



UTM
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Report-1

Technology and Information System

Chapter 9: Privacy, Security and Ethics

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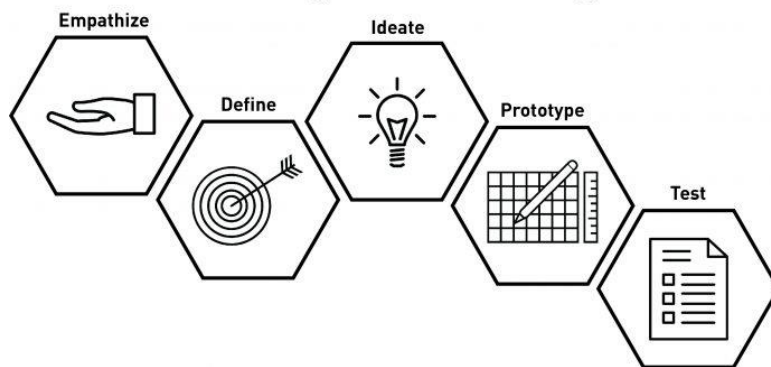
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Introduction

Design thinking is an innovative, ingenious problem solving and non-linear process in which developers can interact with the users and try to understand their needs. The approach of design thinking is classified into five different steps such as i) Empathy ii) Define iii) Ideate iv) Prototype and v) Testing. Nowadays, design thinking process is gaining popularity because it helps the developer to define the problem and therefore create innovative solution.

Design Thinking



Privacy, security and ethics represent the threats of identity theft, malicious software and spyware which can damage our computer system as well as it can violate our privacy. On the other hand, it gives the alternative methods to protect our computer system, sensitive data and privacy. The relevant methods are encryption, restricting access and anticipating disasters. Similarly, computer ethics are guidelines for the morally acceptable use of computers.



Empathy



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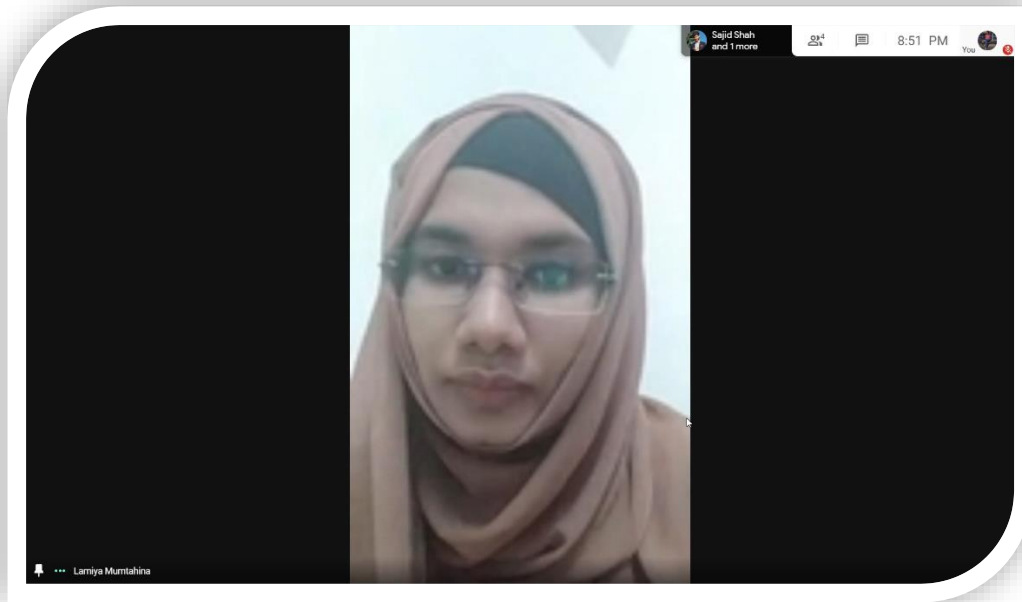
Empathy is the first step in design thinking because it is a skill that allows us to understand and share the same feelings that others feel.

The Internet is the largest WAN in the world and is made up of numerous devices that communicate through communication media all over the world. This helps all users to link and interact with each other.

The Internet is one of the best human inventions, but it has its peaks and valleys. Identity theft, hacking malware, and cheat on any specimen that a browser might encounter on a normal day.

Lamiya Mumtahina, a Chemical Engineering student at UTM's 5th semester, was asked a few questions:

- Do you face any kind of problems while using the internet?
- What is the solution from your point of view?



On the first issue, the interviewee discussed that she uses the internet all the time for scholarly and entertainment material, sometimes when she visits a website, for example, she finds herself infected most of the time, and she won't know until it's too late, whether there's a malicious program or a virus that takes her personal information and accesses her hard drive.

