
INDUSTRIAL VISIT (CICT)

SECP1513

TECHNOLOGY INFORMATION SYSTEM

SECTION : 08 - 1SECR

COURSE : BACHELOR OF COMPUTER SCIENCE - COMPUTER NETWORKS
AND SECURITY

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INTRODUCTION

On 20th of October 2019, Centre for Information and Communication Technology (CICT) has organized an industrial visit to gallerium CICT in Sultanah Zanariah library. This industrial visit was led by Dr Haswadi bin Hasan which is the lecturer of Technology and Information System. This program involved the students who are under the school of computing. The students who were involved in the industrial visit on that day are consist of almost 100 students from network and security and some are from data engineering. Other students from different courses which are data engineering, graphic and multimedia software, software engineering and bio-informatics visit on different time or day. The main objective of this program is to expose the students about CICT and also to increase the knowledge about the technological developments in Universiti Teknologi Malaysia (UTM). In additions, this program train students to write a report. Therefore, in this report we will discuss about the detail journey to gallerium CICT from the beginning until the end of the visit. Besides, we also discuss the history of components related to computing such as computer, printer, mainframe, hard disk and floppy disk. Lastly we write about the reflections regarding this program. This reflection include the goal, impact on the goal and improvement our potential in industry.

DETAIL JOURNEY

Our visit to galleria CICT was held on 20 October 2019 at 0300 p.m. Galleria CICT was located in Sultanah Zanariah library at level 2, UTM. Our lecturer, Dr Haswadi asked us to gather at the lobby of the library before we went into the gallerium CICT to make sure all the students were present for this visit. As soon as we entered the gallerium CICT, the staff of CICT welcomed us and took us to the speaker, En Mohd Zahari. He explained the history of CICT founding since inception of UTM until now. The CICT organization chart is made up of many former UTM's students. One more unique thing about CICT is that it is the largest server in Malaysian University, said the speaker. Next, he explain the component that related to computing technologies in CICT. After he finished speaking, we were given the opportunity to explore the area. There were a lot of old computer technologies in gallerium that has been used by CICT from year 90's until early 20's. We had the chance to see the actual devices that were used in the early stage of technology and we could witness the evolution of computers throughout the centuries. This visit end at 5.00 p.m.

DETAILED DESCRIPTION INCLUDE THE HISTORY COMPONENT RELATED TO COMPUTING

We have done our industry visit for CICT at gallerium Perpustakaan Sultanah Zanariah. At the gallerium, we can see a lot of old technology used by UTM around year 1990s. As of our arrival, Mr Zahari which was the speaker of our industry visit gave a talk about the technology that was displayed at the gallerium.

I. Computer

A computer is a machine or system that carries out procedures, calculations and operations based on software or hardware program instructions. It is designed to run applications, and by integrating integrated hardware and software modules, it offers a variety of solutions. There are several different computers were shown at the gallerium during our visit. One of the computers was the IBM Personal System/2 Model 70 386. This device has a highly density memory and a wide range of integrated features. It has the ability to support up to 16MB of high-speed real memory, has 60MB or 120MB of disc storage depending on the model, advanced graphics and 80387 Math Co-Processor which improves desktop computer operations. It retains adaptability with most current software products for Personal Computer systems. This product dated back in 1987 and then is used by UTM library to get its great features at that moment.



IBM Personal System/2 Model 70 386

II. Impact Printer

A printer is an external hardware output device that records the electronic data stored on a computer or other device and produces a hard copy of it. One of the most popular computer peripherals, printers are commonly used to print text and photographs. The Impact Printer or Dot Matrix Printer model IBM (4245) was used in UTM starting from 1990s to 2011. This product was introduced in year 1986 and it has a printing speed of 1200 and 2000 lpm(lines per minute). This device uses a 48-character compatible print band and there was also a various type of other character sets available. Some model has 370 channel interface (byte multiplexer, block multiplexer, or selected channel) attached to the printer. This printer was also able to print a huge amount of copies for a straight 48 hours without rest. UTM Library was able to take benefits out of this printer to print out information of students and staffs alike.



