



**UTM**  
UNIVERSITI TEKNOLOGI MALAYSIA

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**FACULTY OF COMPUTING**  
**SEMESTER 1 2023/2024**

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**SECP1513 – TECHNOLOGY & INFORMATION SYSTEM**

**SECTION 2**

**DESIGN THINKING REPORT**

**LECTURER: DR. ARYATI BINTI BAKRI**

**GROUP 6 (SOCIAL MEDIA)**

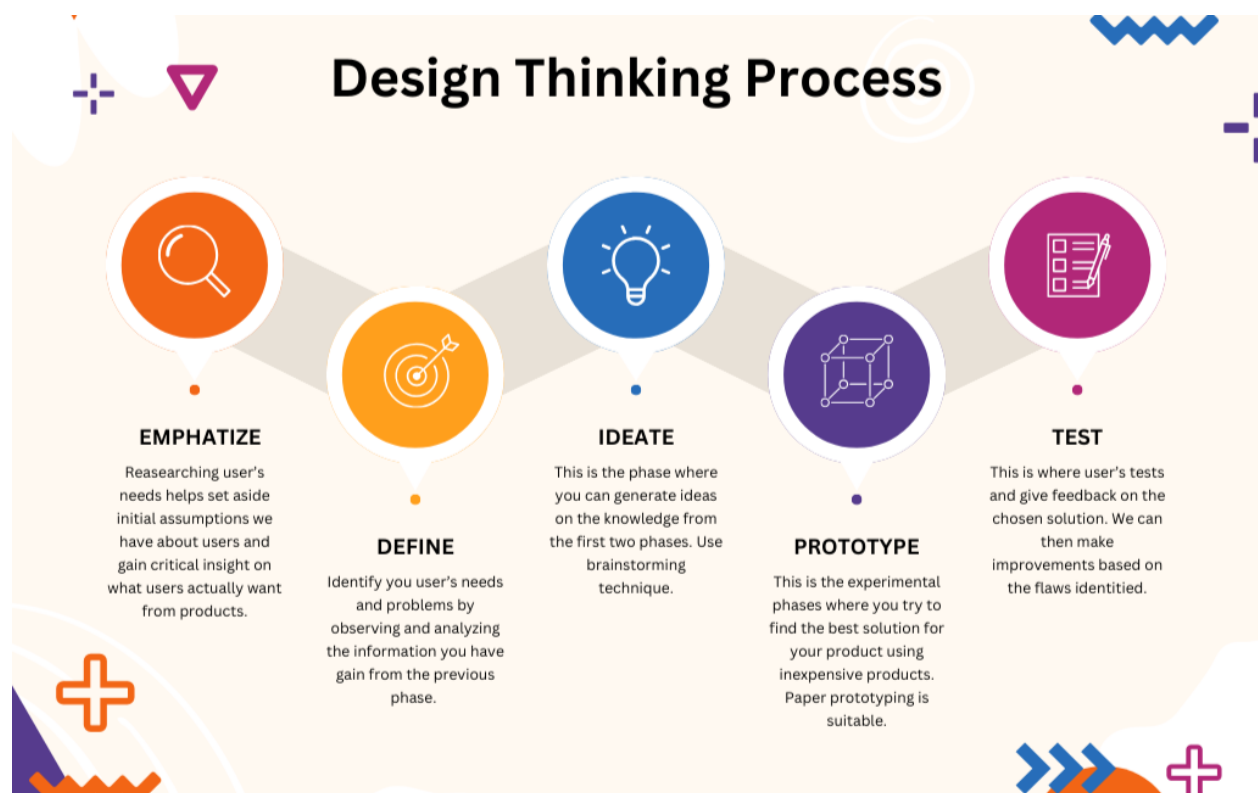
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<b>TEH RU QIAN</b>	<b>A23CS0191</b>
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## 1.0 INTRODUCTION