For the second topic, we asked what you would like to see about these problems, the interviewee indicated that there should be applications to search for bugs, spyware, questionable websites, and malicious programs instead of specific software for each.

Define



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“If I had an hour to solve a problem, I’d spend 55 minutes thinking about the problem and 5 minutes thinking about solutions.”

- *Albert Einstein*

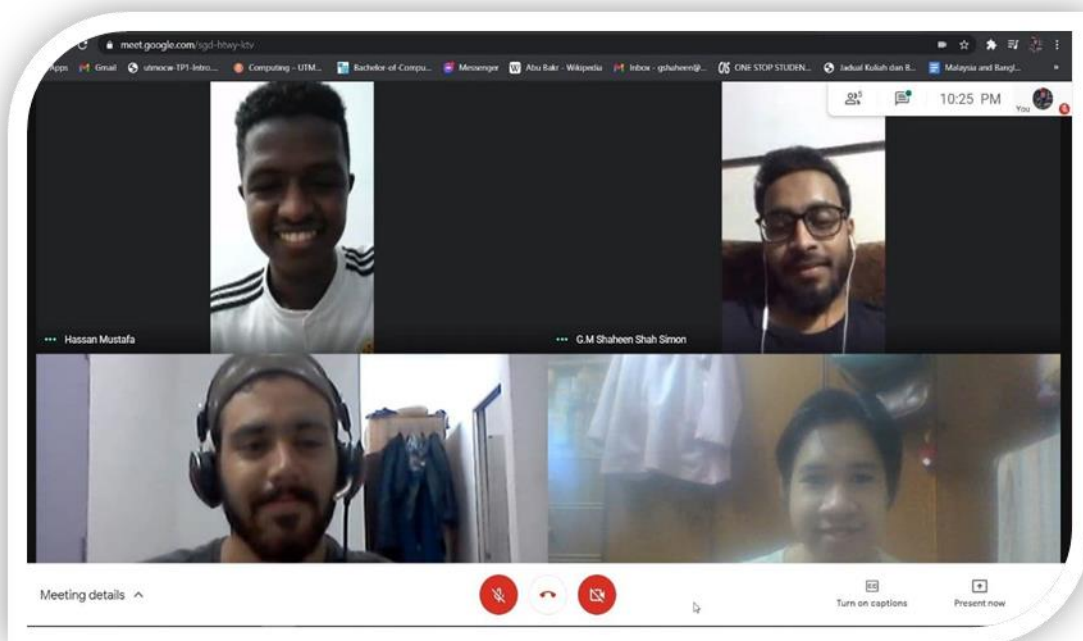
The **define** phase is where you'll establish a clear idea of exactly which problem you are trying to solve for the user.

Many people use the internet much of the time for useful and non-productive stuff, and from our interviewee, we discovered out there are significant malware, spyware, and malicious programs that harm and extract sensitive information from users. The challenge was not only the development of apps and all these challenges but the development of high-quality software that meets our user’s satisfaction.

