**Learning Journal**

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**Course:** Software Project Management (SOEN – 6841)

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**Week5:** 18/02/2024 – 09/03/2024

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**Key Concepts Learned:**

During the fifth week focus was given to understand Project Monitoring in a software project.

* Software projects, are dynamic and unpredictable, requiring continuous monitoring and control to prevent deviations. Unlike manufacturing, where tasks follow a predictable order, software projects involve constant surprises and novelty. To manage this unpredictability, a well-defined process model is essential, guiding project steps and facilitating planning. Measuring project processes against best practices informs productivity, costs, and schedules, while assessing product quality ensures alignment with industry standards. With a robust project plan, execution becomes more manageable and efficient.
* A project plan serves as a roadmap for project execution, outlining the schedule, budget, and various other aspects like communication and resource allocation. Milestones, both major and minor, are incorporated into the schedule to track progress. By comparing actual costs and progress against the planned milestones, project managers can assess how well the project is adhering to the plan. To further enhance this monitoring and control, various tools are available, including status reports, Gantt charts, and earned value management techniques.
* The cornerstone of monitoring project progress is comparing it to the initial plan. This plan serves as a roadmap, with milestones acting as checkpoints to gauge success. If a milestone is missed, the project manager must explain the reason to the client and develop a strategy to get back on track. This might involve adjusting resource allocation or the project schedule itself, all with the aim of meeting the project's goals within the established timeframe.
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* Effective project management requires recognizing that projects can evolve and face unforeseen challenges. To stay on track, project teams should closely monitor progress at the task level, comparing actual results to initial plans to identify any issues early on. In well-organized environments, teams can leverage a central tracking system where members can log their daily activities, providing a clear picture of how tasks align with the overall schedule.
* Project timelines and budgets often shift throughout a project's lifecycle. To measure a project's health, continuous monitoring is essential. Earned Value Management (EVM) offers a methodology to assess a project's progress against predefined baselines. This comparison sheds light on how the project is performing in terms of both schedule and budget. By analyzing variances from these baselines, project managers can identify potential risks and take corrective actions to steer the project towards successful completion.
* Effective project management relies on understanding how efficiently resources are being used. A common metric for this is resource utilization, calculated as a percentage by comparing planned work hours to actual hours spent. This allows project managers to identify situations where resources are under or overloaded. Resource capacity, such as daily work hours, also plays a crucial role in setting realistic timelines. For instance, a task requiring 20 hours would take 2.5 days for a resource working 8 hours daily. However, compressing the deadline to 2 days would necessitate exceeding the resource's normal capacity, potentially requiring overtime or additional support.
* The success of a project hinges on carefully matching people with the tasks they need to do. If someone isn't quite ready for their assigned job, training can help them get up to speed. Throughout the project, it's important to keep an eye on things to make sure everyone is getting the training they need. Sometimes new skills are needed that weren't planned for, and that might mean changing the project a little bit. If someone leaves the project, it's important to find someone new with the same skills to keep things running smoothly.
* Project execution can always have risks. Unforeseen issues like design ambiguities or code refactoring discussions can arise. Team members might also disagree on priorities, with some emphasizing speed and others focusing on quality. To navigate these challenges effectively, project managers need to prioritize them based on their potential impact on the project's success. Just like in risk mitigation, addressing the most critical issues first is essential for ensuring project health.
* In project management, status reports are essential for keeping clients apprised of a project's progress. These reports, typically delivered after completing key project phases, provide details on how costs, schedules, and quality align with the initial project plan. Any discrepancies are thoroughly explained, along with proposed solutions to get the project back on track. By effectively communicating these details, project managers can build strong relationships with clients, ensuring they recognize the team's efforts and appreciate the value delivered throughout the project

**Reflections on Case Study:**

In the case study we can observe that to monitor project progress and mitigate potential issues, the SaaS vendor employs a multi-pronged approach. Weekly iteration review meetings, led by the project manager, serve as a central forum for discussing recently encountered problems and risks. This proactive strategy goes beyond simply reacting to past issues; the team also deliberates on potential upcoming risks that haven't yet impacted the project plan. Furthermore, the project manager utilizes a Gantt chart generated by Microsoft Project to visually track the project schedule and identify any deviations that might necessitate adjustments. By combining these methods, the project team maintains a close eye on project health and proactively addresses challenges to ensure successful delivery.

**Collaborative Learning:**

During this week’s collaborative learning session, we discussed in depth on the critical role of project monitoring. We recognized that status reports function as a vital tool for keeping clients apprised of a project's advancement, particularly following the completion of major milestones. These reports encompass a multilayered view of the project, including cost, schedule, and quality. Deviations from the initial plan are not only identified but also accompanied by proposed solutions to ensure the project remains on track. Furthermore, we explored on the importance of cultivating a strong relationship with the client. This rapport fosters appreciation for the team's efforts and contributes to the project's overall success. Through our discussions, we gained a nuanced understanding of how proactive project monitoring and effective communication are instrumental in the realm of project management.

**Further Research/Readings:**

Project monitoring acts like a guide for project managers, helping them navigate the challenges that come up during the project. It's like checking in regularly to see how things are going compared to the original plan. This way, if costs are higher than expected or tasks are taking longer, the project manager can take steps to get things back on track. By keeping an eye on the project, they can also spot problems that might happen in the future and deal with them before they cause too much trouble. This regular check-in also helps everyone involved in the project stay informed and working together towards the same goals

**Adjustments to Goals:**

I plan to closely follow the project's progress by tracking important details like schedule and quality. This way, if anything falls behind or doesn't meet expectations, I can catch it early and make adjustments. By keeping everyone involved informed and working together openly throughout the project, these monitoring practices will help us achieve better results.