Learning Journal – 4 (Week 5 & 6)

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Course: Software Project Management (SOEN – 6481)

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Dates Rage of activities: 23-02-2025 to 15-03-2025

Date of the journal: 16-03-2025

Key Concepts Learned:
Over the span of two weeks in the date range, detailed analysis was conducted on the chapters 9 to 12 under the section "Software Life-Cycle Management" in short SLCM. Each chapter is well defined with explanation on its importance in everyday project management and must be understood and implemented by good project managers.

- *Chapter 9* – Introduction to Software Life-cycle Management talks about the software engineering management and the processes and metrics of SLCM under waterfall and iterative methods. The processes include requirements, design, build, test, release and maintain.
- *Chapter 10* – Detailed information about the software requirements life cycle management, development, control requirement changes of development methods. Learnt the practical strategies of software requirements and the Software requirements specifications document (SRS).
- *Chapter 11* - Is all about the Software Design Management with methods such as top-down and bottom-up. Discuss the topics, version control design, characteristics, and techniques of design such as object-oriented, prototypes, ER models and system analysis. Learnt the concept of refactoring and reusing of designs.
- *Chapter 12* - Project Construction speaks about the coding standards, frameworks, methods, and techniques. Software construction for the iterative model approach.

Application in Real Projects:
The key concepts learnt are the core principles or the life cycle that are used in every software projects. Every project manager should apply these concepts to establish a well-structured software management process, ensuring the project's progress stays within time and budget constraints while advancing toward successful completion. Some of the key concepts to explore include:

- *Software life cycle*: This includes the requirements identification, design, build, test, release, and maintenance of the software project.
- *Requirements Analysis*: Analysing and understanding the right user requirements is very necessary. Business analyst main job is to get the best solution for the user requirements.
- *Design Management*: The design should be robust and should have the ability of refactoring and reusing the code fragments or the architecture for similar projects.
- *Standards and Framework*: Numerous frameworks are available today which holds good in reusing them for the software projects based on the user requirements. Some of the most common used frameworks are JavaScript frameworks such has react, and python has Django.
- *Object oriented and Structural Programming*: This is one of the hot topics in today's software projects where most of the languages and designs used are either structural or object oriented which makes the software solution reusable and refactorable for different problems.

Peer Interactions:
As we had the project pitch, it was wonderful event where we had the opportunity to pitch our project idea amongst the class which helped in building conversation with the entire class. Also parallelly, me and my team were continuously working on the project idea by using the concepts learnt. For the current two weeks we used the above learnt concepts in using the concepts of requirements analysis and design management to understand the complexity of the idea and determining the justification for the iterative method that we choose earlier for our project development.

Apart from this I was having casual discussions with my classmates regarding the subject and their knowledge which is out of the curriculum but closely related from their experience, which improves my knowledge over the subject.

Challenges Faced:
Since the chapters deals with the core principles of software Management life cycle, the major challenge was to connect the dots between he concepts and real-world use cases. Also, the major challenge faced was describing my project idea in terms of the management life cycle was interesting and had to put more effort in shaping my idea to fit the principles. Further, in chapter 10, understanding the user requirements in English and refactoring it to the developers understanding was a difficult concept. The idea here is to understand the right requirements and to reach the same requirements without missing any artifact to the developers and get the right software built.

Apart from the mentioned the learning was interesting and helped me in gaining more knowledge.

Personal Development Activities:
With regards to the personal development, I involved myself in understanding the concepts in detail from the textbook and solving the exercise questions from the end of the chapters that were tricky. Explored a few articles on the web just to refer the concepts and how they are used even today for every software project that is developed and being developed. To add, I improved my knowledge with more intense understanding when I was writing the report for my project idea for the project plan and feasibility study which used the concepts learnt above. I was able to add all the concepts and mould my project and explain it in terms of the software project management principles.

Goals for the Next Week:
For the upcoming final weeks of the course, I determine myself to complete the remaining project work and read the last two chapters of the curriculum which are chapter 13 and 14. Also, start preparing my self for the second exam that will be approaching in a few weeks. Further, I must explore more on the subject with more articles and papers published. Finally, I determine to continue reading the entire book as I felt the book to be interesting and informative.