

Learning Journal

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Course: SOEN 6841 Software Project Management

Journal URL: <https://github.com/SreePravalika15/SOEN-6841-journal.git>

Week 1: Jan 18, 2024- Jan 24, 2024

Date: Jan 24, 2024

Key Concepts Learned:

This week's session introduced fundamental concepts in Software Project Management:

1. **Definition Of a Project:**
 - Explored the concept of a project.
2. **Software Project Processes:**
 - Discussed the various processes involved in software project management, including planning, execution, monitoring and closure.
3. **Integration of People, Processes, Tools and Technology:**
 - Learned how effective project management integrates human resources, processes, tools and technology for project success.
4. **Characteristics of a Good Project Manager:**
 - Identified key traits of a good project manager.
5. **Subprocesses in Project Management:**
 - Explored sub processes within project management like Software life cycle processes, software project processes and software configuration management.
6. **Management Metrics in Software Projects:**
 - Introduced various metrics used to measure performance in software projects such as Relevant, Meaningful, Practical, Calibration ability and Activity level.
7. **Project Initiation:**
 - Understood the initiation phase, encompassing project charter, project scope and project objectives.

8. **Project Charter:**

- Explored the purpose and components of a project charter as a foundational document for project initiation.

9. **Project Scope and Objectives:**

- Defined project scope and objectives as critical elements in guiding project activities.

10. **Activities in Project Initiation:**

- Explored the specific activities performed during the project initiation phase.

Application in Real Projects:

The concepts learned this week have direct implications for real-world projects:

1. **Effective Project Management:**

- Recognized the importance of integrating people, processes, tools and technology for effective project management.
- Contemplated how this integration can streamline project workflows and enhance overall efficiency.

2. **Traits of a Good Project Manager:**

- Consider how the identified characteristics of a good project manager align with successful project outcomes.
- Reflected on personal strengths and areas for growth in relation to these traits.

3. **Metrics for Project Performance:**

- Contemplated the application of management metrics in tracking and improving software project performance.
- Recognized the potential benefits of using metrics to make informed decisions.

4. **Project initiation Best Practices:**

- Envisioned applying best practices in project initiation, such as developing a comprehensive project charter and clearly defined project scope.
- Recognized the role of a well-crafted project charter in aligning project activities with organizational goals.

Peer Interactions:

1. **Insights from Discussions:**

- Engaged in discussions with peers about the integration of people, processes, tools and technology.

Challenges Faced:

1. **Understanding Subprocesses:**

- Faced challenges in fully grasping the complexities of sub processes within project management.
- Planned to seek additional resources and engage in focused discussions for clarity.

Personal development activities:

1. **Self-Initiated Reading:**

- Undertook additional reading on effective project management traits.
- Revised the previously learnt concepts related to Software Project Management.

Goals for the Next Week:

1. **Gain more insights on Subprocesses:**

- Dedicate focused time to delve deeper into sub processes within project management.
- Engage in peer discussions to gain diverse perspectives on these processes.

2. **Practical Application of Metrics:**

- Apply learned metrics to a hypothetical project scenario.
- Seek feedback from instructors and peers on the appropriateness and effectiveness of the chosen metrics.

3. **Further Exploration of Project Initiation:**

- Explore additional resources on project initiation best practices.

Week 2: Jan 28, 2024 - Feb 3 , 2024

Date: Feb 3, 2024

Key Concepts Learned:

This week delved into the critical aspects of project management, focusing on effort estimation, cost estimation, schedule estimation, and resource estimation.

1. **Effort Estimation:** The process of predicting the amount of effort (person-hours or person-days) required for a project was a key focus. Understanding the factors influencing effort, such as project complexity and team expertise, was crucial.
2. **Cost Estimation:** Building on effort estimation, the course emphasized translating effort into monetary terms. Various cost estimation techniques, including bottom-up and top-down approaches, were explored. Connecting this to the previous week's discussions on project scope became evident as a well-defined scope aids in accurate cost estimates.
3. **Schedule Estimation:** Developing a realistic timeline for project completion was another critical skill covered. Techniques like expert judgment and analogous estimation were introduced, with a clear link to effort and resource requirements.
4. **Resource Estimation:** Identifying and allocating the necessary resources for a project, including personnel, equipment, and materials, were discussed. Recognizing the interplay between resource availability and project timelines emerged as a crucial aspect.

Reflections on Case Study/coursework:

The case study presented in Chapter 3 provided valuable insights into the practical application of project estimation, particularly in the context of a SaaS service vendor. Several key takeaways emerged from the case study, aligning with the course content:

1. **Incremental Development and Feature-Based Estimation:**
The SaaS vendor adopted an incremental development approach, releasing a minimum viable product and gradually enhancing features. This resonates with the course's emphasis on iterative development and aligning estimates with evolving project scopes. The decision to estimate based on the size of the software product (500,000 SLOC) before marketing and incrementally building on it showcased a strategic approach to resource allocation.
2. **Team Size and Cost Estimation:**
The case study highlighted the correlation between team size, project speed, and cost. Initially, a team of 22 people was estimated for the project, with a clear understanding of the associated salary costs. Later, the decision to scale the team to 50 members for accelerated development brought forth considerations of cost implications. The exploration of options, including onshore and offshore resources, demonstrated the practical complexities in estimating and managing project costs.

3. Strategic Staffing Decisions:

The vendor's choice of hiring permanent staff instead of contractors for the long-term goal aligns with discussions on resource estimation in the course. The considerations of hiring locally, offshore, and the cost implications underscored the interconnected nature of resource estimation and its impact on project success.

4. Testing as a Critical Component:

The case study emphasized the critical role of testing, especially when implementing complex logic for the first time. This resonates with the course content highlighting the importance of testing in the project life cycle. The acknowledgment that testing for this project was comparatively large due to the complexity of the logic further reinforces the need for accurate effort and resource estimation.

5. Bottom-Up Effort Estimation:

The approach of breaking down the functionality into lowest-level components and estimating efforts for each component aligns with the bottom-up effort estimation technique discussed in the course. This method ensures a granular understanding of effort requirements, aiding in more accurate overall estimations.

6. Iterative Nature of Estimation:

The estimation of effort over four iterations and the entire major release reflects the iterative nature of project estimation. It showcases the need for continuous monitoring and adjustment of estimates as the project progresses, aligning with the course's emphasis on adaptive project management.

In conclusion, the case study provided a real-world scenario that reinforced the theoretical concepts learned in the course. It highlighted the challenges and strategic decisions involved in project estimation, emphasizing the dynamic and interconnected nature of effort, cost, and resource considerations in successful project management.

Collaborative Learning:

Collaborating with peers during group activities enriched my understanding. Diverse perspectives on estimation challenges and strategies broadened my approach to tackling project uncertainties. This collaborative learning experience reinforced the idea that estimation is not a one-size-fits-all process and benefits from collective insights.

Further Research/Readings:

Further read the slides and text book to delve deep on estimation techniques

Adjustments to Goals:

Reviewing last week's goals, the focus has shifted toward a more on understanding of estimation techniques. Adjustments involve incorporating risk analysis into estimates and

recognizing the dynamic nature of project management. Strengthening my grasp on advanced estimation tools has become a priority for the coming weeks.

In summary, this week's exploration of estimation techniques illuminated the intricate nature of project management. The interconnectedness of effort, cost, schedule, and resources .