Learning Journal

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Course: Software Project Management (SOEN 6841)

Journal URL: https://github.com/Shravanii25/SPM2024/tree/learningjournals

Week 3: 4th Feb 2024 - 10th Feb 2024

Key Concepts Learned: This week, I explored Chapter 4 and the concepts in it:
1. What are Project Risks?
   • Risks are *unforeseen events or circumstances* that can potentially disrupt or impact the success of a project. In software projects, risks encompass various aspects such as budget, time, resources, quality, and technology. Effective risk management involves *identifying, analyzing, and mitigating these risks* to ensure project success.
2. Causes of Risks and Mitigation Strategies:
   • We explore various factors that contribute to project risks, such as the following:
      1) *Quality Constraints,* **2)** *Resource Unavailability,* **3)** *Scope Creep,* **4)** *Cost Constraints,*
      5) *Bad Negotiation,* **6)** *Unrealistic Estimates,* **7)** *Human Error*   **8)** *Poor Management,*
      9) *Disinterest* and **10)** *Attrition.*
   • For each risk factor, there is a specific mitigation strategy aimed at minimizing their impact on the project.
3. Categories of Risks:
   • Risks in software projects can be categorized into: **1)** *Budget Risks,* **2)** *Time (schedule) Risks,* **3)** *Resource Risks,* **4)** *Quality Risks,* and **5)** *Technology Risks*.
   • Understanding these categories is crucial for developing targeted risk management approaches tailored to specific project challenges.
4. Risk Analysis and Prioritization:
   • Risk analysis is crucial in project management, involving assessing risks' potential impact and likelihood.
   • High-risk events are *prioritized based on probability and impact*, requiring continuous monitoring and adjustment of strategies.
   • A risk matrix aids in organizing risks and informing decision-making. This process involves creating, prioritizing, and regularly updating a list of risks, followed by appropriate actions.
5. Balancing Project Constraints:
   • In project management, deviations are common due to risks. Project managers must justify outcomes like *overruns and quality deviations*. Balancing entails prioritizing deliverables and clarifying requirements and priorities. Clear requirements and priorities are crucial for success. Project managers must balance risks while ensuring quality and adhering to constraints.
6. Risk Management in Agile Projects:
   • In agile project management, iterative development minimizes the risk of waiting until project completion. Requirements are divided into small sets, developed within 4-6 weeks, reducing overall risk incrementally. Strategies are devised for manageable risks, while unmanageable risks like natural disasters cannot be controlled.

Mastering these concepts enables project managers to anticipate, assess, and mitigate risks effectively, thereby enhancing project success in the dynamic software development landscape.

Reflections on Case Study/course work:
The case study in Chapter 4 highlights the risks faced by a SaaS vendor during the development of its flagship software product, Strategies to mitigate these risks for the 6.0 release were implemented. Here are the insights gained and its relevance to the course content:
1) Risk Management: Thorough assessment and mitigation of risks associated with offshore teams were highlighted, aligning with the discussions on risk analysis.
2) Attrition Mitigation: Strategies to mitigate attrition risks, like competitive salaries and conducive work environments, echoed the discussions on resource risks and talent retention.
3) Communication Protocols: Standardized communication and virtual meetings were emphasized for bridging gaps in distributed teams, reflecting the importance of effective communication in project management.
4) Schedule Management: Schedule buffers and feature prioritization were effective in managing development schedules amidst unforeseen risks, based on our lessons on schedule estimation and flexibility.
5) Resource Optimization: Utilizing overtime and redistributing tasks within the team to address resource unavailability resonated with the discussions on resource estimation and dynamic resource allocation.
6) Quality Assurance: Incorporating reviews and checks at various stages highlighted the importance of quality assurance, aligning with the focus on quality risks and assurance processes.

Collaborative Learning:
This week, our team focused on our AI-based academic advisor project. We conducted research, defined our problem statement through group discussions, and completed project initiation steps. We analyzed the market, assessed similar projects, and identified their strengths and weaknesses. Additionally, we conducted stakeholder analysis and target audience research. Our efforts culminated in a finalized project initialization and market analysis report. In addition to this, I and my classmate analyzed the case study from our coursework, identifying and evaluating potential project risks to enhance our project planning.

Further Research/Readings:
 I further read and explored some more material related to project management specifically focused on my project topic of AI-Based Academic Advisor.
1. "Artificial Intelligence: A Guide for Thinking Humans" by Melanie Mitchell: Explores the fundamentals of AI, providing insights into its capabilities and limitations, which can inform our project's development and implementation strategies.
2. "Effective Stakeholder Management: A Key to Project Success" by Simon W. Hayward: Offers strategies for effectively engaging stakeholders throughout the project lifecycle, aligning with our focus on stakeholder management in AI project development.

Adjustments to Goals:
1. Based on last week's goals, I completed all the scheduled meetings for the project and worked on the project initialization and market analysis report.
2. I also studied chapter 4 and jotted down all the key concepts learned.
3. My main goal for this week is to revise all the chapters completed until now and start preparing for the mid-term exam which is scheduled.
4. Also, complete the weekly journal for the upcoming week and do the associated exercises with it.