UTM UNIVERSITI TEKNOLOGI MALAYSIA

SCHOOL OF COMPUTING
Faculty of Engineering

SECP1513-09 TECHNOLOGY AND INFORMATION SYSTEM

Industrial Visit II – CICT, UTM

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SECTION : 09-1SECR

COURSE NAME : BACHELOR OF COMPUTER SCIENCE (COMPUTER NETWORK & SECURITY)

LECTURER'S NAME : DR. ADILA FIRDAUS BINTI ARBAIN

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1.0 Introduction

On 20th October 2019 we have a visit to Perpustakaan Sultanah Zanariah, UTM. Dr Adila Firdaus Binti Arbain, our lecturer for Technology and Information System Section 9 (SECP1513-09) was the lecturer in charge for our section. The main purpose of the visit is to go to the UTM Gallerium, the museum gallery of UTM (located inside Perpustakaan Sultanah Zanariah level 2) which is an important entity for the university in collecting, to preserve and keeping the legacy of UTM. The visit was about 2 hours long which start from 3:15 pm to 5 pm. Firstly, we had a short briefing on UTM Gallerium background before we were given permission to walk around the Gallerium to appreciate and learn more about the artifacts kept inside there. The Gallerium was separated into few sections:

- Galeri Warisan Universiti where the painting portrait of our first chancellor, Almarhum Duli Yang Maha Mulia Sultan Johor Darul Ta'zim Sultan Ismail Ibni Almarhum Sultan Sir Ibrahim.
- Galeri Mikrofilem where the tools for video filming back then are being display.
- Galeri Alat Pandang Dengar is where the tools used for visual audio like projector is kept.
- Galeri Teknologi Maklumat, where the computers and IT accessories being used are located.

Due to the visit is mainly focusing on Jabatan Teknologi Maklumat dan Komunikasi (CICT) UTM Johor Bahru, we were more guided around Galeri Teknologi Maklumat.

2.0 Detailed descriptions of this visit.

First and foremost, we had been introduced to different types of IBM computer by the person in charge. Several IBM computer devices that was still preserved in good condition, such as IBM Personal System/2 Model 70 836, IBM Personal Computer 300GL and IBM Powerserver 550 were introduced to us. From his explanation, he mentioned that those devices used to act as an important role in library from late of 1980's to 1990's to manage library activity, for instance circulation, cataloguing and acquisition. Before the implementation of computerised system, UTM library's user had to use catalogue cards to search for library materials manually and it was very inconvenient. After having a revolution towards computerisation in library system, UTM library are now become a lot systematic and comprehensive compared to few decades ago. For us, we appreciate to the invention of computer as it can solves plenty of problems nowadays. Those days without computer was tough enough to the past generation, and we as the young generation should maximise the benefits of computer towards our daily life, and minimise the negative implication towards the society.

Figure 2.1: IMB Personal System/2 Model 70 836

Besides, we were exposed to process camera that was totally new for us. From the description, we knew that the process camera owned by UTM was one of the process camera manufactured by Hunter Penrose Ltd in United Kingdom, and it was a gift from the Department of Survey and Mapping Malaysia (JUPEM) since British colonial period. This process camera has been used to improve in understanding the procedures and principles of photography session for students in Cartography Department, Faculty of Surveying during 1980's and 1990's. The final drawing or manuscripts of process camera was then displayed on the focus point of the camera lens. Despite that, the final printed topographic maps were all treated as "confidential" and "limited" at which they were only available for learning purposes in the faculty. However, the usage of this process camera came to an end in early 2004 and has been replaced by a more modern digital technology. Even though we were not be able to look how this camera can function and work, but we were truly amazed by this camera as this was our first time to see such a huge camera in modern days. This process camera might seemed to be not reliable anymore, but we as computer science students should learn the spirit on how innovator keep modifying a camera until we were able to take a clear picture with just a smartphone. Thus, we should keep in mind to invent a software that can solve problems that encountered at modern days.

Figure 2.2: Process Camera

Next, we moved on to Apple Macintosh Classic Computer. It was first introduced in early January 1984 and next been used in 1990 at UTM library. This computer had a Motorola 68000 microprocessor as its CPU, and had a 512x342 pixel resolution. Apart from that, it was equipped with a storage capacity of 1MB ram and 2 to 40MB of hard disk. The capacity was considered large enough to store data and information. Hence, it was used with an application called Lotus 123, a discontinued spreadsheet application made from Lotus Software to standardize the library data in a proper format. At the same time, Word Star application, a word processor application was also been used in this computer to smoothen the library work. The person in charge also claimed that this computer was extremely useful in UTM throughout 1990's. From our point of view, we as the younger generation should appreciate the advance of computer science technology as the computer system nowadays was much stable and powerful compared to the past. The software interface nowadays is much user-friendly and nicer. At the same time, the memory capacity also been hugely increased and hard disk storage of 1TB or 2TB can be obtained easily at low price. Computer nowadays also have a smaller size and cheaper than the past. For example, this introductory price of this computer was about $999 in 1990s (roughly $1962 in 2019) while the average price of a computer in 2019 is just $630. Hence, we should thank to computer scientists that brought us a convenient life and helped in develop strong softwares.

