# Learning Journal 1

**Student Name:** Minhazul Islam (ID: 40291529)

**Course:** SOEN 6841 Software Project Management

**Journal URL:** Mega Link

**Dates Rage of activities:** 03 September, 2024 – 21 September, 2024

**Date of the journal:** 21 September, 2024

**Key Concepts Learned:** This week professor covered key concepts in Software Project Management, focusing on project initiation, effort estimation, and cost management. The project initiation phase, guided by the project charter, defines the project's purpose, scope, and budget, serving as formal approval from management. Effort estimation techniques, such as experience-based methods and algorithmic approaches like COCOMO, were introduced to help predict project costs. The course also emphasized the importance of setting smart objectives specific, measurable, achievable, relevant, and time-bound to align goals with measurable outcomes. Lastly, the impact of software life cycle models, like waterfall and iterative, on effort estimation was discussed.

**Application in Real Projects:** The concepts that are the professor help us to learn this week are directly applicable to real-world software development, especially in effort estimation. Techniques like estimation by analogy help forecast resource needs based on past projects, while the COCOMO model is useful for large-scale systems where precise cost and effort estimation is crucial. However, challenges include estimation uncertainty, as projects may differ significantly from past experiences, and the complexity of models like COCOMO, which require detailed data and may be impractical for smaller projects. Despite these challenges, these frameworks offer a structured approach that mitigates risks, controls budgets, and aligns project goals with stakeholder expectations.

**Peer Interactions:** Professor often interact with the students during the classes and it allowed us to explore different perspectives on effort estimation. It helps us to understand clearly all the advantages and limitations of Software Project Management. I have also asked the professor to understand few topics in the class and she helped me to catch the exact points. This exchange deepened my understanding of estimation methodologies and their practical applications.

**Challenges Faced:** Although the professor clears every topic clearly in the class, although I faced some challenges while revising at home. Particularly, SMART objectives in the context of complex software systems, where deliverables may not always fit neatly into

measurable outcomes, posed another challenge. Also, Clarifying the intricacies of when to apply each sub-model of COCOMO II was difficult, as it involves technical factors like the degree of reuse or the development stage. Its multiple sub-models like application composition model, early design model, reuse model each require extensive data and detailed project specifications to be used effectively.

**Personal development activities:** I have watched some YouTube videos about Software Project Management to get in-depth knowledge about COCOMO model and how to use the knowledge from text book to industry level. Also, I have downloaded some books from online to learn and research about all the models of Software Project Management and how to use the knowledge from the course to the real life. I am intended to have a session with the professor about the learning of the course. I always had a knack for becoming a Project Manager in my future so I am preparing myself for that.

**Goals for the Next Week:** My goals for the next week is to learn deeply about the function point analysis (FPA) and how it can be used for more granular effort estimation. Also, I would love to enrich my knowledge about resource management and multiple sub-models in COCOMO II. I am also excited to learn the new topics of Software Project Management. I am hopeful that I will able to learn many new ways of managing a project effectively and efficiently through this course in upcoming weeks.