Learning Journal - 2

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Course: SOEN 6841 - Software Project Management

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Week 3-5: 01/20/2025 – 02/02/2025 [CH 3,4 and 5]

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Key Concepts Learned

- Software projects are effort-driven by their nature and must rely on accurate estimation techniques.
- Experience-based and algorithmic cost modelling are the basis on which project estimates are built.
- Effort & Cost Estimation: Explored experience-based methods, algorithmic models, and FPA, highlighting the importance of accuracy amid risk and uncertainty.
- Risk Management: Focuses on key aspects in identifying, analysing, and mitigating risks using assessment methods and mitigation strategies.
- Adaptation to Risks: Stressed the importance of ongoing risk evaluation and responsiveness to evolving conditions within the project.
- Top-down and bottom-up planning strategies are used to lay out a project estimate and the work to be done.

Application in Real Projects

- Accurate effort estimation is essential towards setting realistic goals of a project and allocates the resources economically.
- Experience-based estimation by analogy helps project costs for new projects on historical data.
- Function Point Analysis will prove useful in analyzing the user requirements and setting benchmarks on the functionalities of the software projects.
- Early identification and mitigation of risks ensure a smooth execution process with minimal d isruption.
- Managing larger and more complex software projects requires structured planning-base top-down strategies or bottom-up strategies.

Peer Interactions

- Discussed with peers in group discussions the relevant experience-based and algorithmic techniques and their application challenges.
- Shared insights about analogy-based estimation in software projects and its value.
- Worked with others on Function Point Analysis exercises to understand software measurement better.

- Brainstormed various possibilities for risks in software projects and discussed possible responses to enable effective risk management.
- Worked with peers to compare top-down and bottom-up planning methods on the management of project cost and schedules.
- Reviewed case studies of selected risk mitigation techniques in software projects together with peers.

Challenges Faced

- Finding it challenging to comprehend fully the practical aspects of algorithmic cost modeling in the dynamic environments of projects.
- Faced difficulty in attributing values to risk parameters in statistical models in a precise way.
- Learning to balance the trade-offs between top-down and bottom-up planning approaches to complex projects.
- Difficulty adapting Function Point Analysis (FPA) to unknown or rapidly changing project requirements.
- Met difficulties in forecasting the potential impact of certain risks at planning stages of projects.
- Required more explanation on how traditional project management techniques could be adapted within Agile environments.

Personal Development Activities

- Investigation of supplementary materials on algorithmic cost modeling was targeted towards better appreciation of estimation techniques.
- Real-life examples and case studies on successful risk management in software projects were inspected.
- Research on various project planning methodologies, particularly top-down and bottom-up communications strategies, was conducted to provide additional personal knowledge.
- Attended conferences and seminars including workshops on risk management methodologies were attended in order to learn about proactive response strategies.
- Self-paced learning modules on estimation and planning techniques were taken up to brighten up future project applications.

Goals for the Next Week

- Enhance understanding of algorithmic cost modeling by analyzing more real-world examples.
- Study the case study cases which will prove the key factor of risk management toward project success.
- Understand how to apply Function Point Analysis in an Agile project environment.
- Collaborate with peers on a mini-project to practice top-down and bottom-up planning approaches.
- Examine Agile methodologies and risk mitigation techniques to integrate traditional and modern project management practices.