Impact Printer Model IBM (4245)

III. Mainframe

Mainframes are a category of device that is generally known for its large size, storage capacity, processing power and high level of reliability. These were mainly used by large organizations for mission-critical applications requiring high amounts of data processing. Almost all mainframes have the ability to run multiple operating systems, can add or uninterrupted hot swap system capacity, are designed to handle very high input and output volume, and emphasize throughput computing. Dozens or even hundreds of smaller servers can be replaced by a single mainframe. IBM mainframes were large computer systems that have been developed by IBM since 1952. IBM dominated the large computer industry in the 1960s and 1970s. Present mainframe computers in the IBM line of business systems are innovations in the basic design of the IBM system/360. Mainframe System in UTM offered as a data control of students and staff information in the 1970s began at UTM, Kuala Lumpur. UTM used the mainframe for almost 20 years for its numerous components and functions.



Mainframe Tape Subsystem Model: IBM 9309

IV. Hard disk

The hard disk is part of a unit that retains and allows relatively quick access to large amounts of information on an electromagnetic layer or set of surfaces. A hard disk is actually a set of disks that are lined, like a phonograph album. Each disk has data stored electromagnetically in concentric circles or tracks on the disk. A hard disk unit comes with a set rotation speed varying from 4,200 revolutions per minute to 15,000 rpm. Hard disks remain a common data storage alternative for consumers and businesses, despite growing prevalence and steadily lowering the cost of non-volatile solid-state flash memory in the form of solid-state drives (SSDs). IBM engineers created the first hard disk, which was the size of two refrigerators in 1953. The name of the model is 5 MB IBM 305 RAMAC (random access method of accounting and control). It was nevertheless a huge leap forward in computer storage technologies, most of which relied on magnetic tape. The movable read and write heads of RAMAC enabled semirandom access to data for the first time. Later after a couple of years, IBM introduced the first removable hard disk, the 1311. Its first disk pack, IBM 1316, consisted of six 14-inch disks and a storage capacity of 2,6 MB. This was followed by the IBM 2311 (5 MB) and IBM 2314 (29 MB) disk packs, which were the first to be standardized, as they worked across multiple editions of the IBM System/360 mainframe computer system.

V. Floppy Disk

A floppy disk, also known as a floppy, diskette, or simply disk, is a form of disk storage consisting of a disk of thin and flexible magnetic storage medium enclosed in a rectangular plastic enclosure filled with a material which prevents dust particles. The word "floppy disk" appeared in print as early as 1970, and although IBM introduced its first media as "Type 1 Diskette" in 1973, the company advanced to use the words "floppy disk" and "floppy". The floppy disk was first produced in 1967 by IBM as an option to the buying of hard drives that were incredibly expensive at the time. It was the 8-inch floppy disk, but the model was commercially available in 1971. The disk was 8 inches in diameter with a magnetic coating, enclosed in a cardboard case with a capacity of one megabyte. Conversely to hard drives, the heads touched the disk, like a cassette or video player that wears the media over time. Designed by IBM in 1984, 3.5-inch floppy disk were first

introduced with a total capacity of 720 KB. The 1.44 MB floppy disks were commonly used in the 1990s and were rarely found or used by 2000.



From left: 3-inch floppy disk and 8-inch floppy disk

REFLECTION

What is your goal/dream with regard to your courses/program?

Our aim is to become a competent network engineer when it comes to our courses, which is network and security. We want to be an employee with the ability to protect against all threats such as malware and viruses that allow programs to run faster and smoother and can also stop unauthorized people from accessing the network and connected devices. We look forward to a stable solution.

What is the action/improvement/plan necessary for your potential in the industry ?

We should have studies and learn more about networking and security in order to boost our industry capacity. To enhance more knowledge, we should encourage ourselves to read more journals, books and blog. We can also apply design thinking to invest in new network or security-based software or other devices. In addition, we plan to improve our skills on various aspects such as teamwork, network security preparation,

How does the design thinking impact on your goal/dream with regard to your program?

After we've been active in this design thinking process, we're trying to understand the consumer, question assumptions, and redefine concerns in an attempt to identify alternative strategies and solutions that may not have clear understanding at the outset. The more we use the methodology of design thinking, the more we learn to think and search for an idea faster. This is also encouraged to concentrate on the project.

TASK FOR EACH MEMBERS

Name	Task
Ahmad Ramadhan Syukri bin Jamaludin	Detail and history of component
Muhammad Suhail	Reflextion
Iffah Najihah binti Mhd Khizam	Introduction and detail journey
Anis Sofea Asyikin binti Abdullah	Compile