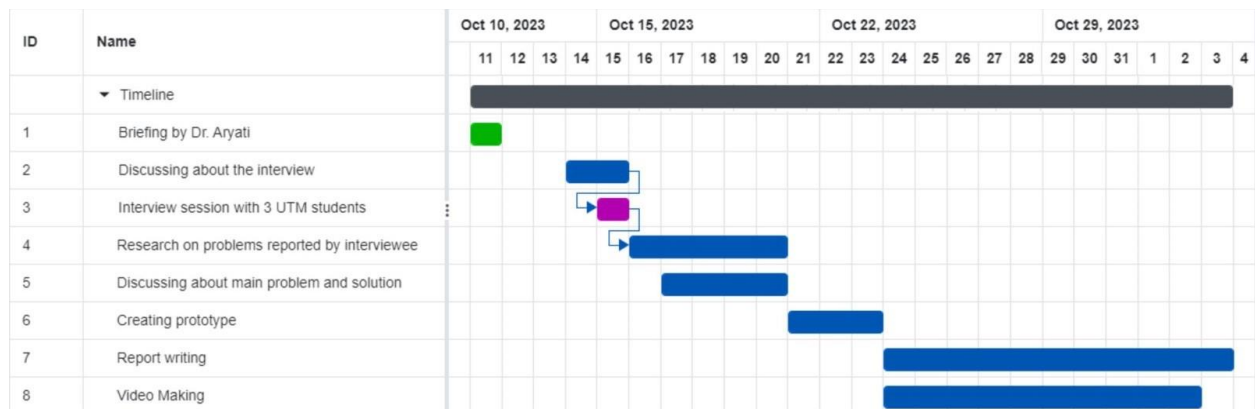
Design thinking is a design method that uses a human-centered approach to problem-solving with the intention of making a product that fits the user's needs. It is important to understand the rapid changes in the user's environment and behavior to make the perfect product or solution for them. There are five phases of design thinking which are Empathy, Define, Ideate, Prototype, and Test.



Social media is a place where people can share information and interact with each other online. As social media usage is on the rise, there are many who choose to take advantage of those who are not so well-adapted in the ways of social media. We have interviewed some students and have concluded that scammers are one of the common problems that users come across when using social media. After going through the design thinking process, we have produced a mobile phone extension called SAFETYLA that alerts users when encountering a potential fraud.

## 2.0 TIMELINE

11/10/2023	Briefing by Dr. Aryati about the design thinking assignment
14/10/2023	Discussing about the interview matter
15/10/2023	Interview session with 3 UTM students
16/10/2023	Research on problems reported by interviewee
18/10/2023	Discussing about main problem and solution
21/10/2023	Create prototype
24/10/2023	Report writing - Introduction
25/10/2023	Report writing – Detailed description (Empathize, Define, Ideate, Prototype)
26/10/2023	Report writing – Detailed description (Testing), Problems
27/10/2023	Report writing – Assessment, Reflection, The task for each member, References
30/10/2023	Video making
1/11/2023	Video and report checking by Dr. Aryati
3/11/2023	Report finalize



### 3.0 DETAILED DESCRIPTION

There are 5 phases in design thinking which are empathize, define, ideate, prototype and test.

#### 3.1 EMPATHIZE

In this stage, we try to use the interview method to tackle the user's problems while they are using social media such as WhatsApp and Telegram. During the interview session, we had 3 UTM students as our interviewees who are Syarifah Dania binti Syed Abu Bakar, Yasmin Batrisyia binti Zahiruddin and Asilah binti Mohd Razak. After the interview session finished, we obtained the problems they faced while they were using social media platforms.

Example questions during interview session:
<ol style="list-style-type: none"><li>1. What is your name?</li><li>2. How old are you?</li><li>3. Which faculty are you from?</li><li>4. In your opinion, what is the biggest problem regarding social media?</li></ol>



### 3.2 DEFINE

The issues reported by the interviewees were scammers, excessive advertising and cyberbullying. Then, we did some additional investigation and discovered that scammers on social media are currently the biggest issue. 26% of all recorded fraud losses in 2021 were due to social media.[\[1\]](#) Therefore, we decided to make scammers our main issue.

Scammers are people who commit fraud to others. For example, a scammer messages a person that he or she had won a prize through a lottery and then asks him or her to pay an upfront payment for fees and taxes.[\[2\]](#) That's how people got scammed.



 classic  
 009/13 SAT 07 APR 2018  
 4D 0458 RM BIG (1) RM SMALL (1)  
 500 0  
**Total RM500.00**  
 World Huat Bonanza - Contest ends on 07/04/2018.  
 Grab your chance to win now!  
 8208 8650 8182 7508  
 SAT 07 APR 2018 15:48:57 00346208853755401390  
 0 0000000015 TR 0000000013  
 00200512 251202 152300116  
 00010 04752 06003 70590 41629 51564 13963  
 00346 00605 37554 01390  