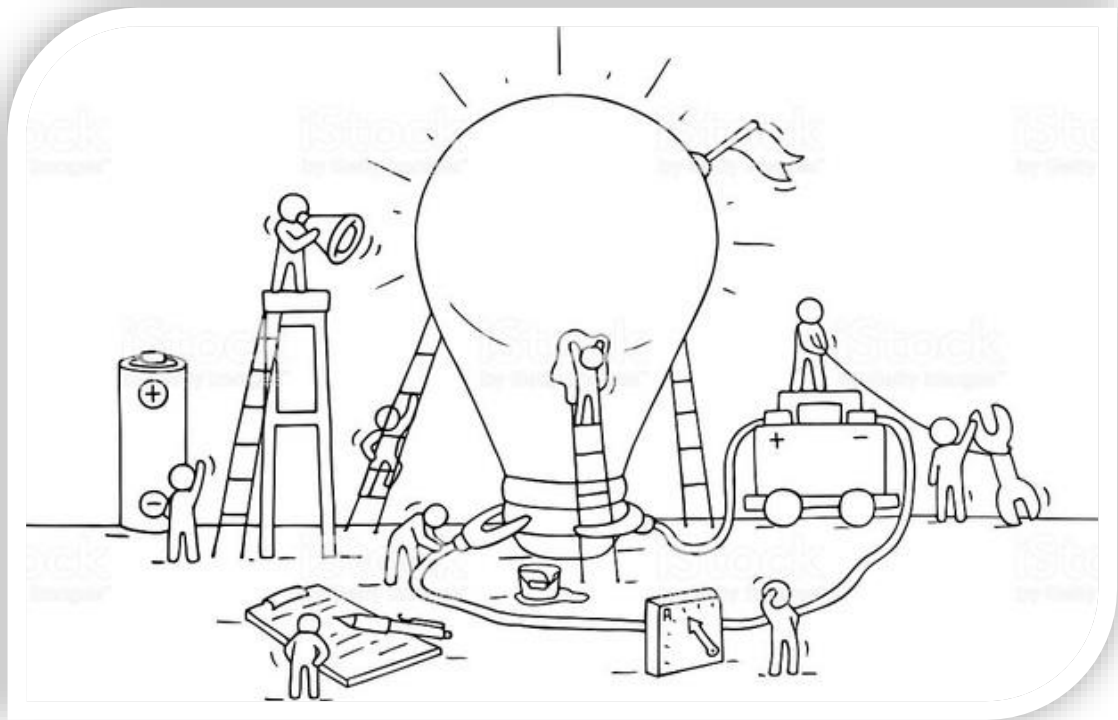
Ideate

For the third process of design thinking we have ideate where we generate ideas from the stated problem that we have identified before. We discussed on several ideas to solve the problem and at the same time, meet the consumer's desires and expectations. We also considered some important aspects on completing the program such as the user's interface and the effectiveness of the program.

After we had the consideration on all the pros and cons of the program, we came up with an idea that can save consumer's personal information and protect the devices from the malicious programs. The idea is that the program can detect the viruses and malicious programs before they can enter the device used or website surfed. For example, notification will appear and does not allow the user to enter their personal information on a particular website that needs user to enter their information. Besides, it can also detect rogue Wi-Fi signal and prevent the hackers from stealing user's crucial information inside the hard drive.



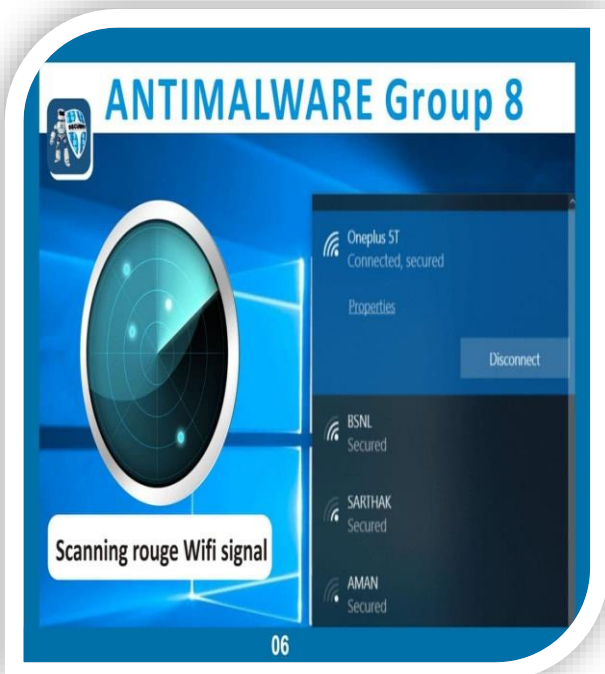
Prototype



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A **prototype** is an early sample, model, or introduction of a product intended to validate an idea or process. It is typically used to test a new configuration to improve the accuracy of device analysts and consumers.

At first, we agreed on a meeting to address the problems that internet users experience from time to time, we did some analysis on the existing applications along with their lack of intuitive and user-friendly interface software that suits our user's needs, and rendered most of the features that have dedicated software all in one seamless bundle.



Testing



https://miro.medium.com/max/3200/1*qvU9OjnuFBs54PKmG58pWg.png

Testing is an opportunity to bring a commodity out of the world, test it in real life, and test it in real time. During this process, you have a chance to see if you have correctly framed the issue. Your team will produce detailed customer input on the prototype, which in turn can improve the knowledge of the users. You'll find ideas that are produced that feed to all stages of the process during iterations. Finally, evaluation at this point is likely to reveal the desires that consumers have never expressed before. The testing was conducted as described below:


1. At first, the users have to activate all the features of the software.
2. It is also capable to detect any suspicious and spyware program.
3. Later, the software will scan the Wi-Fi signal and block the rogue signal.
Moreover, it also encrypts the file and data in hard-drive.
4. Before leaving the search engine the software will erase the browser history, cookies and browser cache.



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WARNING!

