Learning Journal 1

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Course: Software Project Management (SOEN 6841)

Date Range of activities: 9th September 2024 to 20th September 2024

Date of the journal: 21st September 2024

Key Concepts Learned:	**Application in Real Projects:**	**Peer Interactions:**	**Challenges Faced:**	**Personal development activities:**	**Goals for the Next Week:**
• Projects are defined by their unique and temporary characteristics, necessitating management strategies tailored to each project's specific requirements and goals. Key stages such as initiation, design, development, and maintenance are central to guiding a project through its life. Each phase involves distinct activities and deliverables. • Drafting comprehensive project charters, conducting detailed market research, and estimating both timelines and costs are essential to the success of a project. • This involves defining the features of the software, understanding user requirements, and planning the delivery approach to ensure the project meets its goals. • Key principles such as risk management, scheduling, and quality assurance are integral throughout all stages, helping to mitigate risks and ensure timely delivery.	• Applied project management concepts to real-world examples, such as CRM software development. • Identified structured phases in project management to ensure smooth execution and deliverables. • The structured approach helped in understanding how essential scheduling and risk management are when balancing complex deliverables within given timeframes. • Focused on scheduling and risk management techniques to balance project scope with timelines.	• Participated in group discussions focused on balancing client expectations with project constraints, such as resource limitations and tight deadlines. • Gained a better understanding of how effective communication within a team can lead to better decision-making and improved project outcomes.	• Difficulty in creating accurate project timelines, especially when working with tasks that are unfamiliar or lack proper historical data. • Found it challenging to apply risk management principles to hypothetical situations, leading to uncertainty about how to manage project uncertainties effectively.	Worked on **Emotion Detection** and **Academic Virtualization** group projects, gaining experience in team-based problem solving, planning, and task division. Developed communication skills through active collaboration, learning the importance of clear, consistent communication in a project environment.	• Review key project management principles and complete relevant sections in the coursebook. • Focus on reviewing core project management principles, particularly risk management and stakeholder communication strategies.

Week 2: • **Effort Estimation**: Essential during the design phase to ensure that the project timeline and resource allocation are realistic. This informs both project planning and development schedules. • **Estimation by Analogy**: Involves analyzing data from previous, similar projects to inform estimates for new projects, creating a more grounded and informed estimation process. • **Expert Judgment**: Leverages the experience of seasoned team members to provide more accurate estimates, particularly when historical data is lacking or project complexity is high. • **Function Point Analysis (FPA):** A methodology for calculating the complexity of software projects by analyzing the number and type of functions within a system, such as inputs, outputs, and user interactions. • **COCOMO2 Cost Modeling:** This technique helps refine cost and effort estimates through algorithmic sub-models, improving precision in budget forecasts and resource management.	• Utilized analogy-based estimation and expert judgment in planning project timelines, using historical data to better predict the effort required for various project phases. • Applied **Function Point Analysis (FPA)** to a hypothetical project, breaking down the software into functional units to understand how user needs impact project complexity and timeline. • Implemented **COCOMO2** to refine budget projections and resource allocation across multiple project phases, gaining a clearer understanding of how to align project costs with expected outcomes.	Engaged in group discussions on the role of effort estimation in maintaining project timelines, especially during design and development. Collaborated on applying estimation techniques like FPA and COCOMO to group projects, clarifying their practical uses. Participated in activities breaking down complex projects into manageable tasks, improving my understanding of scoping with peers.	• Struggled to fully grasp the nuances of **Function Point Analysis** and **COCOMO2**, particularly when dealing with complex project components • Difficulty in applying these effort estimation techniques to large projects, which often contain unpredictable variables or lack historical data to guide estimates. • Found it challenging to balance the theoretical aspects of estimation with the practical, hands-on application needed in group projects.	Developed a deeper understanding of **effort estimation** techniques such as **Function Point Analysis (FPA)** and **COCOMO2** through group projects and case studies. Continued to improve my knowledge of **project risk management** ,understanding how early estimation errors can impact project timelines and resource allocation. Worked on **collaborative estimation exercises**, which enhanced my skills in breaking down complex tasks into smaller, more manageable components.	• Collaborate with team members on project deliverables, ensuring alignment of effort estimation with realistic timelines. • Work on improving overall project management skills by refining my ability to create detailed project plans, including effort estimation and risk assessment.