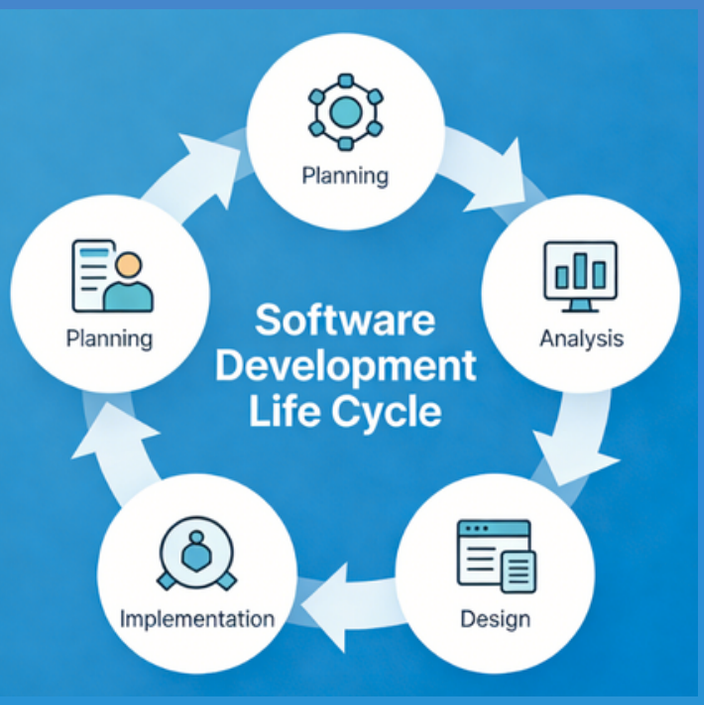
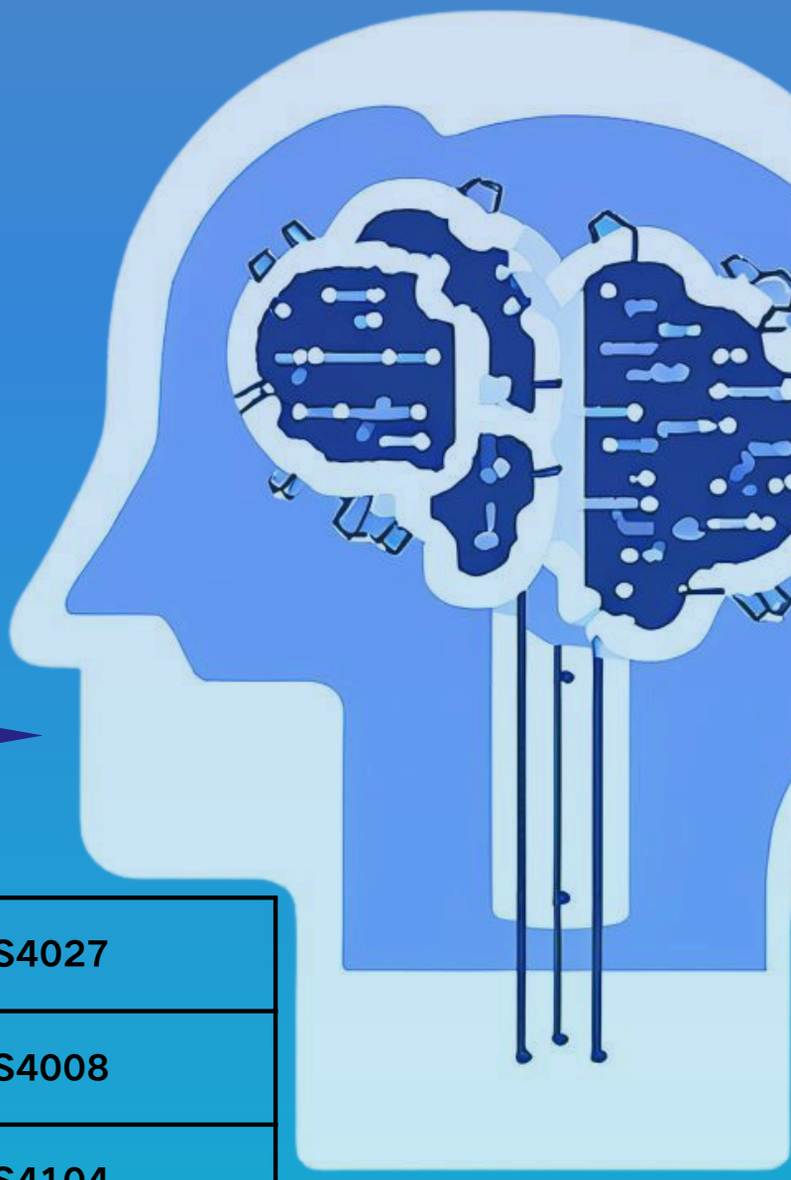
Project Management & System Development

Building the CORE Foundation for Your Computer Science Journey





ASSIGNMENT 3

XU HAOJIE	A25CS4027
LI HONGYU	A25CS4008
LI WENBO	A24CS4104
Mohamed Brahim Khairy	A25CS4015

Part 1: Speaker’s Experience

Speaker: Ts. Hj. Abdul Alim bin Abdul Muttalib.

