

Learning Journal

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Course: Software Project Management [SOEN-6841]

Journal URL: https://github.com/salu2303/SOEN_6841/

Week 1: 18 January - 24 January

Date: 23 January 2024

Key Concepts Learned:

A project is basically something with a defined start time, end time and associated activities to achieve the main purpose, which needs resources for specific amount of time. The difference between job and project is that job is routine task and the project has specific duration. Project directly relates to budget, time and resources. Project management is basically to manage the project with required skill set so that the project can be completed within time. Project management contains different phases which should be followed in order to manage it. Also, project is broken down into different phases such as design, testing, coding, etc which can be waterfall model, Agile model, etc. I got to know about Project Initiation which relates to the very first step of project. Top management organization define the project which includes project charter, scope and objectives. Then budget estimation the essential part of any project which cover salaries of working employees. The project effort is estimated using different techniques. The project objective is to "SMART".

Application in Real Projects:

Iterative models helps to breakdown the project to achieve each task efficiently. Effort estimation is helpful in decision making of person effort. This key concepts can be applied to real world project by focusing more on project initiation techniques.

Peer Interactions:

Involved in peer discussion regarding how one can manage software effectively and what are the challenges to achieve the task. Also, what different effort estimation techniques can be used to find man effort for budget estimation.

Challenges Faced:

I was unaware about this various phases of project development which I found bit difficult at first moment but now its pretty clear to me. Understanding how to estimate effort for the project before even starting the project is bit difficult.

Personal development activities:

I searched for how to be a good software manager and what things should I keep in my mind to achieve goal successfully. I undergo through google to search relevant articles for project initiation methods to have better idea of starting phases of any project.

Goals for the Next Week:

Understanding in depth project scope and objectives or project initiation phase. Various project phases and software design models such as waterfall, agile, etc.

Week 2: 28 January - 3 February

Date: 3 February 2024

Key Concepts Learned:

This week focused on the important aspect of effort and cost estimation for software projects. I got to know about **Experience-based techniques** and **Algorithmic cost modeling**. There are some popular experience-based estimation approaches such as **estimation by analogy** and **estimation by expert judgement**. I learned about various techniques for estimating the effort required for software development projects, including the **COCOMO** model, **Function Point Analysis (FPA)**, and the **Delphi technique**. Each method has its unique application based on the availability of data and the nature of the project. Also, the chapter includes some negative sides of these techniques while estimating the project. Moreover, the chapter emphasized the importance of **accurate estimation** in managing **client expectations** and ensuring project profitability.

Application in Real Projects:

Precisely estimating project effort and cost **can significantly impact the success of software development endeavors**. For example, employing the COCOMO model in projects with available historical data can lead to more precise estimations, thereby reducing the risk of project overruns. However, the challenge remains with different projects with various domains.

Peer Interactions:

We talked about real world **difficulties while actually applying** these different effort and cost estimation techniques to the software project, specifically in projects with limited historical data or in agile development environments. Also, we learned how exactly these techniques can be used in software project management.

Challenges Faced:

One specific challenge I faced while learning this chapter is Function point Analysis which includes so many different factors for effort estimation.

Personal development activities:

I searched about COCOMO and Delphi estimation techniques and went through actual example of the same from a website. Also, I came to know about the difficulties while imposing such estimation in real world projects.

Goals for the Next Week:

I aim to explore software tools that helps these estimation processes, enhancing my practical skills in project management. Also, I will research more on Delphi technique in agile development.

Chapter 1 Reflections: The chapter provided a comprehensive overview of project management fundamentals. It brought to light the importance of various actions that are customer-focused in establishing a project. It also recognized the unique difficulties that come with software initiatives, including their invisibility, complexity, conformance, and flexibility.

Chapter 2 Reflections: The chapter focused towards project initiation management which started with who initiates the project. Effort estimation techniques help to provide estimate of worker salary and required man power. Project estimation in terms of duration is also covered in this unit. The importance of SMART objective is the focus while project planning.

Chapter 3 Reflections: This chapter is highlighting the significance of experience-based techniques like estimation by analogy and expert judgment, alongside algorithmic models such as COCOMO, FPA, and the Delphi technique. The chapter focused on the critical role of accurate estimation in managing client expectations and ensuring project profitability.