**FINAL LEARNING JOURNAL**

**Student Name:** Susmitha Mamula

**Course:** SOEN 6841- SOFTWARE PROJECT MANAGEMENT

**Journal URL:** <https://github.com/susmitha810/SOEN6841>

**Dates Rage of activities:** September 9th, 2024 to November 21st 2024

**Date of the journal:** November 19th 2024

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| **Key Concepts Learned:** | **Application in Real Projects:** | **Peer Interactions:** | **Challenges Faced:** | **Personal development activities:** | **Goals for the Next Week:** |
| • **Project Initiation & Scope Management**: Defining project scope, objectives, charters, and creating SMART goals.  • **Effort Estimation Techniques**: Function Point Analysis, COCOMO, Delphi, Estimation by Analogy, Expert Judgement.  • **Risk Management**: Identifying, assessing, prioritizing, and mitigating risks through reduction, avoidance, or delegation.  • **Configuration Management (CM)**: Version control, change control processes, and tools like Git, and Jira for project stability.  • **Project Scheduling & Resource Allocation**: Work Breakdown Structure (WBS), Critical Path Method (CPM), and buffer management.  • **Lifecycle Models & Quality Assurance**: concurrent engineering, quality gates.  • **Earned Value Management (EVM)**: Monitoring budget and schedule variances, and maintaining baseline plans.  • **Project Closure**: Documenting lessons learned and resource release strategies.  • **Requirement Gathering & Change Management**. | • I worked in a company on a care management project as a software developer which followed the **agile** model. I participated in daily **Scrum** meetings for **milestones** updates, roadblock resolution, and feedback from senior developers.  • Tasks were assigned and adjusted based on **estimated workloads**, using story points and **team velocity assessments**.  • Overcame initial challenges with effort estimation through **historical data** and consulting senior team members.  • We conducted **regression testing** and **release validation** to ensure **quality** during iterations.  • I used Git for **version control** and ServiceNow for incident ticket management, maintaining project stability.  • Engaged in **requirement gathering** and **client communication** for additional details as needed.  • Participated in **lessons-learned** sessions post-release to identify improvements and enhance future project practices. | • Discussed how **WBS** and **sprint planning** were conducted in their companies, providing insights into estimating project **scope, objectives, budget, timelines,** and **workload**.  • Engaged in conversations about requirement gathering, version control practices, validation measures, and **risk management** as applied in their other course projects.  • Learned from peers who attended workshops, gaining insights into **EVM** and various **estimation techniques**.  • Explored different tools used for project management in various companies to support the agile approach.  • Exchanged best practices for documenting lessons learned informed by their experiences in professional settings. | • Initially faced Difficulty **distinguishing** between project **scope** and **objectives** in complex scenarios.  • Struggled to apply Function Point Analysis effectively.  • Faced challenges estimating effort for projects with limited historical data.  • Difficulty assessing risk **impact** and **likelihood** for unfamiliar technologies.  • Understanding **balancing resource allocation** without adequate data.  • Difficulty maintaining **baselines** for projects with frequent changes.  • Challenges applying EVM in agile projects with **iterative changes**.  • Gathering comprehensive lessons learned data within tight deadlines.  • Balancing **project closure** with ongoing project timelines. | • Studied **articles** on project charters, scope definition, and risk management.  • Watched **tutorials** on SMART goal setting, estimation techniques, and EVM.  •Reviewed **articles** on Function Point Analysis, COCOMO, WBS, and quality gates.  • Practiced Git branching and created **Gantt charts** for project management.  • Studied **research papers** on EVM and archiving metrics in agile projects.  • Explored requirement validation techniques and aligning requirements with business goals. | • Learn various effort estimation techniques and their applications.  Explore and apply risk mitigation, avoidance, and transference strategies in real-world cases.  • Create a configuration management plan for a hypothetical project.  • Practice creating a detailed Work Breakdown Structure (WBS) and analyze its effectiveness.  • Study case studies on buffer management to understand its impact on scheduling flexibility.  • Examine case studies on project closure methods.  • Deepen understanding of iterative models for dynamic projects.  • Explore advanced quality assurance techniques for complex software products.  • Study examples of successful change management in real-world scenarios. |

**Final Reflections:**

**Overall Course Impact:** I had work experience in a company where I applied these practices but didn't have a deep understanding or recognize their full importance. However, this course has greatly enhanced my knowledge of project management frameworks and techniques, equipping me with the skills to handle projects with diverse requirements and constraints effectively. It has transformed my approach to risk management, effort estimation, and project closure by providing me with practical, industry-standard tools and methodologies.

**Application in Professional Life:** I plan to apply these insights to my work, especially when using agile management techniques. Effective planning and execution will require a strong foundation in earned value analysis, risk management, and work breakdown structure. I now feel more competent in effectively managing project changes, the importance of project management, and quality product development.

**Peer Collaboration Insights:** Group discussions offered new perspectives from experiences on agile sprint planning and estimation methods, deepening my understanding of the practical use of various project management tools.

**Personal Growth:** This course has significantly enhanced my analytical thinking and strategic planning skills. I am now more adept at anticipating and managing project risks, efficiently allocating resources, and prioritizing tasks in alignment with project goals. My confidence in handling complex project dynamics has increased, and I am actively applying these skills to my current course projects. In the long term, I aspire to leverage these practices to deliver higher-quality products and improve overall project management.

**References used for Personal Development:**

* <https://www.forbes.com/advisor/business/what-is-work-breakdown-structure/>
* <https://www.infoq.com/articles/pipeline-quality-gates/>
* Cândido, Luis & Heineck, Luiz & Barros Neto, José. (2014). Critical analysis on earned value management (EVM) technique in building construction.
* <https://hbr.org/2012/06/managing-risks-a-new-framework>