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**SOEN 6481: Software Project Management**

**Journal URL:** [**https://github.com/AlamOmnia/SOEN6481**](https://github.com/AlamOmnia/SOEN6481)

# Week 1: 18th January- 24th January 2024

Date: 24th January 2024

**Key Concepts Learned:**

* What is a project?

A project is a temporary endeavor with a specific goal or objective, typically to create a unique product, service, or result. It is characterized by a defined beginning and end, a set of tasks and activities, and a finite timeline. Projects are often carried out to bring about beneficial change or to add value.

* What is a software project?

A software project is a specific type of project that focuses on the development, maintenance, or enhancement of software systems. This can include designing and building new software applications, updating existing ones, or fixing bugs and issues.

* What processes are involved in a software project?

Software projects involve various processes, including:

1. Requirements Gathering: Identifying and documenting the needs and expectations of stakeholders.
2. Planning: Creating a detailed project plan that outlines tasks, timelines, resources, and dependencies.
3. Design: Defining the architecture, components, modules, data, and interfaces of the software system.
4. Implementation/Coding: Writing code and converting the design into an actual software product.
5. Testing: Verifying that the software functions correctly and meets the specified requirements.
6. Deployment: Releasing the software for use by end-users.
7. Maintenance: Addressing issues, making updates, and ensuring the ongoing functionality of the software.

* How are people, processes, tools, and technology integrated in a project?

Integration of people, processes, tools, and technology in a project involves aligning their efforts to achieve project goals. This includes effective communication, collaboration, and coordination among team members. Project management methodologies and tools are often used to plan, monitor, and control project activities. Technology and tools are employed to facilitate development, testing, and other processes.

* What are the characteristics of a good project manager?

A good project manager possesses the following characteristics:

1. Leadership Skills: Ability to inspire and guide the team towards the project's goals.
2. Communication Skills: Clear and effective communication with team members and stakeholders.
3. Organizational Skills: Efficiently manage resources, time, and project tasks.
4. Problem-solving Skills: Address challenges and find solutions to issues that arise during the project.
5. Adaptability: Flexibility to adapt to changes and uncertainties.
6. Risk Management: Identify and manage potential risks to the project.
7. Decision-making Ability: Make informed decisions in a timely manner.
8. Team Building: Foster a positive and collaborative team environment.

* What are the subprocesses in project management processes?

Project management processes involve various subprocesses, including:

1. Initiation: Defining the project, its objectives, and securing approval to proceed.
2. Planning: Creating a detailed project plan, including scope, schedule, budget, and resources.
3. Execution: Carrying out the plan and coordinating people and resources.
4. Monitoring and Controlling: Tracking project performance, managing changes, and ensuring project stays on course.
5. Closing: Completing the project, obtaining customer or stakeholder acceptance, and closing out the project.

* What management metrics are measured in software projects?

Management metrics in software projects can include:

1. Effort Estimation Accuracy: Measure the accuracy of initial effort estimates compared to actual effort expended.
2. Schedule Adherence: Assess whether the project is progressing according to the planned schedule.
3. Defect Density: Identify the number of defects per unit of code or functionality.
4. Requirements Stability: Measure the stability of project requirements over time.
5. Customer Satisfaction: Evaluate satisfaction levels of end-users or stakeholders.
6. Resource Utilization: Assess how efficiently project resources are being utilized.
7. Budget Adherence: Compare actual expenditures to the budgeted costs.

How is a project initiated?

1. Identification of Need or Opportunity: The initiation phase often begins with the identification of a need or opportunity within an organization. This could be a problem that needs solving, an opportunity to capitalize on, or a requirement for a new product or service.

2. Feasibility Analysis: A feasibility study is conducted to assess the viability of the project. This includes evaluating technical, financial, legal, and operational aspects to determine if the project is feasible and worth pursuing.

3. Stakeholder Identification: Identify and engage with stakeholders who will be affected by or can influence the project. Understanding their expectations and requirements is crucial for successful project initiation.

4. Project Sponsor Approval: A project sponsor, typically a senior executive, needs to endorse the project and provide the necessary resources. This approval is often formalized through a project initiation document.

5. Project Initiation Document: The project initiation document outlines the purpose, scope, objectives, stakeholders, constraints, assumptions, and initial high-level plan for the project. It serves as a guide for all subsequent project activities.

* What is a project charter?

A project charter is a formal, concise document that officially authorizes the existence of a project. It provides the project manager with the authority to use organizational resources for project activities. The project charter is usually developed during the initiation phase and includes:

Project Purpose or Justification, Project Objectives High-Level, Project Scope, Stakeholder Identification, Project Manager's Authority, Initial Project Risks and Constraints

* What is project scope?

Project scope defines the boundaries of the project by outlining what is included and what is not. It encompasses the work that needs to be done to deliver the project objectives and meet stakeholders' expectations. The project scope is documented in the project initiation document and serves as a baseline for project planning and execution.

* What are project objectives?

Project objectives are specific, measurable, achievable, relevant, and time-bound (SMART) goals that the project aims to achieve. They provide a clear understanding of what the project is intended to accomplish. Objectives are typically outlined in the project initiation document and guide the project team throughout the project lifecycle.

* What project activities are performed during project initiation?

Project Identification: Recognizing the need or opportunity for a project. Feasibility Analysis: Evaluating technical, financial, and operational feasibility.

Stakeholder Identification: Identifying individuals or groups affected by or influencing the project.

Project Sponsor Approval: Securing formal approval and support from a project sponsor. Project Initiation Document (PID): Creating a comprehensive document that outlines project details.

Project Charter Development: Crafting a formal document that authorizes the project.

Objective Definition: Clearly defining the specific goals the project aims to achieve.

Scope Definition: Clearly outlining the boundaries and deliverables of the project.

Risk Assessment: Identifying potential risks and constraints.

Resource Identification: Identifying and securing necessary resources.

**Application in Real Projects:**

* Case Study:
* Project Overview:

A software vendor is working on the 6.0 version of a state-of-the-art SaaS software product used by major grocery retailers in the United States and Europe.

The project consists of four iterations leading to the release of version 6.0, with project management processes covering initiation, planning, execution, monitoring, control, closure, risk management, effort estimation, and cost estimation.

* Project Initiation:

Elaborate project initiation is done specifically for the 6.0 release, while minimal initiation is performed at the iteration level for the minor releases. The need for a new functionality arose to enable third-party logistics service providers (3PL) to receive advance information about the need for trucks, facilitating efficient transportation planning.

* Software Functionality:

The software's functionality involves appointment scheduling for 3PLs to plan truck transportation based on advance information. Retailers order goods from their own warehouses when stock is low, and the warehouse staff loads trucks for outbound logistics to retail outlets. Manufacturers/distributors order goods from their warehouses when stock is low, and trucks perform inbound logistics to retailer warehouses. 3PLs, handling inbound logistics, charge based on distance, capacity, and fuel cost, often on a full truck basis.

**Peer Interactions:**

We discussed different topics of software project management and their key components.

**Challenges Faced:**

Making initial communication with the group members.

**Personal Development activities:**

* Reading material for the week was Chapter 1 and 2 and understanding the topics.
* Assignment 1.1. and 2.2
* Communicating with the group members for the project
* Discussing the project proposal
* Setting up GitHub for weekly journal, assignment and project

**Goals for the Next Week:**

* Reading book: Chapter 3,4 before the next class
* Meet up with group member for updates and project progress.