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Course: Software Project Management
Journal URL:https://github.com/manish198/SOEN6841/tree/main/journal
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Key Concepts Learned:

- Learned why and how project is initiated and leading it to estimation of the project.
- It is difficult to estimate software projects.
- Software estimation can be done with the help of prior experiences or by using algorithmic approach.
- Effort estimation should dynamic.
- Function point analysis requires to consider complexity, product size and quality level.
- For cost estimation, there are several cost modeling techniques. COCOMO model is used widely. COCOMO model is model based on prior experiences and it may vary with companies because the company could adjust the parameter according to the nature of their projects and the weight of the effort matrices.
- Resource estimation is also a integral part of software projects estimations.
- There are always risk associated with the project.
- Over budgeting and unable to deliver on time are the major risks.
- First risk on the projects are identified, then it is analyzed and the prioritized.
- Resource risks, Technology risks, Budget risk,quality risk and time risk are the major type of risk.
- A good project manager should perform risk/benefits trade off.
- Risk cannot be avoided, they can only be managed.

Reflections on Case Study/course work:

- It is difficult to estimate software product because the result of the effort is intangible.
- Software estimation can be done with the help of prior experiences or by using algorithmic approach.
- Effort estimation should be dynamic and it needs to be revised as the project progresses.
- Function point analysis requires to consider complexity, product size and quality level.
- The size of the software is only known when it is finished. As the project progresses the estimation is more accurate.
- Resource estimation is also a integral part of software projects. Since software engineers writes software, proper planning of human resources and their expertise is required for the estimation process.
- We need to realize that there are always risk associated with the project. Over budgeting and unable to deliver on time are the major risks.
- First risk on the projects are identified, then it is analyzed and the prioritized.
- Resource risks, Technology risks, Budget risk,quality risk and time risk are the major type of risk.
- A good project manager should always to risk/benefits trade off. Always choose low risk and high benefits project.
- Risk cannot be avoided, they can only be controlled or managed. We should apply risk mitigation techniques to reduce or manage the risk of the project.

Collaborative Learning:

- Collaborating with peers provided a diverse range of perspectives on the challenges and complexities of software project estimation. Hearing different viewpoints enriched my understanding of the topic.
- Group activities allowed for the sharing of real-world experiences related to software estimation. Learning from others' practical insights added a layer of context that goes beyond theoretical knowledge.
- Engaging in discussions with peers allowed for a deeper exploration of algorithmic approaches to software estimation. Different algorithms and their applications were discussed, providing a more comprehensive view of the available techniques.
- Through collaborative learning, the concept of dynamic effort estimation was emphasized. Discussing how and when to revise effort estimates during the project life cycle highlighted the importance of adaptability in project management.
- Collaborative efforts shed light on the critical role of resource planning in software project estimation. Discussing how to effectively plan human resources and account for their expertise enriched the overall understanding of the estimation process.
- Through collaborative learning, various perspectives on identifying and analyzing project risks were shared. The discussion helped in recognizing the importance of a proactive approach to risk management.
- Group activities enabled the exploration of methods to prioritize identified risks. Understanding how to categorize and prioritize risks in a systematic manner became clearer through collective insights.
- Engaging with peers emphasized the importance of the risk/benefits trade-off in project management. Learning how to make informed decisions by weighing risks against potential benefits was a key takeaway from collaborative discussions.
- Collaborating with peers allowed for the sharing of various risk mitigation techniques. Discussing practical strategies to control or manage risks reinforced the idea that while risks cannot be avoided, they can be effectively addressed through proactive measures.

Further Research/Readings:

Improving Project Budget Estimation Accuracy and Precision by Analyzing Reserves for Both Identified and Unidentified Risks

Source:**https://doi.org/10.1177/8756972818810963**

- The text emphasizes the importance of considering both identified and unidentified risks in project budget reserves. This aligns with the course material on effective risk identification and management strategies.
- It discusses various cost estimation methods, including traditional percentage models, Monte Carlo simulations, and regression models. These align with the course material on different techniques for estimating project costs and reserves.
- The text explores the root causes of cost overruns, such as poor resource management, delays, and unexpected events. This information complements the course material by providing real-world examples and insights into the challenges of cost estimation in projects.
- The study proposes the use of contingency reserves for both identified and unidentified risks, which resonates with the course material on the importance of having contingency plans to mitigate risks in software project management.
- The text introduces an innovative budget estimation method, addressing the limitations of existing models. This aligns with the course material on encouraging creative and effective approaches to project estimation.

- In summary, the provided text complements the course material on software project estimation and risk management by offering insights into innovative approaches, real-world examples, and a comprehensive view of addressing both identified and unidentified risks in project budget reserves.

Adjustments to Goals:

- Last weeks goal was to better understand the phases of project management. After this weeks learning, it is clear for me that how is project initiated. After initiation the project estimation takes place followed by the risk analysis.
- Project managers learn from their previous project about conflict management. The manager will try to solve the issues of their own and if they cannot do it then they will ask help from its higher ordinate.
- The new goal is to better understand cost estimation process in major software companies.
- Better understand the risk in the software project. How the risks identified and documented and overall management of the risk.