UTM &
MICRO
SEMICONDUCTOR

INDUSTRIAL TALK 2

17 December 2024

Encik Mohd Hakimi Iqmall (Pegawai Teknologi Maklumat UTMDIGITAL)

Encik Nik Mohd Habibullah (Ketua Pegawai Eksekutif Micro Semiconductor Sdn Bhd.)

SECP1513 - TECHNOLOGY & INFORMATION SYSTEM
SECTION 01
ACADEMIC REPORT: INDUSTRIAL TALK
LECTURER: DR AZURAH A SAMAH
TITLE: SKILLS IN UNIVERSITY AND INDUSTRY

Topics:

Speaker experience
Basic skills required for Computer Science
Skills required by industry
Reference
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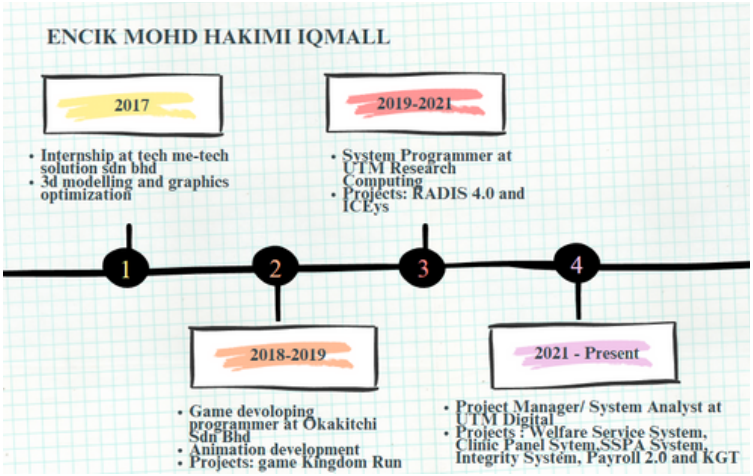
Group members

Tey Xin Yi (A24CS0201)
Dasneem Banu Binti Haja (A24CS0066)
Fakhira Anisa binti Mohd Radzi (A24CS0070)
Nur Syafiqah binti Abdul Malek (A24CS0167)
Muhammad Nasyat Bin Mohamad Nasir (A24CS0141)

Speaker Experience



Aspects	Details
Name	Encik Nik Mohd Habibullah Bin Nik Mohd Nizam
Achievements	1. Founder Of Micro Semiconductor Sdn Bhd (MSSB) 2. Co-founder of GetMe Hired 3. Co-founder of Dialysis Manager
Contributions	1. Founder Of Micro Semiconductor Sdn Bhd (MSSB) – IT equipment, network security solutions and also machinery services. 2. Co-founder of GetMe Hired – develop platform for creating professional CVs for fresh graduates 3. Co-founder of Dialysis Manager – Integrate system to improve haemodialysis center service

Basic Skills Required for Computer Science

The industry talk highlighted that computer science students need a solid foundation in programming languages such as C, Python, Java, and PHP to meet industry demands. Proficiency in version control tools like GitHub and GitLab is essential for managing collaborative projects effectively. Students should also be familiar with development tools like VSCode and Visual Studio, which are widely used for coding and debugging. A strong understanding of database structures, including tables, primary keys, relationships, and schemas, is crucial for organizing and managing data. Debugging skills are vital for identifying and fixing issues in software development. Security awareness, particularly regarding threats like SQL injection, Cross-Site Scripting (XSS), and CSRF, was emphasized as critical for building secure systems. Analytical and logical thinking, supported by a strong grasp of algorithms and data structures, is fundamental for solving complex problems. Additionally, knowledge of frameworks such as .NET, Laravel, and Yii equips students to develop scalable and reliable applications. These skills helps ensuring students are well-prepared for professional challenges.

Skills Required by Industry

During the talk, Mr. Hakimi provided a detailed analysis of the essential competencies required to succeed in the computer science industry. He highlighted that, in addition to excellent technical skills, employers increasingly seek those who possess various ranges of soft skills. One of the skills needed is management skills which is key to efficient teamwork and overseeing projects precisely. Problem-solving abilities and a strong technical foundation are essential for informed decision-making and effective team management. Good communication skills and knowledge of SDLC Methodologies are also crucial for thriving in the industry. Testing and Quality Assurance (QA) skills are also key to a good team dynamic. The ability to manage risks while finishing projects can minimize project disruptions and enhance overall productivity. Proficiency in documentation and reporting skills is also required for transparency and accountability throughout the project. Furthermore, strong leadership and team collaboration skills are important to form a conducive work environment. These combined competencies allow IT professionals to excel in this rapidly evolving industry.

