**Learning Journal Template**

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**Course:** SOEN6841 Software Project Management

**Journal URL:** https://github.com/nisarg291/SOEN6841\_Journal

**Week 1:** 18/01/24 to 24/01/24

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**Key Concepts Learned:**

**Chapter 1: Software Project Management Introduction**

1. **Difference between a Project and a Software Project**:

A Project is defined as any set of unique and connected activities that have one goal and that must be completed by a specific time, budget and resources. A software Project is a set of work activities, both technical and managerial and required to satisfy the terms and conditions of a project agreement. Software projects should have objectives and constraints, responsibilities and have a budget, schedule, limited resources and specific time.

1. **What is Software Project Management:**

Software project management can be defined as implementing project management and software engineering methods to develop/maintain a software product so that the goal of developing/maintaining a software product can be achieved using the minimum possible resources and budget and within the minimum time possible.

1. **Problems in Software Projects and Their Impact on Software Projects:**

Challenges faced in software projects are a high level of innovation required, immature software engineering, lack of proper skills, complexity, ambiguous requirements, and immature tools and techniques. Due to these problems, Management faces issues in communication, team management, effort estimation, work distribution, project reporting and work tracking.

1. **Project phases, software project tasks and processes involved in a software development project :**

Project phases consist of project initiation, project planning, monitoring and control and project closure. Moreover, Software project tasks consist of requirement management, design management, source code building, software deployment and software maintenance.

1. **Requirements for a successful software project manager:**

To become a successful software project manager requires knowledge of project management, software engineering, technologies and tools. Moreover, managers also need to know how to manage teams, customers and suppliers. Also, they need to work under the organizational framework.

1. **Project initiation tasks and software product development initiation tasks:**Top of Form

Large enterprise-level software projects need full support from top management to even get started. Without that support, projects might not even take off. If top management is excited and gives the green light, a project team forms, and the initiation phase begins, where important documents like the project charter, scope, objectives, and initial risk planning are worked on.

At the beginning of creating a new software product, the team plans out what the project will include, identifies potential risks, and estimates how much effort it will take. Unlike custom software projects, they also figure out how much time it will take upfront. For these projects, getting the product to market quickly is super important, so instead of estimating time, they figure out how many people they need to finish the project on a tight schedule. They also create a plan for when the product will be released, following a roadmap for product development.

Moreover, I learned Project management in the waterfall model and the characteristics required of software project metrics concepts from the introduction chapter.

**Chapter 2: Project Initiation Management**

1. **Software project initiation:**

A software project is initiated just like any other type of project.

1. **What is a project charter:**

The project charter is created by the organization's senior management to initiate a software project. It serves as a document that outlines the project's objectives and reasons for initiation.

1. **Project Scope:**

A detailed project scope is developed to define the boundaries of the project. The scope will include what functionalities are needed in the software product to be developed. It will also define the level of quality needed in the software product.

1. **Project Objectives**:

The project should have a set of well-defined objectives that must be met. If any of these objectives are not met upon completion of the project, then the project will be a failure. Objectives are achievable and measurable goals and they should be S.M.A.R.T.(specific, measurable, achievable, relevant and time-constrained.

1. **Practical Considerations for Project Management:**

Project management varies based on project size, product quality, technology, and code reuse.

1. **Project activities performed during project initiation:**

* **Estimate initial project size (rough one):**
* **Estimate initial project effort and costs:**
* **Estimate the initial project schedule:**
* **Create an initial project plan to satisfy the customer:**
* **Stakeholder influence:**
* **Quality planning:**
* **Feasibility study:**
* **Project division:**

In the first chapter, I get an overall understanding of what a software project is and the steps it needs. It also talks about project management and why having a good project manager is important for a software project.

Chapter Two talks about how a software project starts and why things like a project charter, project scope, and project objectives are important. It also explains some important things that happen when a project is initiated.

**Application in Real Projects:**

Let's consider a real-world example of a software project, such as developing a new mobile application for a retail company.

So now after studying these concepts rather than directly working on developing an application. The team will identify the need for an app to enhance customer engagement, improve shopping experiences, and increase sales. The team will do the processes like requirement gathering, feasibility analysis, and initial project planning. After understanding the importance of project management, the company will hire skilled project managers to ensure effective coordination and successful delivery.

After understating the importance of project initiation, the team formally initiates the project. They will create a project charter outlining the app's purpose, scope (features and functionalities), and objectives (increasing user engagement by 30% within six months). The project manager defines roles, and responsibilities, and sets timelines. Challenges in this phase could include clarifying ambiguous requirements and aligning diverse stakeholder expectations. However, having a clear project charter, scope, and objectives benefits the team by providing a roadmap for development.

**Potential Challenges:**

* **Scope Modification:** One challenge could be scope modification, where new features are added beyond the initial project scope, leading to delays and increased costs.
* **Stakeholder Alignment:** Ensuring that all stakeholders have a clear and shared understanding of the project's goals can be challenging.
* **Resource Constraints:** Limited resources may impact the ability to meet project timelines.

**Potential Benefits:**

* **Clear Direction:** A well-defined project charter provides a clear direction, reducing ambiguity among team members.
* **Efficient Resource Allocation:** Knowing the project scope helps in allocating resources effectively, preventing unnecessary work on non-essential features.
* **Risk Mitigation:** Identifying potential challenges early allows for proactive planning and mitigation.
* **Stakeholder Confidence:** Well-defined project elements instill confidence in stakeholders, fostering collaboration.

**Peer Interactions:**

Had a group discussion with my project team members after the project group was assigned about the amount of work and time we needed to give for the assigned project. We discussed how we initiate our project.

**Challenges Faced:**

While learning the concepts I am confused about some concepts and while doing exercises, I need to read my class notes and textbook to clearly understand the concepts and to solve the exercises. So, it takes more time than expected. So next time, I need to practice revision of the concepts after completing the lectures.

**Personal development activities:**

This week, I started reading all course notes to revise the concepts covered in this week. Moreover, I made a timetable for my study, so I can give myself some time to read my course and improve my time management skills.

**Goals for the Next Week:**

Making notes during the next week's lectures and reading chapters 3 and 4. Doing Market Analysis for the assigned project and making project initiation.