

**KURSUS**

**TEKNOLOGI AND SISTEM MAKLUMAT**

**Kumpulan 9 2020**

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| ASSIGNMENT TYPE | GROUP |
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Introduction

Technology is a knowledge where people create ideas to make their problems easier. It is becoming increasingly prevalent in the world today. Nowadays, people are brainstorming their ideas as there are lots of problems with their life. However, it is a fact that technology is currently developing in our world and it will someday lead us towards a new world.

Creating ideas to solve problems are what we called as ‘design thinking’. For our project, we were required to do the design thinking as it is the best way to solve any related problems. The main objective is to design an idea to find solutions that are related to our topic, which is Privacy, Security and Ethics. As for this project, we have interviewed few people that would help us to discuss about and come out with a brilliant idea to solve these cases. We found out that there were three problems we need to figure out to solve these problems.

Empathy

We used three methods to list out problems about computer’s security and privacy, which were observe, engage and immerse. As for observe, we looked out on google and social medias if there are any complaints about any computer security or privacy issues when connecting to Wi-Fi. As for engage method, we had interviewed with three persons that we thought would likely to have some problems related with our topic. Finally, the method immerse is where we tried to understand their problems, as we also thought that these problems needed to be fixed as fast as possible as privacy and security issues are serious matters.

As a result, we found out that there are three main problems that are related to Wi-Fi connection. Firstly, when people connect their computers with Wi-Fi or hotspots, there are situations where another person who uses the same Wi-Fi or hotspots, they might try to take advantage by accessing our privacy files and try to steal from them. Another problem is the other user may have the ability to see our personal information when doing online banking transfers. Finally, our location could be tracked when using the same Wi-Fi connection.

Problem Background

To come out with ideas on how to overcome these problems, we need to understand more about the problems first. As for the first problem, which is an unknown person who uses the same Wi-Fi connection, manage to access other computers’ files without the owners’ permission. The second one is about hackers who are able to access information that were stored in cache memory when people do online banking transfers when there are connected to the same Wi-Fi, as well as our location could be tracked by them. These problems are clearly caused by one main reason, which is the hacker itself. These issues related to our topic, which is security, privacy and ethics.

Hacker can be defined as someone who has an unauthorized access with malicious content. However, although hackers do these things, not all of their work are illegal. As related with the problems, they do not learn about the ethics when using the internet. As we know, some of the basic rules of computer ethics are we must not use computer to harm other users and also stealing other’s information. Furthermore, we cannot access files without the permission of the owner and do copyrighting, which is also known as plagiarism.

Another reason of why these problems occurred is based on the security itself. When we connect our computer with the same Wi-Fi connection as other users, we cannot deny about the threats we might get when the other users have the ability to interrupt the security of Wi-Fi connection. In our topic, we learnt that there are some ways which could threaten the privacy and security of our computer, including web bugs, spyware and anti-spyware programs. These should be avoided as fast as possible as more files could be access and people’s location could also be tracked.

Ideate

We have made an initial step on searching for people's problem on how internet can give bad impacts on their personal information security. We have asked a few people and get 3 difference problem. The first problem is files can be accessed by other members when using same Wi-fi connection. There are two security system that can be used whether face recognition or fingerprint.

The next problem is the risk of getting hacked by others when we are doing online banking using the public Wi-fi or hotspot. The goal for this problem is to ensure that online banking is easiest and safest way to do fund transfer. We have done research on about how hacker can get accessed to person's information that is by using file cache that is stored on any devices.

The last problem is about location tracking. The goal for this problem is to ensure that our location cannot be track by other's that is not a responsible authority. The first way is the user need to know who want to track their location and the second option is user need to block from people to track their location.

Prototype

For the first problem, we have two option of system that can be used to secure someone's privacy. we think the best way is to use face recognition system as it is easier and affordable for users. For the second problem we choose to make a system that can autodelete file cache for user for every transaction. Lastly, the best option for the last problem is that let the user know about who want to track their location. The idea of this system is to know who want to track our location from contact detail.

Test

For the first problem, which is important files can be accessed by other members at home using the same Wi-Fi. Our solution is when user wants to access your file, the user needs to have face recognition first. For more secure, username and password also need to be typed in to ensure the file can only be accessed by the person who creates it.

Next, the problem is when we are doing online banking using the public Wi-Fi or hotspot, we have the risk to be hacked by others and get our information. Our solution for this problem is creating auto delete cache system after every transaction. User needs to choose whether wants to delete the cache or not after every transaction.

The last problem is about location tracking. Anyone can easily track our location when our devices are connecting to a public Wi-Fi or hotspot. Thus, our solution is when user wants to track someone's location, user needs to type in their own username and password of the system. Next, user is required to fill in the phone number of the person that user wants to track. System will auto check whether the phone number is in the user's contact. If the phone number is in the user's contact, the user can track the person's location. If not, the user cannot track the person's location and the user's username will be automatically send to the person that the user wants to track.

Reflections

In my opinion, I have learned how to collaborate with my teammates in this project. Teamwork is extremely important to get this project well done. Although there are some hard times since we are undergoing CMCO, we still manage to discuss our project through google meet. I also learned how to protect our computer security to avoid our personal information being hacked by others. Last but not least, I learned some easier ways to let our modern life safer by having ethics when using computer, taking some measures to protect our computer security and of course protecting our privacy with efficient ways.

Task for each member

At first, all of us discussed about what we think about this chapter. After we understand the chapter, we interviewed our friends about the problems faced when they are using Wi-Fi or personal hotspot. After interviewing, we discussed the pre-solution together to help the user solve the problems and at last we came out with some pre-solutions. With all the pre-solutions, we came out with the idea of prototype which can help the user. Siew Yu Xuan did the prototype since we are in the condition of MCO so we cannot do the prototype together. However, we tested the prototype together through online. Lastly, all the videos recorded had been combined by Muhammad Faiz Aiman bin Fakhrurrazi and edited into a design thinking video.

URL LINK FOR DESIGN THINKING VIDEO

https://youtu.be/3IPPRsz0j1o