Both speakers from the talk emphasized both soft and hard skills are essential to strive in the computer science field. Those claims can be solidified with the reference of an article “Uncovering the Skillsets Required in Computer Science Jobs Using Social Network Analysis”. The study used Social Network Analysis (SNA) to identify the most critical skills required by employers in the market of computer science.

The analysis revealed employers value soft and hard skills. Soft skills such as communication, teamwork, and time management are highly valued by employers and have a high degree of centrality in the network of job advertisements analyzed. Hard skills such as programming languages, database management, and security are also important, with some experiencing increased demand over the years due to factors such as cyber threats or automation.Additionally, certain skills were highlighted based on their centrality indices, including communication, English, SQL, Git, and business skills, among others.

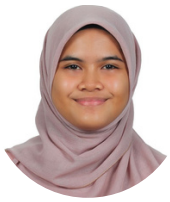
Reference

1) Uncovering the Skillsets Required in Computer Science Jobs Using Social Network Analysis. Mehrdad Maghsoudi (2023). https://arxiv.org/pdf/2308.08582
2) Home. (n.d.). Academic Phrasebank. https://www.phrasebank.manchester.ac.uk/
3) How to write in an academic style. (n.d.). The University of Sheffield. https://www.sheffield.ac.uk/study-skills/writing/academic/style

Reflection

Tey Xin Yi (A24CS0201)

“Be brave to challenge yourself, life begins at the end of your comfort zone” quote by the first speaker, Encik Mohd Hakimi Iqmal, reminds me that in order to strive in computer science in the future, not only soft and hard skills are essential, gaining an evolving mindset is also important. When there is a problem, solve it instead of stalling, only then we can improve no matter when and where we are. If we only acquire either essential skillsets or evolving mindset, we cannot succeed in the long run. Therefore, I will improve both essential skillsets and build an evolving mindset to achieve my goals of life.



Fakhira Anisa bt Mohd Radzi (A24CS0070)

After hearing the industrial talk, I realized that to thrive in the computer science industry, I need to improve my technical skills and management skills. Both skills are vital in developing effective work systems and producing good team dynamics. Over the four years, I need to master programming languages, version control tools, and database structures as they are essential for optimal system performance. Additionally, I will enhance my analytical and logical skills as well as team collaboration skills to become a professional in the industry. Lastly, excellent team collaboration skills are also needed to produce great teamwork between the professionals.

Dasneem Banu Binti Haja (A24CS0066)

In my interpretation, this talk made me realize the necessity of improving technical skills which includes analytic, problem solving and programming skills. This can be attained by enhancing proficiency in various programming languages such as C++, Python and Java. Although many other languages still exist and need to learn later, I believe that this programming languages are widely used nowadays in this fastly evolving industry. Furthermore, I trust that by engaging in activities that related to career-building will surely contribute to my future job in this industry. This is because participation in career related activities and competitions can expand my experience and also improving my social skills. Mainly, in these four years of my bachelor's program, I aim to master all the subjects such as database, network communication and data structure to pursue my dream in becoming a successful data analyst. I will commit myself by investing my best efforts in improving my skills that necessary to be a professional in this technology field.

Nur Syafiqah binti Abdul Malek (A24CS0167)

The industry talk taught me that success in computer science requires a balance of technical and soft skills. While mastering programming languages, version control, and frameworks is essential, I also learned that skills like management, communication, and problem-solving are just as important. The focus on security, debugging, and database management highlighted the need for a solid technical foundation. Additionally, the emphasis on leadership and teamwork showed me the value of collaboration and risk management in the workplace. This talk has motivated me to work on both my technical expertise and interpersonal skills to better prepare for the industry.

Muhammad Nasyat Bin Mohamad Nasir (A24CS0141)

I found that both technical and management skills are essential both in university and in industry. Technical skills for example, logical and analytical skills are important leading us to find success in computer science field, both in university and the industry. These skills will further our efficiency in developing technology, by reducing both time and energy. Management skills are also important as technical skills, communication skills and risk management allow us to keep chasing opportunities. It found that opportunities are the key to success in every field both in industry and university.