SECP1513 - TECHNOLOGY AND INFORMATION SYSTEM

2024/2025 Semester 1

Assignment 3: Report on Industry Talk 2

Title: SKILLS IN UNIVERSITY AND INDUSTRY

Group Name: Cyber Beats

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1. Description of speaker experience

1.1 Nik Mohd Habibullah bin Nik Mohd Nizam

Encik Nik Mohd Habibullah bin Nik Mohd Nizam is a successful entrepreneur in Information Technology (IT) where he holds multiple positions in multiple companies. At the beginning of his career, he was a researcher at Universiti Teknologi Malaysia (UTM) from 2007 to 2008. He conducted research on Research Radio Frequency Identification (RFID) technology for Program Latihan Khidmat Negara (PLKN). Next, from 2008 to 2011, he was a Project Manager at Infotech Net where he was responsible for business development and project management. Afterwards, from 2011 to 2016, he was a Manager at Getme Micro Semiconductor Sdn. Bhd. His job scope was related to business and product development. Now he holds the position of Ceo at Micro Semiconductor Sdn.Bhd. in which this company have produced and published two (2) of their projects which is Dialysis Manager, an integrated system designed specifically to improve the quality of services of hemodialysis center and GetMe Hired that specialize in creating Curriculum Vitae (CV) for fresh graduates and helping employers getting a high quality talent to be in their company.

1.2 Mohd Hakimi Iqmall bin Mohd Zolkifly

Encik Mohd Hakimi Iqmall bin Mohd Zolkifly, an officer from UTMDIGITAL, shared his journey on "Designing Success From Graphic Multimedia to Leading Projects." He is a UTM graduate in 2018 from course Bachelor of Computer Science (Graphic and Multimedia) with Honours but now he works as a system analyst and project manager with a team of three at UTMDIGITAL. His career began with an internship at ME-Tech Solution Sdn Bhd in 2017, where he built modular and animation for Royal Malaysian Navy (RMN). In 2018, he worked as a game programmer at Okakichi Sdn Bhd, responsible as game animator for the game Kingdom Ran. He then joined UTM Research Company as a system programmer, contributing to projects like Research and Development Information System (RADIS) and Industry & Community Engagement System (ICESys). Since 2021, he has been involved with UTMDIGITAL in projects such as the Welfare Service System, Clinic Panel System, and ‘Kenaikan Gaji Tahunan’ (KGT).

2.0 Basic skills required for computer science and skills required by industry

2.1 Basic skills required for computer science

Computer science integrates both technical and management skills all together that allows professionals to be able to innovate and adapt to the rapidly evolving technology industry. These capabilities not only facilitate the growth of cutting-edge technology but also ensure that the industry can remain at the front end in technological advancements.

One of the most important basic technical skills in computer science is programming. Proficiency in programming languages such as Python, Java, C++ and JavaScript are fundamentals as those are frequently used in industry when it comes to writing software and applications. These languages enable the development of software applications, systems, and tools integral to the field (Joiya, 2023). Next, a skill that is as important as programming is database structure in which the use and functions for elements in database need to be mastered as this field requires lots of data and information handling in the future. This skill is essential for organizing and managing data efficiently to avoid data redundancy.

On the other hand, it is crucial for computer science student to develop great understanding and knowledge in System Development Life Cycle (SDLC) as it is a basic fundamental that will be involved in every project in which mastering SDLC allows computer scientist to effectively contribute to different phases in development process ensuring that projects are completed efficiently and meet the desired quality. Furthermore, it is important to be an expert in documentation and reporting as it is required throughout the lifecycle to ensure clarity in which documentation provides a clear and concise record of project requirements, objectives and solutions to ensure team members and stakeholders able to understand the overview of projects and share the same understanding.

In short, computer science requires anything from soft skills in the way of communication and flexibility to technical knowledge in programming and mathematics. Mastering those skills will allow people to be successful in this exciting and influential field.

2.2 Skills required by industry

Industry 4.0 or the Fourth Industrial Revolution, is the rapid advancement of technology in manufacturing and industrial processes. This involves smart technologies like IoT, AI, and cloud computing that help enhance efficiency, productivity, and flexibility (SAP, 2023).

The required skills in the industry are both technical and management. Technical skills include programming and debugging. Mastering computer programming languages like JavaScript and Python is great due to its simplicity, readability and flexibility (Assembly, 2024). The ability to be familiar with these languages and different types of version control in a short span of time is essential when working in industry as the continuous evolvement of technology will require individuals in this industry to master different programming languages over time to ensure their professional growth align with the current technology advancvements. Debugging skills are also needed to deliver high-quality code with maximized functionality to produce positive user experiences (Assembly, 2024).

On the contrary, management skills include communication and problem-solving skills. It is important for individuals working in this industry to possess strong and clear communication skills, which include collaborating with colleagues and understanding the user's needs to be able to translate problem instructions into functional code. Good communication skills are vital to ensure the efficiency while delivering ideas, presenting questions and provide progress to guarantee the product meets project's expectations (American Public University, 2024). Next, problem-solving skills which includes the process of identifying problems, brainstorming solutions, implementing the solutions and evaluating the feedback. By having strong problem-solving skills, a problem can be solved efficiently and rationally. This skill is usually used in planning and analysis phases to assess project needs.

Other than all those skills mentioned, knowledge of database structures and system frameworks is also important to keep one job-relevant and competent in the industry. The job market is open to explore, and these skills will help secure and excel in desired positions.

3.0 Reflection

How you will successful in the computer science in next four year?

3.1 Nur Faatihah binti Mohamad Fuad (A24CS0161)

Both technical and management skills need to be strengthened, hence by joining clubs, ace classes and developing strong analytical and logical skills can help. Additionally, experience will be gained through classes, talks, and IT competitions to become a skilled and capable programmer in the industry.

3.2 Ida Yatullailiyeh binti Amrun (A24CS0084)

Efforts will be made to improve both programming and technical skills, while soft skills will be developed by joining organizations and engaging in healthy social activities. For now, the focus is being placed on programming and analytical skills to ensure that the crucial aspects of the computer science field are mastered.

3.3 Ahmad Irfan bin Azahan (A24CS0036)

Computer science-related competitions or events will be joined to utilize and improve programming skills while working on problem-solving skills to solve different types of problems. After this, opportunities to work on programming projects will be found to enhance communication skills and team collaboration skills.

3.4 Cheong Yi Shien (A24CS0058)

In these four years, efforts will be made to master programming fundamentals, such as programming skills and languages to build a strong base for coding. Problem-solving skills will then be practiced, and participation in coding-related activities will be undertaken to improve logic and gain more experience.

4.0 Reference

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