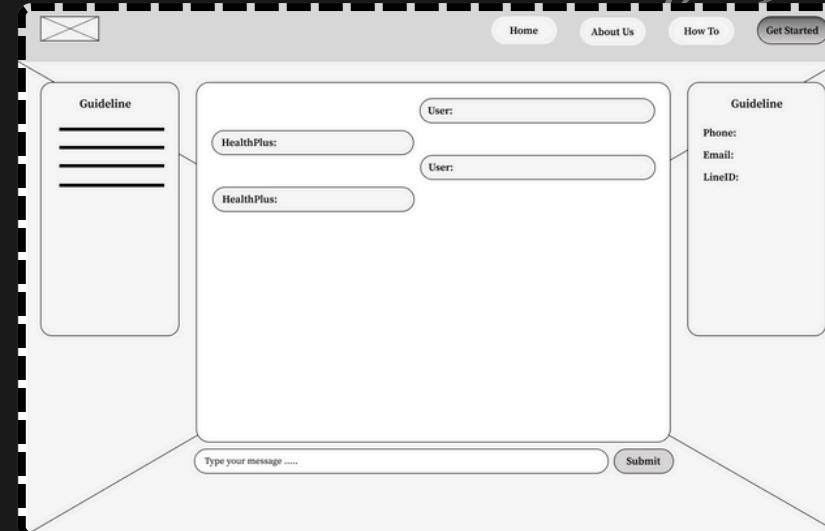
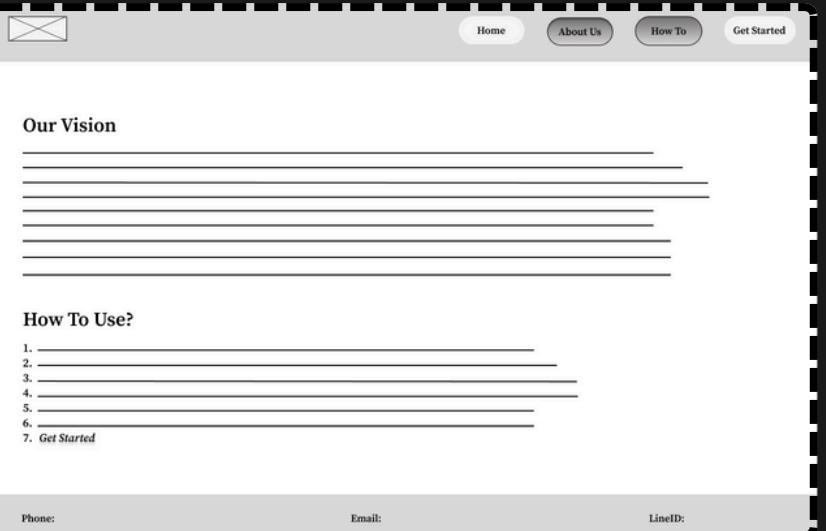
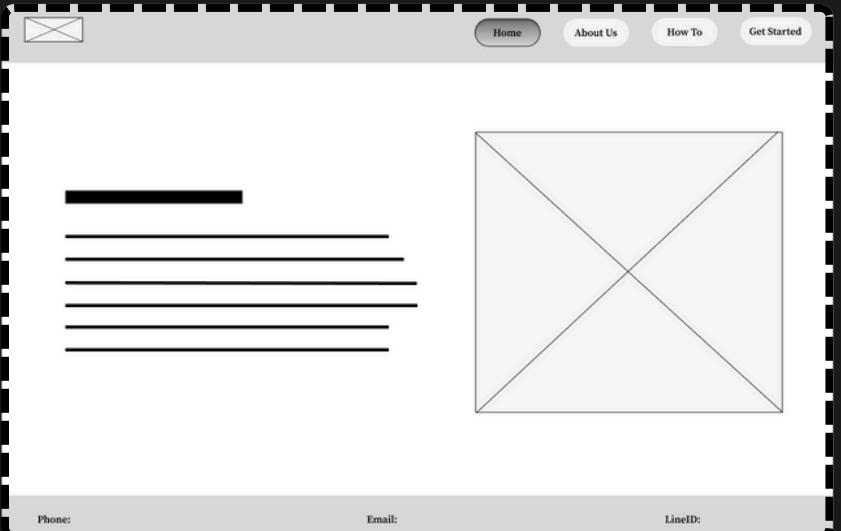


