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**Course:** SOEN 6841

**Journal URL:** https://github.com/itshisher/SOEN-6841-learning-journal/tree/main

**Week 3:** February 4– February 10

**Date:** February 6

**Key Concepts Learned:**

Chapter 5 introduces configuration management, a process that works alongside project development. A configuration management system includes information like project name, time stamp, document number, author, document type, and version number and is used by the entire project team, contractors and service providers. It holds documents, builds, and plans for different stages of the project. A good configuration system ensures that the project team can access and manage project work properly and prevent information loss and cyber-attack. Strategies for successfully using a configuration management system include centralized control, secure access, continuous integration, branching for different versions, and having an audit facility and a smoke test for checking.

Chapter 6 introduces software project planning which is a detailed roadmap that considers trade-offs among quality, schedule, cost, and organizational benefits. Components include risk, resource, schedule, effort, scope, quality, supplier, cost estimation, communication, configuration management, and tools planning. Various plan types suit different project structures, with input requirements adjusted accordingly. Techniques like the Critical Path Method and Goldratt's Critical Chain aid in scheduling and control. Project planning is important for managing tasks, especially in large software projects, and tools like MS Project and Primavera facilitate collaborative work for teams at different geographical sites.

**Application in Real Projects:**

Configuration management in real projects involves controlling changes to the project's artifacts, including code, documentation, and other deliverables. This ensures that the project remains organized, version control is maintained, and any modifications are well-documented. In software development, configuration management is crucial for handling multiple versions of code, collaborating among dispersed teams, and ensuring the integrity of the software during its lifecycle. To deploy a successful configuration management system, various aspects such as centralized system, smoke tests, integration of the build and secure system are required.

Project planning is also significant in real projects, throughout the entire project lifecycle. It involves defining goals, organizing tasks, allocating resources, setting timelines, and managing risks. Real-world applications of project planning include maintaining a structured schedule, tracking progress against milestones, adapting to changes, and ensuring efficient communication among team members and stakeholders. Planning techniques such as the critical path method can be used to make schedules and the critical chain method can be used to effectively track and control project tasks. Additionally, tools are also required to make plans.

**Peer Interactions:**

Meet with group members two times this week. During the first meeting, we went through the project requirements and rubrics to ensure what we are going to include in our first deliverable. We also separated tasks and formed two subgroups working on problem identification and market analysis. Me and the other group member are still working on problem identification, and we decided to have education as our domain. We planned to meet Thursday again to finalize scope and problems during the project's development and will finish our part by this Friday.

**Challenges Faced:**

Challenges for Chapter 5 (Configuration Management): Implementing a secure configuration management system and setup access permission is a big work since a project team can have many members with different levels, a good configuration system also contains continuous integration and automated testing, branching, and maintaining an effective audit facility for document verification and build integrity.

Project planning faces challenges such as uncertain requirements, resource constraints, scope creep, dependencies, communication breakdowns, risk management complexities, adaptability demands, and quality assurance concerns. Ambiguous or changing requirements can hinder the creation of a comprehensive plan, while resource limitations and scope expansions may impact project timelines and budgets. Managing dependencies and constraints, ensuring effective communication, and adapting to unforeseen disruptions are crucial aspects of successful project planning. Additionally, addressing risks and maintaining quality standards further contribute to overcoming challenges and ensuring the project's overall success.

Challenge for our project: Doing online research for our project deliverable. Our topic is to develop a learning chatbot and we also need to identify potential competitors and opportunities to develop our product. There are many chatbot out there and they contain a lot of noises. Making a summary of each competitor and their advantages and disadvantages is not easy. We also find difficulties deciding our domain.

**Personal development activities:**

Readings for chapter 5 and 6. Make summaries for these two chapters and do exercises for chapter 4. Online research for our project and discussion with teammates on our first deliverable. Choose ideal learning chatbots to make a comparison report. Develop a draft for problem identification and discuss with the other members.

**Goals for the Next Week:**

Readings for chapter 7 and 8, do chapter exercises and go through case studies after each chapter. Meet with teammates to finalize our first deliverable and submit it before due. Attend class regularly and prepare for the post project.