Current Role: Head of Technology and Innovation at Serunai Commerce Sdn Bhd.

Experience Overview: Ts. Hj. Abdul Alim is a distinguished professional with extensive experience in leading digital transformation and innovation projects. During his industry talk, he shared his expertise in managing complex technological systems, emphasizing the importance of aligning technical development with strategic business goals. His career highlights the practical application of project management frameworks within the commerce and technology sectors, providing students with a bridge between academic theories and industry-standard practices.

Part 2: Technical Definitions

- Project Management: This is the discipline of planning, executing, and closing projects effectively by managing resources, time, and budget to achieve specific goals.
- System Development: This refers to the process of defining, designing, testing, and implementing a new software application or program to meet user requirements.

Part 3: Program Application (Computer Science)

- In Data Engineering: Project management is crucial for organizing data pipelines, while system development focuses on building scalable database architectures.
- In Computer Networks: Project management ensures the timely deployment of network infrastructures, and system development is used to create network monitoring and security tools.

Part 4: Academic Integration

As noted in professional literature, "effective project management within system development cycles reduces risks and ensures the quality of the final software product" (Jones, 2024).

Part 5: Personal Reflection (Mohamed Brahim Khairy)

The industry talk by Ts. Hj. Abdul Alim was highly enlightening, as it highlighted that technical skills alone are not enough; understanding how to manage projects is what ensures their success in the real world. To succeed in my Computer Science journey over the next four years, I plan to:

1. Master the fundamental principles of system development to build a strong technical base.
2. Acquire project management certifications to align my skills with industry demands.
3. Focus on collaborative projects to improve my communication and teamwork abilities.
4. Stay updated with the latest trends in technology to remain competitive in the job market.

Skills Analysis: Basic vs. Industry-Specific

1. Basic Skills Required for Computer Science Foundational Computer Science competencies focus on technical proficiency and problem-solving (Sommerville, 2019):

Programming Fundamentals: Proficiency in languages like Python, Java, and C++, along with structured coding practices.
Mathematical & Algorithmic Thinking: Mastering discrete math and algorithm design (sorting, graph theory) to solve complex logic problems.
Computer System Literacy: Understanding OS (Linux/Windows), hardware architecture, and network protocols (TCP/IP).
Data & Database Proficiency: Knowledge of SQL, data structures, and basic data processing.
Critical Reasoning: The ability to break down complex tasks and troubleshoot systematically.

2. Industry-Specific Skills (Tech & Info Systems) Real-world industry needs, as seen in companies like PPG, focus on application and operations (PPG Digital IT, 2025):

Data Analytics: Using tools like Python (Pandas) and Power BI Premium to turn massive, messy datasets into business insights.
Cloud Computing: Proficiency in multi-cloud platforms (AWS, Azure) and scalable infrastructure (IaaS/PaaS).
Enterprise Systems: Familiarity with ERP systems like SAP S/4HANA (Materials Management, Sales Distribution) to handle core business processes.
DevOps & Automation: Skills in CI/CD pipelines (Azure DevOps) and infrastructure-as-code to streamline development.
Cybersecurity: Understanding zero-trust models and data governance to ensure safety and compliance.
Collaboration: Working across global teams (e.g., "Follow the Sun" models) to align tech with business goals.

3. Individual Reflections: Path to Success (Next 4 Years)

Mohamed Brahim Khairy (Research Specialist) The talk by Ts. Hj. Abdul Alim was an eye-opener. I realized technical skills aren't enough—project management is the key to real-world success. To succeed at UTM, I plan to:
Master system development principles for a strong technical base.
Get certified in Project Management to match industry standards.
Focus on group projects to improve my teamwork skills.
Keep up with the latest tech trends to stay competitive.

Xu Haojie (Lead Designer & Formatter) I resonated with the idea that visualization is a functional bridge, not just decoration. The speaker showed how good graphics accelerate decision-making. My goal is to master Power BI Premium and combine it with academic reporting. I want to learn how to present data that is visually striking but also academically rigorous, ensuring my reports communicate complex technical ideas clearly.

Li Hongyu (Content & Reflection Coordinator) My biggest takeaway is the need to translate theory into practice. Foundational knowledge only has value when it works within real-world constraints, like global teams or fragmented data. At UTM, I aim to master ERP system documentation. I want to learn how to translate complex workflows (like SAP) into structured, clear documents. This bridges the gap between coding and business operations, which is essential for my career.

Li Wenbo (Quality Assurance & Submission) The talk changed my perspective: Quality and compliance are foundations, not afterthoughts. Global projects require proactive checks to lower risks. My goal is to master automated quality auditing using Azure DevOps. I want to use tools like CI/CD pipelines to automate things like code quality checks and even plagiarism detection. This aligns with the industry's focus on "proactive quality" and ensures my work is always original and professional.