



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

SECP1513 Technology & Information System

Assignment 3 (Academic Report)

Project Management & System Development

Building the CORE Foundation for Your Computer Science Journey

**Title: Project Management & System Development
(Industry Talk 2)**

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Views on Project Management & System Development

01

This industry lecture was conducted by Ts. Hj. Abdul Alim Bin Abdul Muttalib, Head of Technology & Innovation at Serunai Commerce Sdn Bhd. Based on his work experience in the relevant field, he highlighted that for software engineers to be successful in the current era and years to come, they must have a well-rounded set of skills. He formulated the following equation in this respect:

40% coding and AI skills + 60% system design and project management skills = fully future-ready

(Abdul Alim, 2025).

Such a notion assumes the paradigm of the role of graduates with a computer science education has moved from being programmers to system-level architects who monitor the entire process with the help of AI technology. The lecturer explained that the learning outcomes for higher education are sufficient for learning technology skills, but what the industry increasingly values are system developers, designers, manufacturers, and managers.

03

The emphasis that the speaker gives to system-level thinking skills and project management skills is well supported by current studies in software engineering. *Chadli et al. (2016)* emphasize that software development has been relying on good project management practices, especially in complex and distributed software environments. In the above systematic mapping analysis, it has been observed that the use of tools related to planning, coordination, communication, and monitoring in projects is a prerequisite in making these projects a success. Again, this reinforces that software engineers must have knowledge related to system design and management apart from programming knowledge.

05

However, the industry requires skills that go beyond these essential skills. Project management skills are also required for tackling complexity and uncertainty associated with software development projects, with the goal of delivering projects on time, not exceeding the budget, and meeting stakeholders' expectations. Formal knowledge in project management provides the tools and processes that must be used in order to successfully initiate, plan, execute, and close projects. In other words, this means that computer science professionals must have the skills in terms of project scope definition management, risk management, and team management. The result of mastering these skill competencies will allow a new graduate to move from task accomplishment in their field to building complete software systems.

02

Overall, from the discussion, it is possible to deduce some essential skills for computer science students. These would involve a robust understanding of programming and algorithms, an appreciation for the software development life cycle (SDLC) and its essential activities, from planning and analysis to maintenance, and familiarity with recognized approaches to software development. The SDLC is a systematic means of managing a software project from beginning through implementation. In addition, knowledge regarding when a plan-driven or adaptive method of software development is appropriate is important in managing a software project based on the limitations and needs of a project.

04

Moreover, the importance of project management and its direct influence on the efficiency and quality of the software development process was stressed by *Shashikumar and Gopalakrishnan Nair (2014)* in their study. They found that factors such as proper planning, risk management, and resource allocation increase the benefits of project management. This finding is in line with the lecturer's point that future-ready computer science graduates should be proficient in technical skills and project management skills in order to manage the entire software development life cycle in the face of project constraints and uncertainties.

REFLECTION

MASON LING MING EN

Through this industry talk, I learned that if I want to be more competitive in the job market, I cannot only focus on one single specialization. Instead, I need to make myself more all-round within my field. Therefore, in order to graduate successfully after four years in university, I will use my free time to learn more knowledge related to computers and also ask seniors for advice. I will also learn about risk management and team management, so that I can complete tasks better in my future work.

LEE WAI SIANG

From this industry talk, I learned that the overview of today's Computer Science job market. I know that it's not enough to just write code, we also need to sharpen our problem solving skill and master modern tools to stay competitive in this modern world. In short, we need to apply what we learn in university to workplace to stay competitive in the future.

KOO YAO MENG

Based on this industry talk, I have gained further insight into the present and future trends of computer science engineering. Also, I have understood the importance of having a goal in order to be competent in this industry, along with awareness of the required skill sets. Through upgrading myself regarding the same and adding new skill sets, I can improve my own value in the industry. For the next four years, my strategy to succeed in computer science would be to enhance my abilities incrementally. Not only would I channel my efforts towards my academic pursuits, I would also enhance my knowledge beyond academic confines. I would attempt to be updated on all the latest advancements and learn new things. For instance, as cited by Ts. Hj. Abdul Alim Bin Abdul Muttalib, artificial intelligence would play a significant role in the future and computer science engineering would require expertise in artificial intelligence. As such, I would require increased learning on artificial intelligence and all other facets of knowledge beneficial to my development in computer science.

TOH ZEN HEE

Based on this industry talk, I am able to plan my degree of computer science in the next four years better by knowing to not just learn coding but to understand the logical connection and knowledge within the system. Moreover, I should also treat my project and assignment as a challenge or a simulation of my future job as a computer major employee. In addition, as a computer science student i should not just rely on school learning material but also learn some new skill that is also related to computer. Lastly, I should treat AI as my learning partner rather than a shortcut to pass my degree, as using AI in it's full potential can support me to make my understanding and decision making better.

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