**Chapters:** 5 and 6

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**Course:** Software Project Management

**Journal URL:** https://github.com/ThansilMohamedS/SPM

**Dates Rage of activities:** 30/01/2025 to 06/02/2025

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**Key Concepts Learned:**

Configuration Management (CM) ensures software integrity by controlling changes, preventing version conflicts, and maintaining traceability. It comprises Configuration Identification, Control, Status Accounting, and Auditing, ensuring proper versioning and compliance. Effective CM prevents undocumented changes and operational risks.

Project planning establishes execution, monitoring, and control frameworks, covering scheduling, budgeting, and quality assurance. It follows Top-Down (breaking total project duration into tasks) or Bottom-Up (estimating small tasks first) approaches. Work Breakdown Structure (WBS) organizes tasks, while Critical Path Method (CPM) identifies the longest dependent task sequence. Gantt Charts and Activity Networks visualize schedules. Supplier management and iterative planning enhance adaptability and efficiency, ensuring optimal resource allocation and risk minimization.

**Application in Real Projects:**

Configuration Management (CM) ensures software integrity by controlling changes, preventing version conflicts, and maintaining traceability. It comprises Configuration Identification, Control, Status Accounting, and Auditing, ensuring proper versioning and compliance. Effective CM prevents undocumented changes and operational risks.

**Peer Interactions:**

This week, I engaged in discussions with my friends regarding Configuration Management (CM) and Project Planning and how to apply these concepts in our projects. We explored how CM helps maintain version control when updating features, such as modifying expiration tracking algorithms or enhancing user notifications. We also discussed different project planning approaches, debating whether a Top-Down or Bottom-Up method would be more effective for structuring our project. We decided to use both at specific times. Integrating both approaches gives us a good base for our project. These discussions provided valuable perspectives on minimizing risks, improving task allocation, and ensuring smooth project execution.

**Challenges Faced:**

We had several challenges while planning and structuring our project, « Food Expiration Alert System ». One of the main difficulties was accurately estimating task durations in our Bottom-Up planning approach. We burnt quite a few time in deciding whether to follow top-down or bottom up approach. Since the project involves multiple component such as database design, notification system, sensor integration, and UI development, it was challenging to predict how long each module would take without prior implementation experience.

Another major challenge was managing dependencies between tasks. For instance, the notification system depends on accurate food expiration data from the database, and integrating external APIs or sensors requires careful testing before deployment. Coordinating these interdependencies while maintaining a structured workflow required continuous adjustments to our timeline.

**Personal Development Activities:**

I basically had a timeline and had plan for myself to follow for this 2 weeks. I had milestones which I had to attain at specific deadlines which helped me to follow up. With proper planning I was able to develop my knowledge well which in return had a good understanding after missing the first few weeks. I also watched certain youtube channels to update my knowledge regarding newer topics.

**Goals for next week:**

I took suggestion from ChatGPT for the goals.

* Refine Task Estimates & Dependencies
* Set Up Configuration Management (CM) System
* Work on Initial Prototype Development
* Research Sensor & API Integration
* Team Coordination & Review