SOEN 6841 – SOFTWARE PROJECT MANAGEMENT

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JOURNAL URL: https://github.com/devanshu-kotadiya/Software-Project-Management/tree/main/Learning%20Journals

DATES RANGE OF ACTIVITIES: 21/09/2024 – 30/09/2024

JOURNAL DATE: 05/10/2024

KEY CONCEPTS:

Effort and cost estimation: Experience based (Analogy, Expert judgement), Algorithmic cost

- Multiplication factor (subsystem) = (number of elements in New) / (number of elements in Old)
- Size (new subsystem) = Size (old subsystem) * Multiplication factor
- Size (New project) = sum of the sizes of its subsystems
- Size Ratio = Size(New Project)/Size (Old Project)
- Estimated Effort (New Project) = Effort (Old Project) * Size Ratio

Function point analysis technique:

- Function count type
- Boundary count
- Calculate unadjusted FPC
- Value adjustment factor
- Calculate adjusted FPC

Components of FPA

Calculation of UFP [Unadjusted Function point]:

- Data (Internal logical file, External interface file)
- Transactional (External Input, External Output, External Inquiry)

UFP Calculation Table

Value Adjustment Factor Calculation table

Algorithm Cost Modelling: COCOMO cost modelling

Risk Assessment: Risk Identification, Risk Analysis, Risk prioritization

Risk Control: Risk planning, resolution, Risk monitoring

Risk response strategies: Avoidance, Transference, Mitigation

APPLICATION IN REAL PROJECTS:

- From the case study, I learned the importance of accurate effort estimation and cost planning in software development, particularly for SaaS projects. The vendor used incremental development and offshore hiring to reduce costs and speed up delivery. Thorough testing was crucial, especially for complex features like appointment scheduling. This approach demonstrates real-world applications in managing project costs, expanding

teams, and using incremental development to deliver value early, all while ensuring high product quality through careful testing.

- This case study shows how a SaaS company successfully dealt with challenges like working with teams in different countries, communication problems, and project delays. To overcome these issues, they established clear communication guidelines, planned extra time to account for delays. They also required employees to work extra hours to meet deadlines when team members were absent. These strategies can be used in other projects that involve teams in different locations, to reduce risks, and to deliver the product on time and with high quality.

PEER INTERACTIONS:

During the peer interaction activity, we discussed how the concepts we've learned, such as effort estimation and risk management, will be applied in our final project. We also shared experiences from previous industry projects, focusing on how we handled risk analysis in real-world situations. Additionally, we worked together to refine our project pitch, which we later presented during lecture time, aligning it with the key project management strategies we've studied. This collaborative exchange deepened our understanding of how to apply theory to practice.

CHALLENGES FACED AND ADDRESSING THOSE CHALLENGES:

One challenge I faced was calculating Function Points, as I initially struggled to grasp the process. To overcome this, I researched real-world examples and studied how Function Points impact effort and cost estimation. This additional research helped me understand the calculation better, showing me how it serves as a critical tool for estimating project complexity and resource needs. Through this process, I gained a clearer perspective on how to apply Function Point Analysis in project planning.

PERSONAL DEVELOPMENT ACTIVITIES:

In my personal development activities, I researched our project, "Digital Skill Platform," and explored various cost and effort estimation techniques. I specifically focused on applying analogy-based experience estimation by analyzing data from similar developed platforms. This approach allowed me to make more informed predictions about our project's resource needs. Additionally, I studied how to allocate resources effectively to manage potential risks, enhancing my understanding of project management strategies. This exploration not only deepened my knowledge of estimation techniques but also improved my ability to strategize resource allocation for successful project execution.

GOALS FOR NEXT WEEK:

Short term: Study configuration management, solve exercises of chapter 3 and 4, revise chapter 1 and 2 from the textbook and get a better grasp keeping in mind the mid term examination.

Long term: My long-term goal is to study how to effectively align my previous experience in software project management with the job roles I am applying for, ensuring I am well-prepared for CULTURE-FIT interviews.