**Chapters:** 7 and 8

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**Course:** Software Project Management

**Journal URL:** https://github.com/ThansilMohamedS/SPM

**Dates Rage of activities:** 08/03/2025 to 16/03/2025

**Date of the journal:** 16/03/2025

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| **Key Concepts** |
| This week, I explored the fundamental principles of Project Monitoring and Control, which are essential for keeping software projects on track in terms of scope, cost, time, and quality. Project monitoring involves systematically collecting and analyzing data to track progress, ensuring that tasks are executed as planned. In contrast, project control focuses on taking corrective actions to align execution with project objectives. A crucial aspect of effective monitoring is establishing a baseline plan, which includes key benchmarks such as cost, time, scope, and performance. By continuously comparing actual progress against these baselines, project managers can identify variances early and take proactive measures to mitigate potential issues.  I studied Earned Value Management (EVM), a technique that integrates cost and schedule performance to assess project health. Unlike traditional tracking, EVM assigns a monetary value to completed tasks, offering precise insights into schedule and budget status. Additionally, S-Curve Analysis helps visualize cumulative expenditures and detect deviations from the plan.  I explored corrective action strategies for handling deviations, including workload redistribution, resource reallocation, deadline adjustments, and scope modifications. In extreme cases, project termination may be necessary. Additionally, schedule optimization, such as removing unnecessary slack, enhances efficiency, minimizes risks, and ensures timely project completion. |

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| **Application in real life** |
| In software development, project monitoring and control ensure smooth execution and risk minimization. Earned Value Management (EVM) tracks cost and schedule performance, helping assess project progress. For our Food Expiration Alert System, EVM can verify if database integration and notifications stay on schedule and within budget. S-Curve Analysis visualizes cost trends for optimal resource allocation, while quality metrics like system accuracy and user feedback ensure reliability and efficiency.  To address potential delays, corrective actions like adjusting workloads, reallocating resources, or modifying deadlines can keep the project on track. If bottlenecks arise such as inaccurate expiration alerts then risk management strategies can be applied to refine detection algorithms. Schedule optimization techniques, such as removing unnecessary slack, ensure efficient development cycles. By integrating these approaches, we can enhance system scalability, improve user experience, and minimize food waste effectively. |

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| **Peer Interaction** |
| This week, my peers and I engaged in discussions to refine our understanding of project monitoring and control. We debated the effectiveness of Earned Value Management (EVM) versus traditional tracking methods and explored how S-Curve Analysis can provide better cost visibility. In relation to our Food Expiration Alert System, we analyzed potential project risks, such as inaccurate expiration alerts and delayed notifications, and discussed corrective actions like resource reallocation and timeline adjustments. Additionally, we reviewed schedule optimization techniques, ensuring our project remains efficient and scalable. These discussions enhanced our ability to manage deviations effectively and reinforced the importance of proactive project control. |

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| Challenges Faced |
| This week, while working on the Food Expiration Alert System, I faced challenges with maintaining accuracy in tracking expiration dates, as the system relies on real-time data and manual user inputs. Errors in product details led to inaccurate alerts, affecting system reliability. Additionally, managing version control became complex as new features were integrated, and estimating development effort was difficult due to uncertainties in user behavior and system performance. To address these challenges, we built a minimal viable version to test the system, identify bottlenecks, and adopted an iterative risk assessment approach to refine estimations and improve scalability and accuracy over time. |

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| **Personal development activities** |
| To enhance my understanding of project monitoring and control, I focused on studying case studies and best practices for managing software projects, particularly in areas like risk management and configuration control. I researched real-time notification systems to improve the efficiency of expiration alerts and explored database optimization techniques to ensure smooth performance. Additionally, I worked on refining my collaboration and decision-making skills by actively engaging in team discussions, contributing to the development of risk assessment strategies, and improving our approach to managing project timelines and tasks effectively. |

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| **Goals for next week** |
| Next week, I plan to deepen my understanding of Earned Value Management by working through practical examples to enhance my analytical skills. I also aim to explore additional case studies on project closure to gain insights into how organizations manage final deliverables and ensure smooth transitions. Additionally, I will continue improving my project documentation practices, focusing on maintaining clear and well-structured records throughout a project’s lifecycle. By achieving these goals, I aim to strengthen my ability to effectively monitor, control, and close projects, ensuring efficient and successful project execution. |