

Learning Journal 1

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Course: SOEN 6841

Journal URL: <https://github.com/Akhilesh-Kanbarkar/Concordia/tree/main/SOEN%206841>

Dates Range of activities: 16 Jan 2025 – 27 January 2025

Date of the journal: 28 Jan 2025

Summary of Learning Activities:

Key Concepts Learned:

1. Explored the fundamentals of software project management, including concepts of project initiation, planning, and risk management.
2. Understood the key roles in software projects.
3. Learned the (SMART) Objectives, scope, project charters.
4. Goals can be allocated to individual.
5. Gained insights into effort estimation techniques like Function Point Analysis, Wideband Delphi, and COCOMO, and their applications.
 - Function Point Analysis is a quantitative method used to measure the functional size of software applications. It focuses on the functions and features that the software provides to users, allowing developers to estimate the effort required based on these functionalities.
 - Wideband Delphi is a consensus-based estimation technique that involves a group of experts estimating project effort or time using a structured process. The participants discuss and provide their estimates anonymously to prevent bias.
 - COCOMO is a parametric estimation model that computes the estimated effort and cost of software development based on project size (measured in lines of code or function points) and other project characteristics.
6. Studied risk response strategies such as mitigation, avoidance, transference, and acceptance.
7. Read a case study involving a software vendor developing a SaaS product for grocery retailers, specifically focusing on logistics and appointment scheduling. (Case Study Chapter -1).
8. Read case study for chapter 2 where the project is initiated to develop appointment scheduling functionality for the SaaS vendor's software product, aimed at addressing the lack of effective solutions in the market. The project charter, scope and the objectives are developed.
9. Read case study for chapter 3 where case study refers to the development stage of the software project, where the vendor is working on building the appointment scheduling functionality, integrating it with existing features, and preparing for thorough testing.
10. Read case study for chapter 4 which highlights the importance of identifying potential risks associated with developing the SaaS vendor's flagship software product and implementing effective risk mitigation strategies. The vendor faced significant challenges, including communication gaps, attrition, and development schedule management due to using offshore teams. By employing standardized communication templates, virtual meetings, and scheduling buffers, the vendor successfully navigated these risks while ensuring that priority features were developed on time. Additionally, ongoing quality checks throughout the development process helped maintain high software standards, ultimately supporting the project's success and market viability.

• Reflections on Learning

Application in Real Projects:

In the Waterfall model, project initiation is linear and sequential. Ex: A company plans to develop a banking software system. During project initiation, they document all requirements and create a detailed project plan. After finalizing the requirements, they move straight to design and coding. If they discover a

necessary change in functionality after the development has started, it could lead to significant delays and extra costs.

In the Iterative model, project initiation is more flexible, allowing for incremental development and adjustments throughout the project lifecycle. Ex: The same company initiates the development of the banking software by identifying core functionalities needed for a minimum viable product (MVP). They launch an initial version quickly, gather user feedback, and iterate on additional features and improvements in short cycles, making it easier to adapt to user needs.

Realized the significance of iterative models in minimizing risks by enabling frequent user feedback.

Peer Interactions:

Participated in group discussions to compare effort estimation techniques.

Outcome- Discussed about the various effort estimation techniques such as Expert Judgement, Analogous Estimation, Parametric Estimation, Three Point Estimation and concluded that; these estimation techniques can be applied based on project size, complexity, and the available data. Choosing the right technique often depends on the context and specific project requirements.

Personal Development Activities:

- Well-read and watched some video resources on the project management, and project life cycle concepts from the Google Project Management Course and tried to build a high-level budget plan along with a project charter. This activity gave me a clear understanding of the importance of how a project manager needs to brainstorm all the necessary factors about a project and checking its requirements or else the down the line company may end up abandoning the project.
- Created a visual timeline of project phases to better understand interdependencies and resource allocation.
- Completed tutorials on Gantt chart tools to improve project scheduling skills.
- Analyzed real-world projects to identify effective project management practices.

Challenges Faced:

1. Understanding the intricacies of **effort estimation models**, especially adjusting parameters for specific contexts
2. Difficulty in linking theory to real-world application during project scope definition.

For better understanding of these topics I watched tutorials and well-read past successfully implemented project which helped me to have a clear idea on the theoretical and analytical aspects of these problems along with this I also conducted a comparative exercise between Agile and Waterfall models helped in understanding the flexibility required in dynamic environments.

Time Management

Allocated 5 hours to reading course material, 3 hours for the other resource learnings, and 2 hours for peer discussions and activities.

Goals For Next Week:

- Explore advanced techniques for integrating software tools into project management.
- Reviewing the course materials provided in the classroom during the upcoming weeks.