

Learning Journal Template

Student Name: Nikita

Course: Software Project Management

Journal URL: <https://github.com/Nikitakhera01/SPM.git>

Week 1: 4 Feb – 10 Feb

Date: 9 Feb

Key Concepts Learned:

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1. Configuration Management
 - During every development process, many versions of the product are built. Changes to the project can occur at any time as per needs, budget and time constraints.
 - In maintaining these versions, configuration management plays a necessary role so that all team members have access to all products and documents.
2. Purpose of Configuration Management
 - Identification: Identifying configuration items and assigning unique identifiers to them to facilitate tracking and management.
 - Change Control: Managing and documenting changes to configuration items to ensure integrity and prevent unauthorized alterations.
 - Status Accounting: Recording and reporting the status of configuration items.
 - Auditing: Reviewing configuration management processes and records to ensure compliance with standards and identify areas for improvement.
3. Configuration Management Techniques
 - Centralized configuration management system
 - Secured role-based access
 - Continuous Integration with automatic testing facility
 - Easy branching mechanism
 - Audit facility
4. Configuration Management Artifacts
 - The document outlines the approach and procedures for managing configuration items throughout the project lifecycle.
 - It defines roles, responsibilities, processes, tools, and standards for configuration identification, control, status accounting, and auditing.
5. Project Planning & its Fundamentals
 - Project planning is the process of defining the scope, objectives, tasks, timelines, resources, and deliverables of a project. It involves creating a roadmap that guides the project team throughout the project lifecycle.
 - Top-Down Plan: Commencing with an overarching view, followed by breaking down into intermediate tasks and specific milestones.

- Bottom-Up Plan: Identifying individual tasks first, then organizing them into higher-level objectives for the overall project plan.
- Work Breakdown Structure (WBS): Hierarchically deconstructing project scope into manageable components, facilitating organization and understanding.
- Resource Allocation: Efficiently assigning personnel, budget, and equipment to tasks and activities for optimal project execution.
- Supplier Management Plan: Structuring procedures for vendor selection, contracting, and oversight to ensure effective external collaboration.
- Configuration Management Plan: Establishing protocols for controlling changes to project artifacts throughout the lifecycle, ensuring consistency and integrity.
- Communication Management: Planning channels, methods, and frequency for information dissemination among project stakeholders to maintain transparency and alignment.
- Defect Prevention Strategy: Implementing proactive measures to identify and mitigate root causes of issues before they escalate, enhancing overall project quality.
- Other fundamentals like project duration, project cost management, tool management, scope, effort estimate, risk management has been discussed before.

6. Project Planning Techniques

- Critical Path Method (CPM): CPM is a project management technique used to determine the longest sequence of dependent tasks, establishing the minimum time required for project completion. It involves constructing a network diagram to identify the critical path, which comprises activities that cannot be delayed without extending the project duration. By focusing on task dependencies and durations, CPM helps prioritize activities and allocate resources efficiently for timely project completion.
- Goldratt's Critical Chain Method: Developed by Eliyahu Goldratt, the Critical Chain Method enhances traditional project management by addressing resource constraints and uncertainties. It identifies the critical chain, considering both task dependencies and resource availability, and adds buffers to protect against variations and delays. By managing these buffers, project managers can improve project reliability and reduce the impact of resource constraints and unexpected events on project timelines.

7. Project Planning Artifacts

- Project planning artifacts are documents created during project initiation and planning to guide project execution. They include the project charter, work breakdown structure, project schedule, and resource allocation plan. These artifacts help ensure alignment of efforts, effective resource management, and successful delivery of project objectives.

8. Project Planning in Agile Models (Iteration Planning)

- Project planning in Agile models involves creating a roadmap for project execution in iterative and adaptive cycles, prioritizing flexibility and responsiveness to change. It's necessary to ensure alignment of team efforts, manage resources effectively, and deliver value incrementally to stakeholders.
- Additionally, it helps in identifying dependencies, managing risks, and fostering collaboration among team members, ultimately leading to the successful delivery of high-quality products or services.

Reflections on Case Study/course work:

- Case studies give real life examples of implementing a software project management to fulfil the needs of the organization.
- These concepts help to better understand what problems are going to occur during implementing it in real life.
- It gives some useful insights how to use budget and resources to its fullest.
- Risk mitigation techniques can be used to lessen the effect of any upcoming risks during the software development.
- Configuration management also helps to ensure consistency, control, and traceability of project elements.
- Project planning case studies also gives a deep understanding of iteration cycle from identifying tasks to resource allocation, and after receiving feedback, repeat this cycle until you get quality product.

Collaborative Learning:

- This week, I had meetings with my team members. We discussed the project ideas and started working on our first submission.
- We shared different ideas to make our system more effective and user friendly.
- We identified what other systems lack, and then add all those features to give a better solution.
- We divided tasks among team members based on our individual strengths and interests.
- Class interactions are also very engaging, both with the professor and other students.

Further Research/Readings:

As I started working on the project, I went through many different resources online. It helps me understand how project management works, how to start a project. Right from the market analysis to development to maintenance & control. I'm working on a volunteer service platform, so I went through at least 20 websites. I did all the market analysis, discover other existing platforms, their pros & cons, and then finalise our system's scope and objectives.

Adjustments to Goals:

- Balancing multiple assignments, classes, and other responsibilities was a task, but I managed all well this week.
- Reading and writing journal is becoming easy with weekly practice.
- Some extra research on the topics online is time consuming. I'm still working on it.
- I'll work more on personal development activities.
- From next week, I'll try to give more time for challenging subjects, and will start reviewing class notes before coming to class.
- Prepare for the midterms.