

Learning Journal Template

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Course: SOEN 6841-Software Project Management

Journal URL: https://github.com/SiddharthOza00/SOEN-6841-Learning_Journal

Week 2: Feb 4 – Feb 10

Date: Feb 10

Key Concepts Learned:

- Configuration management is essential in software projects for managing numerous artifacts throughout the development life cycle.
- Configuration management ensures safe storage and secure access to artifacts, supporting development.
- A good configuration management version control system will manage different work product versions, safely store and access artifacts, track changes and maintain an audit trail.
- In configuration management systems access rights management, automated testing, and continuous integration ensure smooth workflow.
- Each artifact has multiple versions, with changes leading to new versions.

Reflections on Case Study/course work:

- This week I read Case Study 5 and findings are as following:
- The implementation of a centralized configuration management system facilitated smooth collaboration among internal, external, and offshore teams. Despite geographical disparities, the teams were able to work efficiently on the software development project.
- The continuous availability of the configuration management system, operating without downtime, ensured universal accessibility, thereby facilitating uninterrupted development task progression.
- Robust access controls were implemented by the system, delineating administrative privileges from view-only permissions to uphold document security while facilitating suitable access for team members, thereby augmenting data integrity.
- Although automated smoke testing effectively identified build inconsistencies, future research could aim to optimize testing methodologies for improved efficiency and accuracy in error detection.
- Exploring the scalability and adaptability of the configuration management system to meet evolving project needs and potential growth could ensure its long-term viability and effectiveness.

- Investigating methods to enhance user experience and streamline development workflows, including improving local build synchronization and integrating supplementary development tools, could significantly boost productivity and collaboration among distributed teams.

Collaborative Learning:

- Before coming to the lecture, I skimmed over the 5th chapter ppt and got an introduction of configuration management systems. This week we arranged a meeting to distribute the responsibilities among the team for the upcoming submission. And later this week I started reading the book to start preparing for the upcoming midterm.

Further Research/Readings:

- For Configuration management, I found a research paper "**Version Models for Software Configuration Management**" by Reidar Conradi and Bernhard Westfechtel
- The evolution of version models, from file-based techniques to contemporary distributed version control systems, is traced in this study. This evolution reflects evolving software development requirements, including scalability and decentralization.
- The three types of version models are branching, linear, and hierarchical. Each has benefits and drawbacks related to history traversal, concurrent development, and branching and merging support.
- The scale of the project, the composition of the team, the development process, and the availability of tools all influence the version model selection. Small, collocated teams typically prefer more straightforward linear models, while big, dispersed teams typically choose more complex branching models.
- Even with the progress made in version control technology, problems like merge conflicts, inconsistent versioning, and scalability problems still arise. As a result, more research and development is needed in areas like automated conflict resolution and effective version traversal algorithms.
- This research study offers a thorough analysis of version models used in software configuration management, adding to the current discussion on SCM procedures and guiding future version modelling research efforts.

Adjustments to Goals:

- For the upcoming submission. We did not know that we were supposed to add research papers to the project submission so we are focusing on finding and reading more research papers regarding the project topic.