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07/04/2018 (Sat)

1st Prize	<b>0458</b>	999/18		
2nd Prize	<b>1807</b>	PLAY THE GAME		
3rd Prize	<b>6153</b>			
Special Prizes				
7180	3029	6967	6821	0369
6895	0910	1148	4734	3256
Consolation Prizes				
6085	5049	7146	4424	4517
0030	9326	2273	2861	8464
4D Powerball Numbers				
(79)	(63)			
4D Jackpot Gold				
<b>580753</b>				
(04)				
Jackpot Amounts				
Next Live Draw 03/04/2018 (Sun)				

TICKETS SCAN NEWS

120KB/s 1:07 63%

Kiy Haji Ando Sa...  
 07/04/18, 1:07 PTG

Assalamu alaikum kiy haji. 1:07 PTG ✓✓

Waalaikum salam anak,Macam mana?  
 1:09 PTG

Alhamdulillah saya dah Bank in tu duit mahar yang tuan kiy haji Minta,masa ni saya betul-betul kesusahan and nak Minta pertolongan Daripada tuan kiy haji.  
 1:14 PTG ✓✓

Baiklah anak,Sila tikam Hari ni,SABTU 07/04/2018 kat kedai MAGNUM 4D ##0458##,tolong anak rahasiakan Dan cukup anak sahaja yang tikam nombor tu, pasal yang dibagi izin hanya anak seorang yang boleh tikam nombor tu.  
 1:23 PTG

Baiklah tuan kiy haji,sahaya pastikan hanya sahaya yang nak tikam nombor tu.  
 1:26 PTG ✓✓

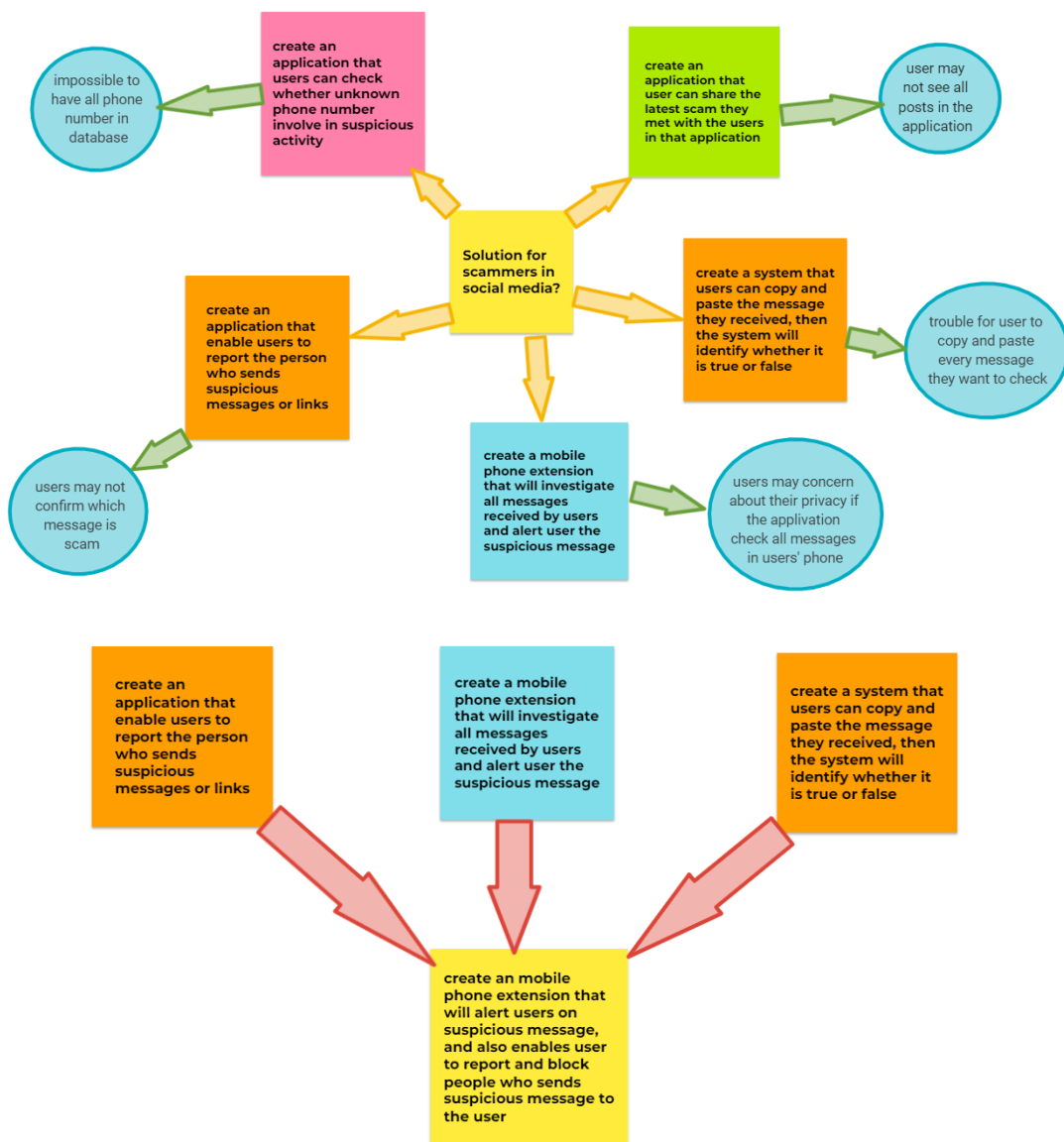
Anak boleh bagi dkat kiy haji berapapun lepas dpt hasil tikaman nombornya ataukah anak juga boleh bagi dermakan dekat anak yatim.  
 1:29 PTG