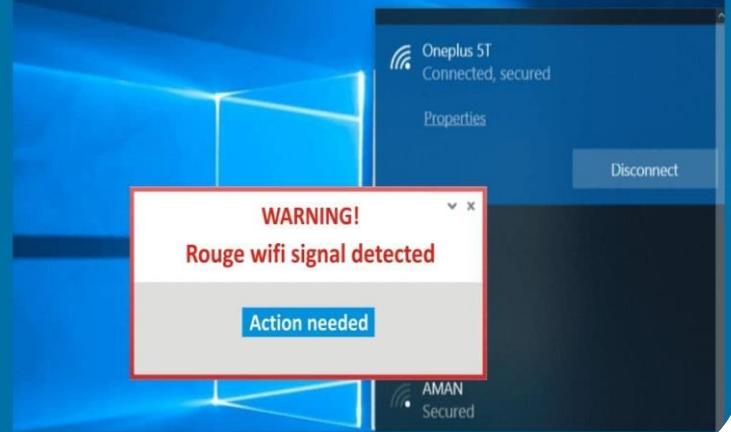
Spyware detected on your computer

	Warning! Win32/Adware.Virtumonde Detected on your computer	Danger!
	Warning! Win32/PrivacyRemover.M64 Detected on your computer	Danger!

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Reflections

MOHAMMAD SYAZWAN BIN SAHDAN (A20EC0217) Technology and information systems are growing rapidly throughout the world hence more problems and challenges are ahead that we need to alert with and invent suitable technology that can overcome the problem.

This design thinking widely opened my eyes and I learned how to generate ideas and decide the best solution to the problem. This will be a very good start for me to step into job environment where i need to work with others and exchange my opinion.

I need to always alert about the upcoming problems by people. I can also join various innovation competitions held by various institutes. This can enhance my thinking and personal skills in order to reach the demand by the industrial companies. Internship will be the best platform for me to adapt with the working environment.

SHAH SAJID (A20EC4050) There are two types of goals which are short and long goals. Short term goals have the potentials to give us instant gratification. After achieving short goal, we feel much more confident. It works very well for students of all ages and everyone loves the feelings of achievement of the long term goals. Short term goals according to experts are stairs of our long term goals.

The main thing I have learned during this Design thinking project is it has a noticeable effect on our dreams with regarding to our program ,because the first thing we did for the design thinking is thinking. As we worked together, we shared our thoughts with each other as a result we came across with new ideas to solve the problem. We could also enrich our participation skills and leadership skills.

As a student we really need to gain so much knowledge and experience to expand our point of view on information and technology. Moreover, it is necessary for us to improve our skills such as technical and behavior skills, because the technical skill learned on the job and in college provides us with the knowledge we need to perform your tasks. The skills like communication and leadership help to build positive relationship with coworkers and clients.

HASSAN MUSTUFA IBRAHIM(A20EC4025) At the completion of this course, I think I'm going to be filled with valuable information that I do not find in several other classes. I want to keep up with the course and make the best of it so that it can help my arsenal and make me closer and closer to my goal.

The design thinking impacts on my goal with regard to my program:

- It gave me the chance to look at the situation from a different angle.
- It helped me to investigate a dilemma to establish its root cause.
- Innovated and challenged my thinking to solve problems.
- Guarantees that my overall result follows the goals and consumer expectations.
- Continued to expand my knowledge.

The action/improvement/plan necessary for me to improve your potential in the industry:

- Communication is the ability to speak, write, and listen.
- Interpersonal abilities. Verbal and non-verbal attitudes and responses to interactions with others.
- Problem solving.
- Self-confidence
- Get a mentor

G M SHAHEEN SHAH SHIMON (A20EC0266) My father bought the first computer when I was eight years old. At first glance, I wonder how the system works and it's the beginning of curiosity. Gradually, I started learning about computers how it processes the human language to computer language.

I realized that code is a set of commands that are set inside the software. Therefore, I started learning different kinds of coding language and computer mathematics as they are the core of the computer. After completing high school I made up mind to pursue an undergraduate in software engineer. Therefore, I took admission to the faculty of computers (Software engineering).

Design thinking refers to the cognitive, strategic, and practical process and this assignment taught me to analyze the problem from a different perspective. Design thinking is more than just a methodology; it opens up a whole new way of thinking and offers design thinking that has often taught us to work in a group, to coordinate with group members, and to find a better idea to fix the dilemma of the end-user.

First of all, I have to work hard and need to have to perseverance in order to reach my goal. Innovations are very common technology so I need to be up to date with the latest technology in order to increase my potential in the industry.

Task distribution

No.	Name of member	Task
1	MOHAMMAD SYAZWAN BIN SAHDAN (A20EC0217)	*Chapter video *Idea contribution * Report writing
2	SHAH SAJID (A20EC4050)	*Chapter video *Idea contribution *Taking interview *Prototype *Video editing *Testing the prototype
3	HASSAN MUSTUFA IBRAHIM (A20EC4025)	*Chapter video *Idea contribution *Report writing * Testing the prototype
4	G M SHAHEEN SHAH SHIMON (A20EC0266)	*Chapter video *Idea contribution *Taking interview *Prototype *Test the prototype *Report writing *Video editing

Video link: <https://youtu.be/ijpQHr4274g>

*****THANK YOU*****