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Learning Journal 2
Chapter 5 and Chapter 6

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Course: SOEN 6841 – Software Project Management

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Key Concepts Learned

Chapter 5 Configuration Management. It provides for change control and allows for different versions of the software product to be in existence on a temporary basis during controlled subphases of development. Configuration management is a process that establishes and maintains consistent operational and functional characteristics of a product. It encompasses control of information relative to options and alternative designs which may be implemented. It protects against confusion and regression, along with quality assurance problems. The basic elements of configuration management are configuration identification, configuration control, configuration status accounting, and configuration auditing. The benefits of configuration management are less confusion, the product remains correct with less risk of increased liability, reduced life cycle costs, and the ability to reduce the risk of expensive cost overruns and fixes/conversions/revisions. When configuration management is NOT done properly, chaos reigns, no version control exists, glitches/flaws appear and disappear, and features are omitted after they are proven to be stable and operational. Chapter 6 Software Project Planning. One of the essential project disciplines that comprise project development life cycle. It extends project scheduling/budgeting/communication QA project planning. Steps include top-down and bottom-up planning with an emphasis on proper project partitioning, WBS, CPM, Goldratt's Critical Chain, and Gantt Charts for effective resource allocation.

Application in Real Projects

Configuration Management ensures changes do not happen without proper documentation—suggested changes that are not recorded are less likely to be errors later on. Fewer errors mean less rework. Furthermore, rework is avoided via change control and risk management because it examines what can go wrong if a team member decides halfway through the implementation that he or she wants to do something else. Scheduling should not be an issue via WBS and CPM. These two systems outline what needs to be done and what can be done because of it and how many resources are needed. Therefore, as long as funding for resources is vetted and provided, there should be no issues of delay for a project based on resource-related concerns. Where there may be resource-related concerns, however, there is a communication plan and resource management plan to show who is doing what.

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Peer Interactions

Through group discussions, I learned how Configuration Management allows for stable software builds while software is still being developed and how it guarantees changes are documented. We took a poll on incremental versus waterfall project development and planning, examined the case study that found project scheduling errors due to its lack of planning so that we all learned what NOT to do, and shared our own lives advocating for supplier management and QA best practices, so we understand what's essential and what's just a nice-to-have. The collaboratively created risk management and change control policy proved to us why these things are required for projects to be successful.

Challenges Faced

Estimating the impact of changes was challenging, as it required deep analysis of dependencies and risks. Managing configuration items and tracking software components initially seemed unclear but improved with practice. Project scheduling was difficult due to task complexity, but techniques like WBS and bottom-up estimation helped. Communication gaps within the team led to initial barriers, but structured documentation and meetings improved workflow. Risk identification was another challenge, requiring assessments and reviews of past projects. To address these issues, impact analysis techniques were used to evaluate changes, a traceability matrix was implemented, and estimation methods were refined using historical data. Structured meetings and risk workshops also improved team coordination and planning.

Personal Development Activities

To stay on track, study sessions were scheduled, and key points were summarized after each reading. Discussions with peers helped reinforce learning, and practical exercises provided hands-on experience. Setting up a configuration management system improved understanding, while exploring different project scheduling methods, including WBS, helped apply concepts to real scenarios. Conversations on change control and quality assurance deepened insights into their role in project success.

Goals for the Next Week

The focus for the next week is to **prepare key points for the project pitch presentation on the Food Expiration Alert System**. Additionally, efforts will be directed towards **continuing to read upcoming chapters and summarizing key takeaways**. The project work will continue, ensuring that responsibilities are executed efficiently, and all planned tasks are completed on schedule.