Itu niat saye tuan kiy haji. 1:31 PTG ✓✓

Taip mesej

### 3.3 IDEATE

After we decided our main problem, which is scam, we conducted a discussion using Jam board to figure out a solution to solve this problem. Finally, we plan to create an extension which will alert users about which message was suspected of fraud. Besides, users can also report and ban a person who sends suspicious message that involves scams to them.





### **3.4 PROTOTYPE**

After discussion, we created a mobile phone extension called SAFETYLAA. The steps using our extension are listed below:

Switch on to safety mode. (Figure 3.4.1) After that, our system will always be active to detect scammers and alert users when scammers are present. For example, in the conversation shown in Figure 3.4.2, a pop-up message appears.

Also, users may just click on the profile of the person who sends suspicious links, to report and block them. After we receive the report, our system will investigate the person. During the investigation, the person won't be able to access any other social media accounts. If our system found that the person is scammer, the number will be blacklisted to chat with users. This action can prevent users from falling into traps.

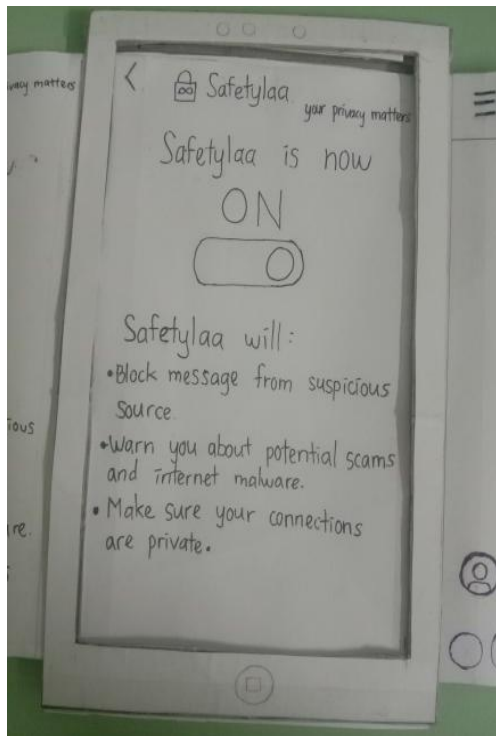


Figure 3.4.1

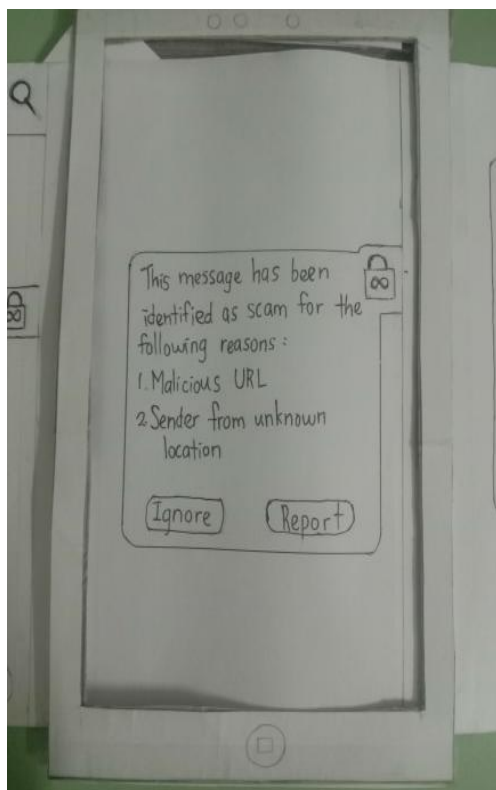



Figure 3.4.2

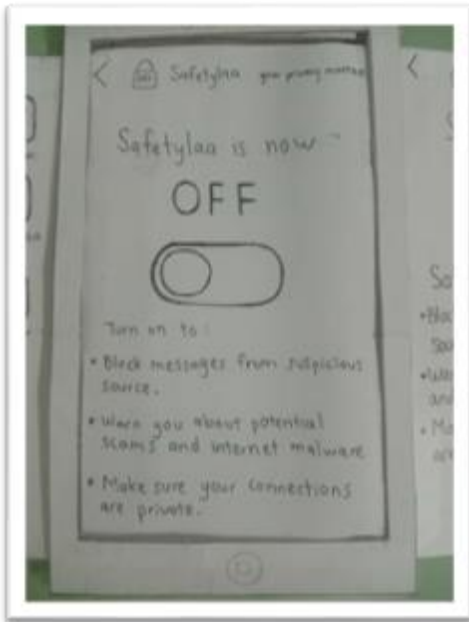
### 3.5 TEST

After we created this mobile phone extension, we did some testing by implementing it in our mobile phone. Then, we test the extension for several situations. At the end of the testing, we found that the extension works very well. It can detect fraud messages accurately and report it to the user.

(Table 1)

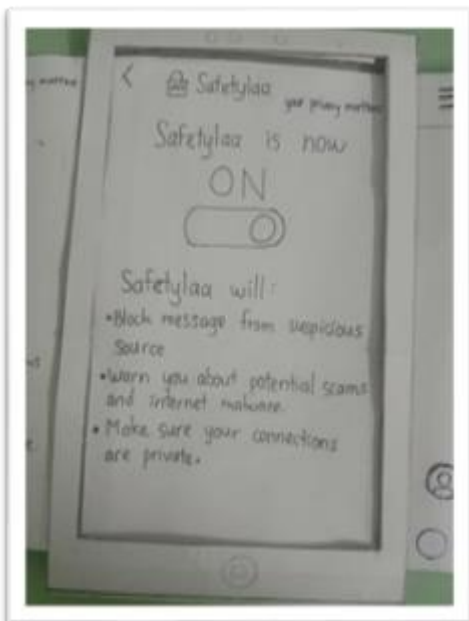
Page	Description
	The phone's home screen

Page 1



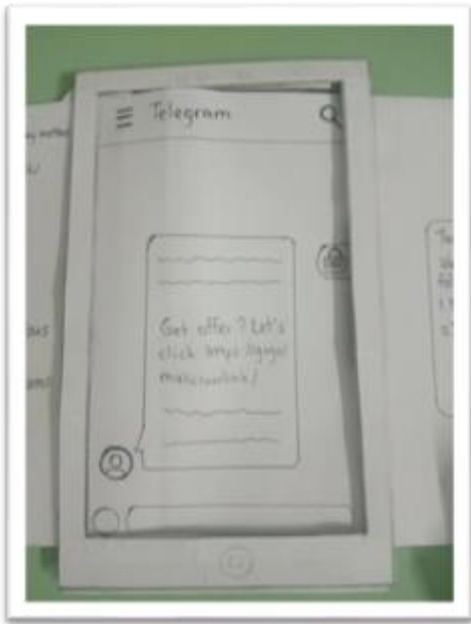
Turn on SAFETYLAAs before using the social media

Page 2



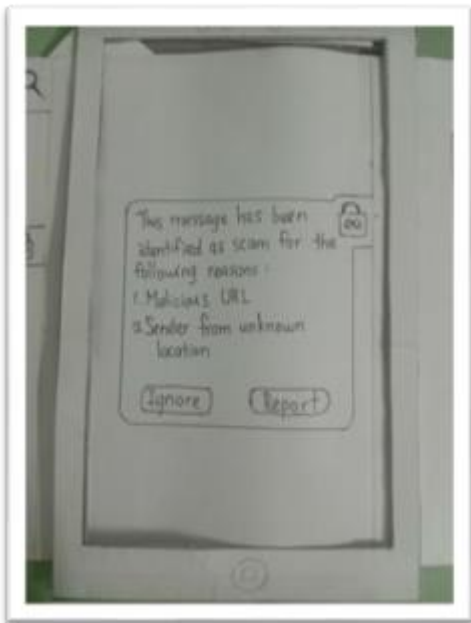
Once SAFETYLAAs is turned on, it will assist you in identifying fraudulent links and scammers to keep you from falling victim to their tricks.

