

SOEN 6841 - Software Project Management

Learning Journal [Jan 28 - Feb 3]

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Course - SOEN 6841[Software Project Management]

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Week 1 - Jan 28 to Feb 3

Date - 02/01/2024

Key Concepts Learned:

- In this week, I went through the slides and learned about COCOMO Models, effort estimation, cost analysis. Also I learned about effort estimation for waterfall and iterative based model. Waterfall model follows linear approach where each phase must be completed in order to move to next phase whereas iterative based model involves multiple sprints such that project can be completed quickly and also it is easier for developers to build the software in multiple sprints, test, and deploy the new feature.
- I learned the important factors that influence cost estimation of project such as project size, complexity, development team, technology used in the project. So we have to frame the project cost by considering all these factors. Inaccurate allocation of project budget will lead to failure of the project. So these are important factors to be considered while framing the budget of the project.
- Also I learned about 2 types of projects - "Time and Material based project" and "Fixed Schedule Fixed Cost based project".
 - In **Fixed Schedule and Fixed cost project**, the requirements do not change, have concrete project details and will have a clear plan for developing the project. Project cost and schedule is prepared at the beginning. Customer and project team agree on a fixed cost for the entire project.
 - In **Time and Material based project**, the requirement of the customer changes frequently. So it is challenging for the project team to frame a project cost at the beginning of the project. As a result, the customer agrees to make recurring payments based on the time spent by the project team working on the project.
- Also I got to learn about Project Risks, causes of project risks. Some potential causes of risks are quality constraints, resource unavailability etc... I learned about categorisation of risks based on budget, resource, schedule, project scope, quality and technology. I also got to learn about Project Risk management in Agile Models, Artifacts of Project Risk Management.

Application in Real Projects:

The concepts learned in this week can be applied on both personal and business projects. COCOMO (Constructive Cost Model) provides a structured approach for estimating the effort, time, and resources required for a software project. It helps in accurate planning by considering various parameters like project size, complexity, and development environment. Also project should follow agile methodology instead of traditional waterfall model so that project can be developed quickly in sprints. Risk Mitigation plans should be formed before project execution. Also we need to

continuously monitor some of important risk factors that may affect the project like resource, budget, technology etc...

Peer Interactions:

I discussed on how to implement the concepts learned in our final project. I discussed about the risks that we may face while developing our project and formed some risk mitigation plans. Also I discussed about case studies of chapter 3 and 4 with my peers.

Challenges faced:

Understanding the effort and cost estimation of projects that follows Agile methodology whose requirement changes frequently.

Personal Development Activities:

- Discussed about project milestones, requirements with my team members
- Explored about Agile Methodology and how they are implemented in real world projects.

Goals for next week:

- Learn next week course materials
- Discussion with my team members regarding the project initiation and market analysis.