Learning Journal - III

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Course: SOEN 6841- Software Project Management

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Dates Range of activities: 9/10/2024 – 12/10/2024, 18/10/2024 – 22/10/2024

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Key Concepts Learned:	Application in Real Projects:	Peer Interactions:	Challenges Faced:	Personal development activities:	Goals for the Next Week:
Project planning has two approaches, top down and bottom up. Top-down approach is used when for software product development where you have a deadline and budget set. Whereas, bottom-up is used mostly for software application projects and when requirements are not clear so it is hard to estimate the project timeline.	Software application development is for developing a software for the organisation, to increase productivity. Requirements are sometimes not clear and there is no high pressure on delivering the software before a certain timeline. Hence, bottom-up approach is used. Both techniques involve estimating cost, quality, schedule, effort etc.	Discussed with my classmate who was a project manager about how planning is done in real life projects. Many rounds of thorough analysis to ensure the estimation of cost and budget	Understanding CPM method, on how the tasks in the critical method are determined.	Read case studies for project planning and the importance of artifacts produced at this stage like, tool and supplier management, CPM.	Read more case studies on bottom-up approach
Work breakdown structure involves breaking down the work to pseudo tasks (Designing, Implementation, Testing) which is further broken down into individual tasks with set start and end time. End of pseudo task is a milestone.	Work breakdown structure is used to estimate the effort for individual tasks by allocating the number of resources required and start and end time. It is a primary artifact to assess whether the schedule is going according to plan.	-	Difference between milestone and quality gate. Milestones tell you about progress of a project in terms of work unlike quality gate.	Saw recommended templates for work breakdown structure online.	Read case studies on how work breakdown is implemented in real projects
Project Monitoring involves assessing whether the software development process is going according to plan by measuring against planned and actual metrics. The project's budget used, schedule, work done and quality are assessed. Not	Monitoring a project is the first step to ensure control of issues and risks. The kind of metrics measurable is determined by software process maturity. More mature a software, better monitoring and better control that ultimately	Discussed with my classmate who was a project manager about how monitoring is implemented in real projects. It is done at frequent	Difference between basic COCOMO and intermediate COCOMO. Intermediate and COCOMO II used cost and scale factors	Read the chapter case study to understand how it is implemented in an iterative project development.	-

performing frequent monitoring may lead to failure of the project as it no longer meets the customer's expectations.	determines the success of a project. First step of monitoring is data collection. Data has to be accurate and meaningful.	decided intervals and the result is sent to the respective teams.	that are industry set constants.		
Control refers to the required action taken when there is a deviation between actual and planned cost/budget, work done, schedule or quality. Prerequisite of control is project planning and monitoring. Different techniques like remove schedule conflict, remove gaps from critical path tasks, etc. can be used.	Taking control is time sensitive. More the delay, more impact and cost it takes to recover and to put the project back on track. Sometimes, it even ends up in cancelling the project. Timely feedback is also important to ensure all parties involved are also aware about the progression.	-	Difficulty in understanding how scheduling tasks using gaps helped resolve task conflict.	Read how critical path is used to monitor and control different aspects of progress.	Read more case studies on the same.
Earned Value Analysis involves how much work should've been done in terms of profit for the amount of budget consumed. EVA is necessary because work and budget do not show a linear growth.	Delivering a software project within the budget is very important. EVA helps determine whether project is progressing well. It helps project managers to assess the completion of the project in terms of profit/money.	-	Faced difficulty in understanding schedule and cost variance calculation based on EV value.	Read examples to understand how budget and time together is used to determine the progress.	Re-read this topic in text book for more understanding.

Final Reflections:

Overall Course Impact:
Planning and Monitoring and control are important stages of software project management. Most of the time is spent on these phases. Proper planning ensures the success of monitoring and proper monitoring ensures appropriate control so that the any deviations from the plan can be removed in proper time.

Application in Professional Life:
By applying the skills and knowledge from these chapters, I can improve my effectiveness in planning software development projects by providing a detail estimate of cost, schedule, quality and use them in project monitoring and control phase to ensure the project is going according to plan and if it is not, take according actions to put it back on track. These practices will not only streamline project workflows but also create a more resilient and responsive team environment.

Peer Collaboration Insights:
I learned how theory applies to real-life projects, emphasizing that careful consideration of the kind of control technique used to deal with a deviation. Each scenario and project are unique, requiring thorough analysis of its complexity before making any decision.

Personal Growth:
I gained a clearer understanding of project planning and monitoring and control, recognizing that it is not straightforward and that project managers play a critical role in a project's success.