Page 3



Here is an example of a suspicious source.

Page 4



Following that, SAFETYLAA will identify the link and display a pop-up window. You may decide to report to that user at the moment.

Page 5

<div data-bbox="224 205 688 821" data-label="Image"></div>	<p>Presenting the user's current reporting to SAFETYLAA. After that, SAFETYLAA will take the actions required to prevent the message from being sent.</p>
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Page 6

Table 1

## **4.0 PROBLEMS AND SOLUTION**

### **Detailed Description (Problem, Solution and Team Working)**

The biggest problem that we collected from interviewees is scammers on social media. Nowadays, scammers are increasingly using social media to take advantage of people. This is because social media is the most profitable method for them to target people. For example, the con begins when a con artist contacts you, frequently through a direct social media message. They will initially try to build a connection by directly sharing details of a "great investment opportunity" that enabled them to make so much money in a short time. Then, they offered investment websites with a professional appearance but lacking in information to lure and guide you to complete your transaction. In this situation, many users fall into traps and lose their money.

As a result, our group starts to brainstorm ideas to find a solution. Fortunately, we have a solution to this issue, which is to develop an extension in mobile phones. Our team is going to collaborate with social media, especially Facebook, Telegram, Tik Tok, and more, to enable universal access to the extension. Through artificial intelligence, this extension is used to identify and avoid scams. As an example, it will check every single hyperlink that was sent in a message as quickly as possible. If it is determined to be a scammer, a pop-up warning will appear and advise users not to click it.

In addition, users can use the extension's user reporting system to suspect and report a person who always bothers them. To confirm that the phone number is secure, they can also check it in this system. The system will determine the authenticity of the phone number and, if the person who sent it is a fraudster, it will block him.

## 5.0 ASSESSMENT

The teamwork and efficiency in our group is visible. After Dr. Aryati assigned us the assignment on October 11th, we started to make our group. After that, we had an online meeting to discuss our respective tasks. Each team member works hard on their own tasks. We enlisted the help of multiple auxiliary applications to carry out research. For example, we used Google Docs and Microsoft 365 (Microsoft Word) to ensure that each member can include their part in the report. Besides, our interviews received good responses from users. After conducting interviews, we prepared innovative approaches to address a range of issues that many users may face. Judging from the results of the interview, scams on social media have become a major problem faced by many people. Therefore, after discussion via Jam board, our team members came up with a solution, which is creating a mobile phone extension to solve the scams problem. Finally, our team finalized a plan to resolve scamming issues after multiple discussions. With reasonable task allocation and teamwork, we completed this assignment faster than expected time which is on 15<sup>th</sup> of November.

## 6.0 REFLECTION

Person	Reflection
Tan Yi Ya	The goal that I would like to achieve at the end of the day is to acquire the skill of flexibility in terms of thinking and problem-solving abilities. Design thinking promotes our creativity and allows us access to different viewing perspectives of a problem from people with different backgrounds. I shall continue to learn, polish and grow from my own flaws to achieve my dream.



Chua Jia Lin	My goal regarding this course is to know more about current technologies and their history. This project inspired me to learn more about the application of current technologies in our daily lives. To improve my potential in the industry, I have to do more research to learn more about technologies on websites.
Teh Ru Qian	According to my understanding, design thinking is an iterative process in which we try to find and solve problems in different ways. In my opinion, this project introduced me to the importance of identifying a problem and coming up with many creative and innovative solutions. I'll surely apply what I learn about design thinking to problem-solving in my everyday life.
Goe Jie Ying	By studying this program, my goal is to gain stronger problem-solving skills, technical foundation and analytical skills. Design thinking encourages me to be innovative, adaptable, and open to feedback which is important to achieving my goals. I'll always develop my soft skills such as communication and problem-solving to improve my potential in industry.
Najma Shakirah Binti Shahrulzaman	My goal is to have a strong understanding and mastery of everything taught in this course and gain self-learning skills to catch up with the newest and relevant technologies. Design thinking plays a crucial part in problem-solving as it is important to fully understand the problem and resolve all assumptions regarding the problem to find the most effective solution. I will do my best to ensure that my capabilities and knowledge are up to par with what the industry needs.

