Learning Journal 4

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Course: Software Project Management (SOEN 6841)

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Dates Rage of activities: 24/02/2025 - 14/03/2025

Date of the journal: 14/03/2025

Key Concepts Learned:

This week's sessions focused on Project Monitoring & Control (Chapter 7) and Project Closure (Chapter 8), two critical phases in Software Project Management that ensure a project's success and efficiency.

Project Monitoring involves tracking a project's progress, schedule, budget, and quality against a predefined plan. Key aspects include:

- Baseline Comparisons: Comparing actual project progress with initial baselines to measure performance.
- Earned Value Management (EVM): A technique used to assess project health by integrating schedule and budget performance. It helps determine if a project is ahead or behind schedule and within or over budget.
- Risk & Scope Control: Ensuring that any changes are assessed for their impact before implementation.
- Corrective Actions: Strategies like re-planning activities, reallocating resources, or even terminating a project in extreme cases.
- Monitoring Tools: Usage of Gantt charts, S-Curve Analysis, and Performance Metrics like defect density, schedule variance, and resource utilization.

Project Closure ensures that all deliverables are completed, evaluated, and archived for future learning. It includes:

- Deliverable Verification: Ensuring all project outputs meet agreed-upon criteria before final handover.
- Source Code Version Management: Proper documentation and archival of the latest stable version of the project.
- Lessons Learned Documentation: Capturing insights on what worked and what didn't, to improve future projects.
- Archiving Metrics Data: Storing relevant project data for future reference and compliance needs.

Application in Real Projects:

The concepts from this week are crucial for managing software projects effectively. Here's how they apply in real-world scenarios:

1. **Project Monitoring & Control:**
    - In large-scale software development, EVM helps project managers identify cost and schedule deviations early. For example, in a mobile app development project, if feature implementation lags behind schedule, managers can reallocate resources or extend deadlines accordingly.
    - Risk control is essential in industries like **finance and healthcare**, where scope changes can introduce compliance risks. Monitoring ensures regulatory standards are upheld while balancing project goals.

2. **Project Closure:**
    - In **Agile development**, sprint retrospectives act as a form of closure for incremental project phases, ensuring continuous improvement.
    - Version control systems like **GitHub** ensure that stable, well-documented versions of the project are maintained before closure, preventing code loss or rework in future iterations.

Peer Interactions:

During these days, my peers and I collaborated extensively in preparing for our project pitching, ensuring that our scope and deliverables were clearly defined. We also engaged in combined study sessions to revise Chapters 5 and 6 for the quiz, discussing key topics such as estimation models and risk management strategies. During reading week, we began working on documenting Deliverable 2, successfully completing sections like the feasibility study and solution proposal. Additionally, we explored how monitoring tools like S-Curve Analysis could visually demonstrate project performance trends, refining our understanding through practical applications.

Challenges Faced:

Understanding Earned Value Management (EVM) calculations initially seemed complex, especially in differentiating Planned Value (PV), Earned Value (EV), and Actual Cost (AC). However, working through real-world examples improved my understanding. Scope control was challenging, particularly in assessing how even minor changes impact budget and schedule. Team discussions helped me appreciate the importance of change control boards (CCB). Additionally, managing project closure documentation felt overwhelming at first, but researching best practices in project archives and metrics selection helped me streamline the process. Another significant challenge was preparing the budget plan for our project, as estimating costs accurately and ensuring financial feasibility required multiple iterations and peer discussions.

Personal Development Activies:

To enhance my understanding, I explored case studies on companies successfully using Earned Value Management (EVM) to track project performance. I also practiced project closure techniques by drafting a closure checklist for our project, ensuring no key elements were overlooked. Additionally, I worked with GitHub to simulate a real-world version control workflow, reinforcing the importance of structured archival and documentation. These activities not only strengthened my grasp of monitoring and closure techniques but also helped me develop a more analytical approach to project tracking and reporting.

Goals for Next Week:

Next week, I plan to revise Chapters 7 and 8, practice earned value analysis (EVA) exercises, practice creating EVM reports and Gantt charts for different project scenarios, and meet with my team to complete Project Deliverable 2, as the deadline is approaching this week. Alongside these tasks, I will give a casual reading to Chapters 8 and 9 in preparation for the next class and start preparing for the final exam to ensure a strong grasp of all covered topics.