SYSTEM DEPLOYMENT

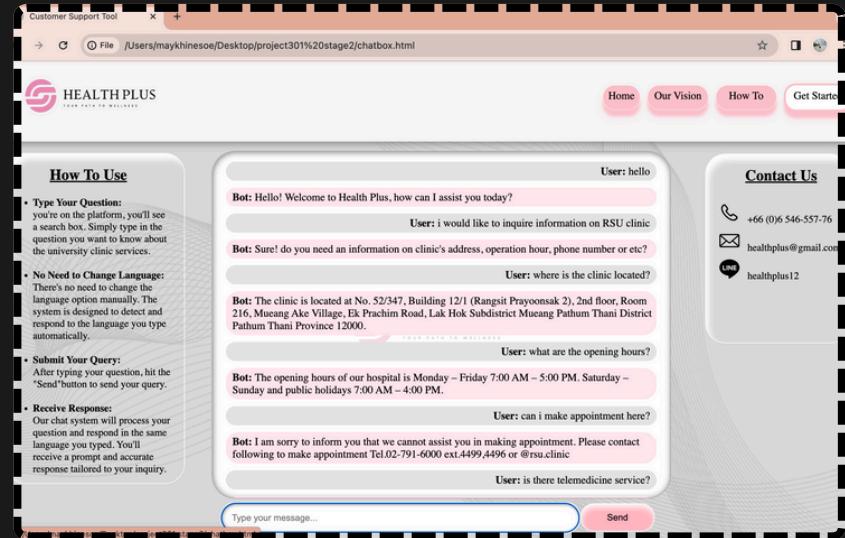
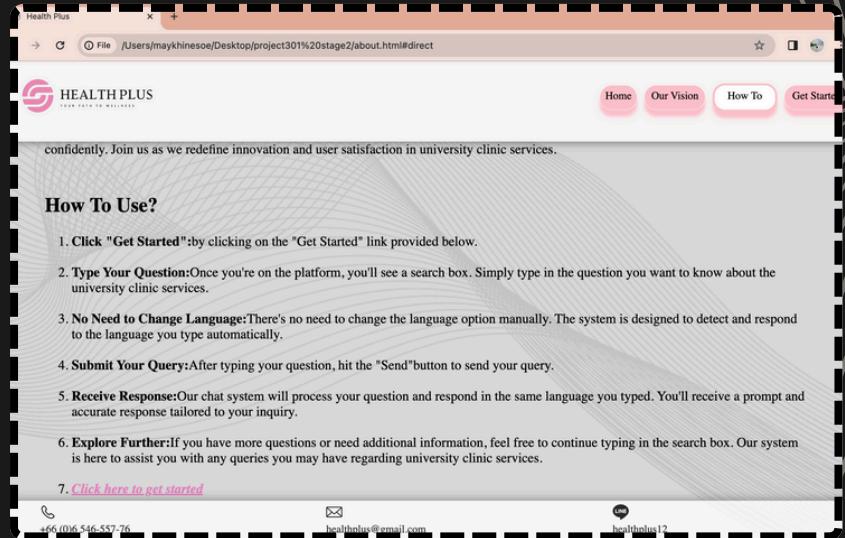
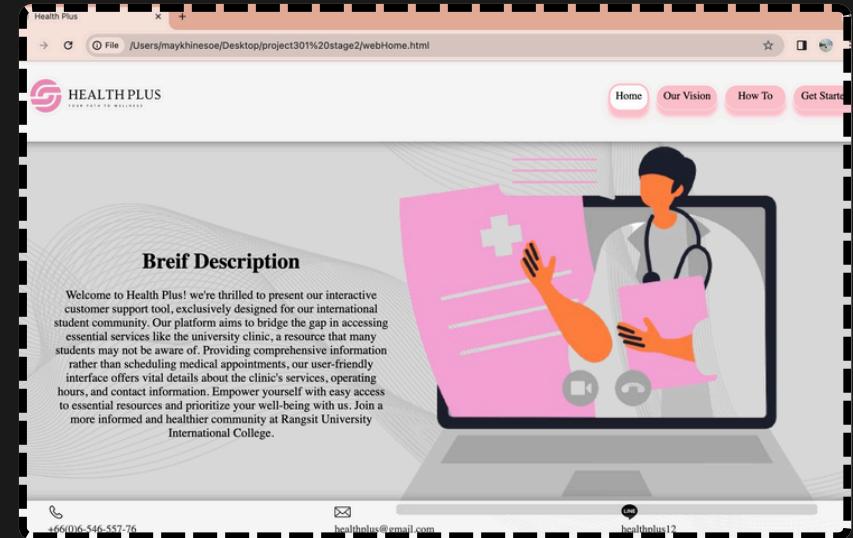
- Analyzing Survey Form Results: Examining user feedback.
- Creating Wireframe: Establishing layout and functionality.
- Initiating User-Centric Design Process: Prioritizing user needs.
- Thinking of Suitable Colors for Health Plus: Selecting colors aligned with brand identity.
- Implementing the Design with Code: Translating design into functional interface.

