Learning Journal 1

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Course: Software Project Management

Journal URL: https://github.com/daivik1515/Learning-Journal.git

Dates Rage of activities: 9 September 2024 – 21 September 2024

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Key Concepts Learned:

- **Project Initiation:** The key concept is that software project initiation involves critical planning tasks such as defining project scope, objectives, risk management, and cost/effort estimation. For software applications, development is based on specific user requirements, while software products, such as COTS or SaaS, are created based on market research and opportunities.
- **IT vs Software Projects:** IT projects encompass the entire IT system, including hardware, software, and other components, to create a fully functional system, such as setting up business intelligence or warehouse management. These projects involve tasks like developing software, purchasing hardware, and setting up networks. Software projects, on the other hand, are focused solely on the development and maintenance of software. They involve creating software designs based on user requirements, coding, testing, and maintaining the software.
- **Management Metrics:** Management metrics are essential for improving business processes, productivity, and product quality, helping organizations stay competitive. In software projects, management metrics focus on productivity, while technical metrics assess product quality. Tools like check sheets, histograms, Pareto charts ensure effective decision-making throughout the project.
- **Project Closure:** Software project closure is a critical activity where all project artifacts are analyzed, completed, and transferred to a central repository. This step ensures that the data collected throughout the project is normalized and useful for future projects. Proper closure ensures that lessons learned, and project metrics are preserved for reference and improvement.
- **Project Charter:** A project charter is a foundational document that outlines the key aspects of a project, including its goals, objectives, and major responsibilities. It sets stakeholder expectations by aligning hopes with practical limitations and achievable goals, ensuring that enthusiasm remains throughout the project's progress. It links the project’s purpose to the broader business goals it aims to achieve.
- **Scope vs Objective of a project:** The scope of a project defines the boundaries, deliverables, tasks, and overall work required to complete the project. The objective, on the other hand, refers to the specific goal or outcome the project aims to achieve.
- **Good Manager:** A good software project manager must understand project management, software engineering, and relevant technology. They should effectively manage teams, customers, and suppliers while working within the organization’s framework. Creativity is crucial, but following a solid framework helps minimize mistakes, ensuring measurable outcomes and successful project execution.

Application in Real Projects:

- **Implemented Project Charter:** As a member of a team of four working on an AI project, I successfully implemented the project charter by clearly defining both the scope and objectives. Though we had some challenges in aligning the team's efforts with the project's strategic direction and desired outcomes.
- **Estimation of efforts :** Effort estimation is critical in planning and allocating resources for project tasks. Accurate estimation ensures that the project timeline, cost, and workforce are aligned with the goals. Learning how to balance these elements and improve estimation accuracy has been a valuable part for our team.
  Challenges: Some tasks were given more story points than the required effort.
  Alternative: Using a consensus approach where team members discuss and agree on estimates can lead to shared understanding and collaboration.
- **Management of the project:** The concepts from management metrics can be applied to continually improve processes and product quality. In our AI project, scatter diagrams and cause-and-effect diagrams would help identify root causes of issues and eliminate them efficiently.
- **Quality Check:** I am more concerned about the quality checks now and before writing any code I do the quality planning to ensure that the product is being developed with a desired quality standard. I will incorporate this practice in all the future projects.

Peer Interactions:

- **Roles of good manager**: In our peer interaction with my friends, we discussed how a good manager should foster clear communication and motivate the team towards common goals. We highlighted the importance of adaptability in handling unexpected challenges. Additionally, we emphasized that a good manager should mentor their team members, promoting growth and professional development.
- **How to keep a project on track:** We had many challenges keeping track of the project details We discussed that to keep a project on track, clear and realistic goal setting is essential. We emphasized the importance of regular progress monitoring and adjusting plans as needed to address challenges.

Challenges Faced:

- **Difference between project scope and objective:** When exploring the differences between project scope and objectives, I found that I often confuse the two for the same, thinking they are nearly synonymous. However, I read about it in the book and from the lecture slides to overcome this difficulty.
- **Implementing the software tasks to the real-life project:** Implementing software tasks within our real-life project presented several challenges, particularly in the areas of effort estimation and effective planning. These concepts require further attention to ensure successful execution. Some real-time examples will be extremely helpful to understand the procedure.

Personal development activities:

- As a group of friends collaborating on a project, we collectively decided to design, plan, and adopt best management practices, selecting a team leader to guide our efforts. In my role as team

leader, I am gaining valuable insights into the professional challenges we encounter and exploring strategies to effectively address them.

- I am actively working on enhancing my problem-solving skills, recognizing their vital role in both academic and professional settings.

Goals for the Next Week:

- I will establish and monitor key management metrics that provide insights into project performance and team productivity. This will include defining specific metrics related to schedule adherence, budget, variance and quality indicators.
- I plan to look closely at the project charter to clearly understand the project's goals, scope, and key stakeholders. By doing this, I will pinpoint important success factors, possible risks, and how well the project aligns with our organization's goals. This review will help us make better decisions and keep our team focused on the project's vision and mission as we move forward.
- I plan to implement a dynamic approach to project planning that allows for real-time adjustments based on ongoing developments and feedback.