Figure 2.3: Apple Macintosh Classic Computer

Last but not least, we grabbed a chance to see an old Mainframe Data Storage Model: IBM (9345B22). UTM began to use this device starting from the 1970's and it served its duty for almost 20 years before its retirement. This device was used at Computer Centre, UTM campus, Kuala Lumpur which was before the establishment of UTM Skudai, and its main function was acted as a data control of student and staff information. UTM treated it as a core device as it also provided functions such as securing, storing, processing and printing university's information data. At the same time, we were taught by the person in charge about the difference between mainframe and supercomputer. The mainframe has high reliability towards transaction processing such as student's record and sales order entry, while supercomputer has been used at scientific and engineering field as it can perform at highest operating rate. Just like the process camera and the Apple Macintosh Classic Computer, this was our first experience to have a look on this device as we rarely can see a mainframe in our daily life. We hoped that the mainframes that currently using are still function well and keep the information data of student and staff secured and safe. At the same time, we hope to learn how a mainframe works in future.

Figure 2.4: Mainframe Data Storage Model: IBM (9345B22)

3.0 Reflections:

a. How does this visit impact on your goal/dream with regard to your program?

Our goals regard to our program are that we hope that we can improve the technology of computer networking and security of Malaysia in the future especially in the field of security of internet. This visit gives us a chance to know more about the history of computer networking and security system in the past. We are totally amazed of the creativity and innovative of human that can keep on improving and creating better and better IT products that convenient to the users. This make us have a strong feeling to enhance the current networking system and security system. Especially when we saw the evolution of computer that displayed in the gallery. And this once again make us believe that human's life can be more and more convenience with the evolution of technology. For example, computer evolve from super computer to notebook and even have touch screen and flip-able screen nowadays, these all come from the efforts of the past experts in this field. We hope that we can complete ourselves with the basic knowledge and keep on updating ourselves with the latest information so that we can commit our effort in this field in the future. Besides that, we get to know that in order to success, we should always take seniors' experiences as reference, this will help us to save a lot of time as we will never repeat the same mistakes that made by the seniors before this. For example, we get to see the few old modern of projectors in the gallery and the newer moderns were made based on the base of older inventions. These impact us that we can always archive better results when we learnt from the past mistakes. Last but not least, we are motivated to always strive for greatness in the field of computer science and technology after we find out that how amazing human was that capable to invent and create so many useful technology and products to make our life better and easier. It is a life-long learning when come to this field as the technology will never stop growing.

b. What is the action/improvement/plan necessary for you to improve your potential in the industry?

Well, first of all, we will focus more on practical and applied approaches to learning, for example, we will have more practical practice and will seek for work opportunities in real life to ensure us had ready to emerge for the work place. Besides, it will allow us to gain valuable hands-on experience and feedback from employers. At the same moment we can ensures that what we learnt is practically. Besides, we will do a lot of extra research regarding this industry as the information of this industry is updating everyday. We will also seek for the chance to interact with exchange students so that we have a chance to understand how far does the technology grows in their country especially China and Singapore. In addition, we will also roughly get a big picture of what is the global standard of computer and information technology. We will also participate in competition regarding our program such as Cyber Security Catch The Flag(CTF) so that we can learn some extra knowledge regarding this field. When we are preparing for a competition, we will enhance our practical skill in order for us to have certain competitiveness in the competition. Competition is a fun and rewarding ways to challenge ourselves, as well as providing even more impressive material for our future career. We will also practice our soft skills because we will need to collaborate with each other for our team to win the competition. Soft skills are also an important skills that we need to acquire in this industry. The reason is soft skill such as communication skill, design thinking skill and presentation skill are useful when come to promote or present our ideas to our client in the future as our client may not for computer science industry. In this case, we need to practice so that we know how to explain clearly in the way that our clients can understand. In conclusion, in order to improve our potential in the industry, we will focus more on practical and applied approaches to learning, do extra research, interact with exchange students and participate in the competition.

4.0 The task for each member

TEAM MEMBER	MATRIC NUMBER	Task
LOW WEI CHIEH	A19EC0079	Photoshooting, Report writing (Detailed descriptions include organization structure, services, achievements, information systems that have been developed or maintained by CICT etc.)
LIEW WEI XIAN	A19EC0070	Report writing (Introduction and details of the visits)
SIAH WENG TZE	A19EC0161	Report writing (Reflection), team member's task distribution