

Learning Journal 2

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Course: Software Project Management

Journal URL: <https://github.com/MasoumehF/SOEN-6841-Software-Project-Management>

Dates Range of activities: 28 January-7 February 2025

Date of the journal: 9 February 2025

Key Concepts Learned

This week, we covered Configuration Management (CM) and Project Planning.

1. Configuration Management (CM):

- CM helps control and document software changes to avoid project chaos.
- It includes Configuration Identification, Configuration Control, Configuration Status Accounting, and Configuration Auditing.
- **Benefits:** Reduces confusion, ensures product integrity, and provides traceability.
- **Challenges:** Poor CM can lead to lost code versions, reintroduced bugs, and untraceable changes.

2. Project Planning:

- A crucial activity from project initiation to delivery.
- Key elements: Work Breakdown Structure (WBS), scheduling, budgeting, resource allocation, and risk management.
- **Planning Techniques:** Top-down vs. Bottom-up planning, Critical Path Method (CPM), and Goldratt's Critical Chain Method.
- **Challenges:** Estimating complexity, handling unexpected risks, and avoiding miscommunication.

Application in Real Projects

- **Configuration Management:** Essential in Agile and DevOps environments to ensure smooth version control and software releases. Poor CM can lead to major technical debt.
- **Project Planning:** Critical for time management and resource allocation. The WBS approach is useful for breaking down large projects into manageable tasks to prevent delays.
- **Potential Challenges:**
 - Uncontrolled changes can cause version conflicts.
 - Misestimating project scope can lead to delays and budget overruns.
 - Communication breakdowns may lead to missed and inefficiencies deadlines.

Peer Interactions

- Had discussions with peers on **real-world examples of poor CM** leading to major software failures.
- Collaborated on **WBS creation** for a case study. It helped in understanding task **dependencies** and **effort estimation**.
- A classmate shared insights on **Agile vs. Waterfall project planning**, which helped me see the practical differences in scheduling flexibility.

Challenges Faced

- Struggled with understanding Configuration Auditing—particularly how it verifies software compliance.
- Found **Critical Path Method (CPM)** calculations tricky, especially in complex project networks.
- Need more practice in estimating task durations and resource **allocation** effectively.

Personal Development Activities

- Watched tutorials on Git & CM tools like **GitHub Actions** to understand automated version control.
- Explored case studies on failed software projects due to poor planning.
- Practiced WBS modeling using Trello and Microsoft Project to enhance project structuring skills.

Goals for the Next Week

- Deepen understanding of configuration auditing and change control processes.
- Practice CPM calculations with different project examples to improve scheduling accuracy.
- Improve resource estimation skills using case-based simulations.
- Engage in more peer discussions on project planning challenges and strategies.