In this report, I’m going to discover what actual cybersecurity and privacy are, and their application. Cybersecurity and privacy are becoming important concepts that we need to consider nowadays as people prefer to use devices and IoTs in order to enhance the quality of their lives. The term cyber security refers to the application of technologies, processes, and controls to protect systems, networks, programs, devices, and data from cybercrimes [1]. There are lots of types of cybersecurity such as application security, network security, and information security. Application security is to identify the weakness in the application code and fix it to make sure the application works well without any bug or crash. Network security is to keep the network safe from unauthorized access by controlling firewalls, VPNs, or complex identification that can reduce cybercrime. Information security is protection that keeps data safe from unauthorized access or manipulation in the transmission process between machines. The term privacy refers to the right of the user's information to be controlled or observed by third parties.

Privacy in Information Technology is the right to have some control over how our personal information is collected and used [2]. This means that we can control our personal data and anyone cannot access to it without the user’s consent. However, this ambiguous to distinguish whether a certain action violates someone’s privacy or not, and this concern is becoming a social-ethical issue within society. As we are using more and more devices that are connected to the internet, the proportion of devices taking a huge role in our lives is increasing. Lots of cybercrimes occur in this situation as people are not aware of the security and they easily expose their personal information so that anonymous people might manipulate the user's data or observe their life pattern in this process. Besides, Identity theft is now the fastest growing crime in America which people regardless of age, gender, race can be the target of cybercrime [3]. In society, cybersecurity and privacy can be used as a tool of a decision whether it is ethical or legal. People can look for whether their data is stored in a safe without anyone’s access, or whether the programs, network, applications work well without any crashes or bugs. The most effective inventions that let people know about cybersecurity and privacy are the internet and IoTs.

By using the internet, people can benefit from synced data through all devices that can provide convenience. Besides, the user can control the devices even though they are not at home by using programs that can control connected devices through the internet that can save lots of resources, or they can utilize it more effectively such as turning the light on when they arrive at home. Furthermore, IoTs devices not only connect to the internet and interact with the user, but also collect the data and analyze it which is the use of machine learning. Based on the data collected, devices including IoTs will decide for a user that can be used in many ways such as medical diagnosis, and image recognition which resembles what human does.

Cybersecurity and privacy can be considered abstract concepts, but these ideas potentially affected people in both good and bad ways. These concepts enabled people to be aware of what internet privacy is and what they need to do in order to keep their data safe which can prevent cybercrime and data leaks. However, as people prefer to keep the information or any property safe, it might require additional authentication while in progress which will decrease the productivity in the data transferring process. Nowadays, these topics have created some jobs related to security and privacy. For example, in Vietnam, there is a job called Cyber Security Manager that performs technical security assessments and attack simulations on multiple application platforms [4]. In addition, there is a data privacy manager that trains the staff about security policies, contracts with third-party programs to make sure it is trustworthy and secure [5]. As many jobs are being created nowadays, most of the employees that work on computers will be largely affected. In our lives, there are some ethical problems whether the boss of the company can monitor what employees are doing. This can be both right and wrong as employers should know what employees are doing. This doesn’t sound wrong, but on the other hand, employees might feel they are being observed and controlled by employers and their working performances will be decreased. We cannot say who is right and wrong, so these types of social-ethical problems are occurring in our society as the working condition is developing and people are starting to use devices that are connected to each other.

Based on my experience, the terms cybersecurity and privacy inspired me to look around and see how I deal with the devices and control my data. In my home country, our family used IP cameras for observing pets, and to protect a house from thieves. Also, there was a plug that connected to the internet so if I want to turn on the TV for my pet, then I easily click the button in the application and turn on the TV without pressing the button on the remote controller at home. This helped me to think about what action I need to take to protect my IoT devices because if someone accesses my IP camera, then a terrible situation will occur in which the privacy of all families is exposed through it that nobody wants. Even though actions such as not to use the same password on many different websites and trying not to open emails from strangers or not to click any suspicious links to prevent any unauthorized access are small, they will hugely protect us from cybercrime. Usually, our parents are not don’t know which link to click, or they prefer to use the same password to easily memorize. However, after I realize that what would happen if our devices were controlled by other people or information is stolen, so I suggest they not do that to prevent cybercrime.

Reference List

[1] IT Governance, “Cyber Security.” https://itgovernance.co.uk/what-is-cybersecurity (accessed Dec. 12, 2021).

[2] iapp, “What is Privacy.” https://iapp.org/about/what-is-privacy/ (accessed Dec. 12, 2021).

[3] Whitehouse, “FACT SHEET: Cybersecurity National Action Plan,” *whitehouse.gov*, Feb. 09, 2016. https://obamawhitehouse.archives.gov/the-press-office/2016/02/09/fact-sheet-cybersecurity-national-action-plan (accessed Dec. 12, 2021).

[4] Michael Vietnam, “Cyber Security Engineer - JN-092021-3603130,” *Michael Page Vietnam*. https://www.michaelpage.com.vn/job-detail/cyber-security-engineer/ref/jn-092021-3603130 (accessed Dec. 12, 2021).

[5] V. Anh Le, “Information Risk & Data Privacy Manager at Prudential Vietnam Assurance | ITviec.” https://itviec.com/it-jobs/information-risk-and-data-privacy-manage-prudential-vietnam-assurance-1444?utm\_campaign=google\_jobs\_apply&utm\_source=google\_jobs\_apply&utm\_medium=organic (accessed Dec. 12, 2021).