SYSTEM DEPLOYMENT

Develop the wire frame



Deploy the final form



MAINTENANCE

Response Error

- Response information is not accurate.
- Gather more information about clinic and train the AI.
- Test the solution and repeat until problem is solved.

API Key Error

- Face with unexpected API Key error.
- Have a problem in generative AI.
- Reduce the generative AI version and test the solution.

System Maintenance

- Use project managing tools (Monday.com) for preventing unexpected error in system planning such as project scope, timelines, budget and so on .

USABILITY EVALUATION

What is your nationality? *

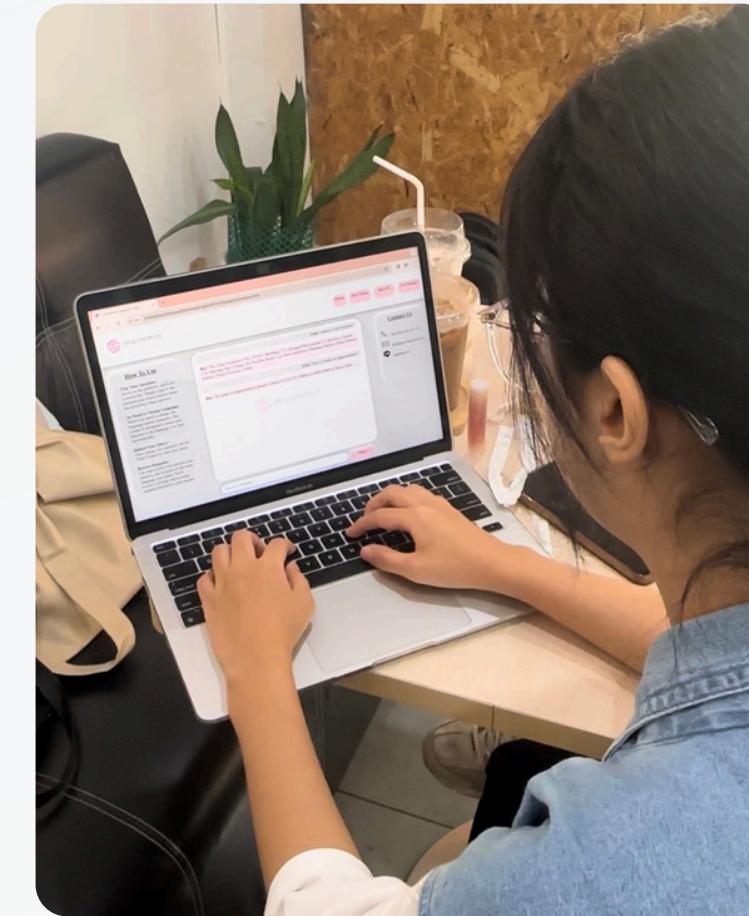
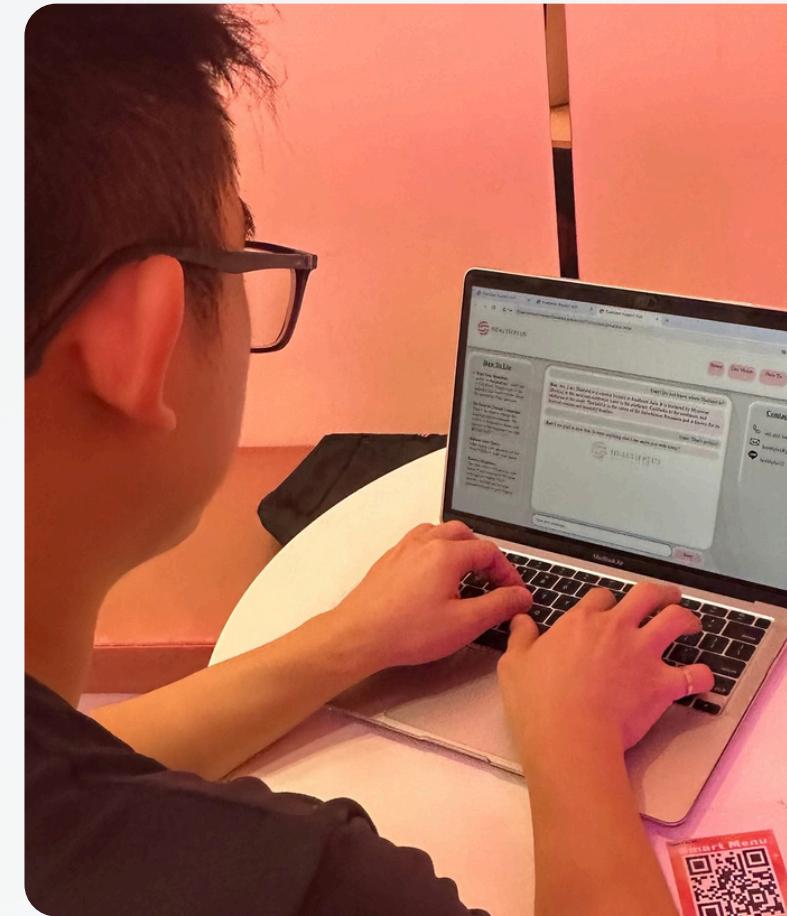
Choose