## 7.0 THE TASK FOR EACH MEMBER

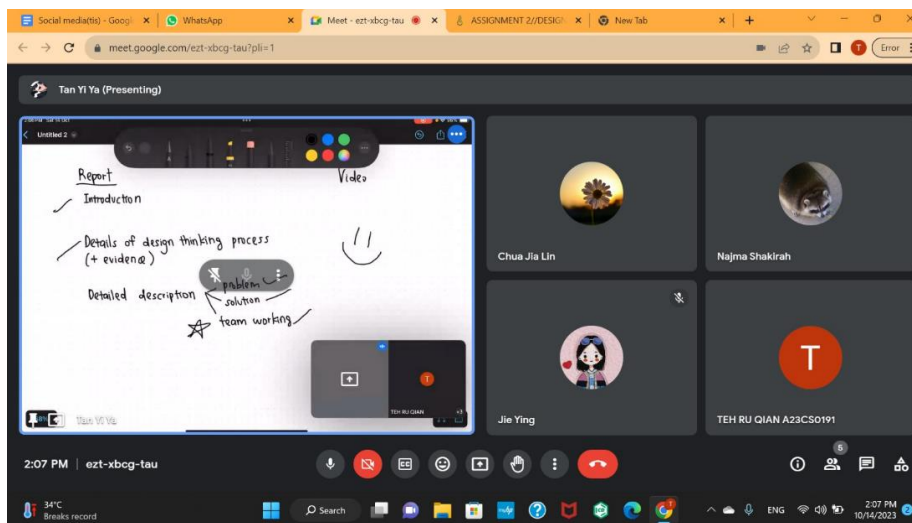
Person	Task
Tan Yi Ya	<ul style="list-style-type: none"><li>• Videographer/editor</li><li>• Prototype</li><li>• Brainstormer</li><li>• Photographer</li></ul>
Chua Jia Lin	<ul style="list-style-type: none"><li>• Design thinking process</li><li>• Brainstormer</li><li>• Report finalizer</li></ul>
Teh Ru Qian	<ul style="list-style-type: none"><li>• Problem &amp; Solution</li><li>• Brainstormer</li><li>• Photographer</li><li>• Prototype</li></ul>
Goe Jie Ying	<ul style="list-style-type: none"><li>• Assessment</li><li>• Brainstormer</li><li>• Interviewer</li></ul>
Najma Shakirah Binti Shahrulzaman	<ul style="list-style-type: none"><li>• Introduction</li><li>• Presentation</li><li>• Brainstormer</li></ul>

## 8.0 REFERENCES

1. Research, M. (2023b, October 2). Top Social Media Scams | How to protect your business. *Bolster AI*. <https://bolster.ai/blog/social-media-scams#:~:text=Social%20media%20scams%20are%20rampant,these%20scams%20are%20to%20detect>.
2. *What are some common types of scams?* / Consumer Financial Protection Bureau. (2023, August 28). Consumer Financial Protection Bureau. <https://www.consumerfinance.gov/ask-cfpb/what-are-some-common-types-of-scams-en-2092/>
3. Interaction Design Foundation - IxDF. (2016, May 25). What is Design Thinking?. <https://www.interaction-design.org/literature/topics/design-thinking>
4. Bahaudin, N. H. (2018, April 15). Fake 'haji' detected running lottery numbers prediction scam. *NST Online*. <https://www.nst.com.my/news/crime-courts/2018/04/357620/fake-haji-detected-running-lottery-numbers-prediction-scam>

## Appendix

14/10/2023 - Meeting to allocate task



18/10/2023 - Discussing about main problem and solution



## Discussion via Jam Board

Solution (about scams on social media)

- app to check suspicious activity
- app to report suspicious activity
- extension to investigate msg
- define whether the msg is true / false
- auto check the message received

Final Decision

create an mobile extension that alert user on suspicious message  
and enable them to block and report the people that sent it to them

Youtube Link for Video: <https://youtu.be/QyVm9iafDNI?si=FoQEkhJY9IHla4Gx>

