Project Management and System Development

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Project management refers to the application of planning, organization, and control of resources to achieve specific objectives within defined constraints, with effective planning being essential to project success. System development is a structured process that involves defining objectives, designing solutions, developing and testing systems, followed by deployment and maintenance of software applications. These stages reflect real-life planning practices that emphasizes clear goals, preparation, evaluation, and continuous improvement. Understanding the principles of project management and system development enables students to apply academic knowledge to practical situations and develop structured thinking for their future careers.

The Road map: SDLC

Firstly, planning phase. The speaker mentioned that students can't planning and brainstorming on their own. We need other people to gather as a team and decides the goal of the system and its purpose. Next, analysis. In this phase, requirements are gathered. Students are advised to analyse the requirements. All needs are clearly defined before moving forward. Then, designing the system after it has been analysed. This includes an interface design and workflows. After that, implementation or development phase. The developers write the code and build the system and test it to make sure everything works as planned. Lastly, maintenance to keep it running. After the system is launched, it needs updates and improvements. This phase ensures the system to stay secure, stable and useful over time.

PM Methodologies: The "How"

The first method to Project Management is by the Waterfall Methodology; it is a linear, traditional and sequential progression to be approached strictly to stick to different phases of the project. This method is ideal for projects with fixed requirements and goals, and some of its advantages are the milestones of the project are well-defined and clear, alongside with its high levels of predictability since it is easy to manage. However, the downside is the ability to pivot the trajectory of the project course is difficult to attempt since it requires a significant resource deconstruction to do so. The second method is by the Agile Methodology; a modern, iterative approach mainly utilized by major industry leaders such as Petronas, Intel and Maxis. It is designed for environments that require high adaptability and rapid response to shifting requirements. One of the best features of this methodology is it ensures iterative development, accelerated feedback and wider flexibility. Hence, this contributes to continuous improvement, thus allowing for constant optimization.

The New Era: Agentic Coding

Agentic coding refers to using AI as an assistant rather than fully relying on it. The speaker advised students not to copy and paste AI-generated code without understanding programming fundamentals, as AI can make mistakes. ChatGPT is not a suitable tool for direct coding; instead, tools like Cursor.ai in VS Code provide better context and assist developers in understanding their code. Agentic coding can increase productivity by handling syntax which can help developers get hired faster. However, system architecture remains the most important skill, because it cannot be replaced by AI. Developers who are strong in architecture are more likely to be hired because they rely on real knowledge and experience, not just AI.

Reflection

Nur Dania Halisa binti Mohd Hazri (A25CS0306)

From the talk, I learned that building software is not something that we can build randomly or spontaneously. It follows a process called as Software Development Life Cycle (SDLC). Each phase has its own purpose or functions, starting from why the system is needing, followed by planning of how it can be built, designing and implement the system based on the plans and lastly, maintaining the system's update. In the next four years, I believe that I could improve my coding by following this cycle.

Nurul Najiheen binti Hazril (A25CS0337)

Upon listening to the speaker's sharing on SDLC and the whole PM process, it has now made clear for us students to understand that no matter the difference of our courses in the Computer Science field in university, Project Management applies to everyone in their career in the future to ensure that a high quality project can be produced with systematic contributions within the team.

Nurin Batrisyia Husna binti Mohd Hazry (A25CS0328)

From the talk, I learned that planning and teamwork are essential in system development. The speaker also reminds us that AI could assist in coding but should not replace human creativity. In the next four years, I will improve my coding fundamentals and explore new technologies like AR/VR and cloud systems to meet industry needs.

Siti Nur Alysha binti Suhaimi (A25CS0354)

From the industrial talk, I learned that "Project management is a planning. If you fail to plan, you're planning for a failure." This made me realize that planning is the key, not just in theory but in real projects. I understood that following the SDLC will help me manage my time, work better in teams, and develop systems that work. By applying these lessons, I believe that I can grow my skills and succeed in this field over the next four years.

Sofea binti Mohammad Hisyamuddin (A25CS356)

Learning about project management and system development helped me understand that success in computer science requires both structured thinking and adaptability. I realized that following clear and correct methodologies ensures organized progress, while integrating AI responsibly can boost productivity without replacing fundamental skills. Over the next four years, I aim to build a strong foundation for a successful career in computer science by combining technical knowledge with disciplined project management.