On a scale of 1 to 5, how would you rate the convenience of our support tool? *

1
 2
 3
 4
 5

On a scale of 1 to 5, How easy is it to use and navigate the chatbox's UI? *

1
 2
 3
 4
 5



- Collecting feedback from random students in Rangsit University.
- Analyzing the feedback, identify usability issues and re-adjust the project.
- Recording reaction video of users from First Click testing.
- Monitored user engagement, usage patterns, and key metrics.
- Analyzing the effectiveness of the changes made.

PROJECT MANAGEMENT INFORMATION SYSTEM

▼ This week

	Task	Owner	Status	Due date	Budget	Timeline
<input type="checkbox"/>	> Planning 2	+ 4	Done	! 24-Jan	\$0	! 18 - 24 Jan
<input type="checkbox"/>	> Analysis 2	+ 4	Done	✓ 31-Jan	\$0	✓ 25 - 31 Jan
<input type="checkbox"/>	> Design 2	+ KZ 4	Done	! 7-Feb	\$0	! 1 - 7 Feb
<input type="checkbox"/>	> Development 3	+ 4	Done	! 14-Feb	\$19.99	! 8 - 14 Feb
<input type="checkbox"/>	> Testing 2	+ R 4	Done	! 21-Feb	\$10	! 15 - 21 Feb
<input type="checkbox"/>	> System development 1	+ 4	Done	! 28-Feb	\$5	! 22 - 28 Feb
<input type="checkbox"/>	> Maintenance 2	+ 4	Done	! 13-Mar	\$15	! 7 - 13 Mar
<input type="checkbox"/>	> Usability Evaluation 1	+ 4	Done	✓ 26-Mar	\$0	! 14 - 20 Mar
<input type="checkbox"/>	> Project Management 1	+ R 4	Done	✓ 27-Mar	\$0	✓ 21 - 27 Mar
+ Add task						

24 Jan - 27 Mar \$49.99 sum 18 Jan - 27 Mar

- Use Monday.com tool for managing the project.
- Calculate budget and estimate the project cost.

CONCLUSION

- Developed interactive support tool for Rangsit University International College students.
- Conducted research, interviews, and surveys for student needs understanding.
- Aiming to facilitate access to clinic information for international students.



HEALTH PLUS
YOUR PATH TO WELLNESS





THANK YOU!