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**SOEN 6481: Software Project Management**

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

# Week 1: 28th January- 3rd February 2024

Date: 2nd February 2024

**Key Concepts Learned:**

**Effort Estimation for Software Project Management:**

Effort estimation in software project management involves predicting the amount of work required to complete a project. This is crucial for planning, budgeting, and resource allocation. Different techniques used for effort estimation in software projects include expert judgment, analogous estimation, parametric estimation, and three-point estimation. Expert judgment relies on the insights of experienced professionals, analogous estimation uses historical data from similar projects, parametric estimation employs mathematical models, and three-point estimation considers optimistic, pessimistic, and most likely scenarios.

**Cost Estimation for Software Project Management:**

Cost estimation in software project management is the process of predicting the financial investment needed for project completion. Techniques include:

**Function Point Analysis (FPA):**

FPA quantifies software functionality based on user inputs, outputs, inquiries, files, and interfaces. It provides a standardized, technology-independent measure, aiding in accurate effort and cost estimations for software projects.

**COCOMO (Constructive Cost Model):**

COCOMO is a software cost estimation model that considers project size, complexity, personnel capability, and environment to predict effort, time, and resource requirements. It offers a structured framework for early-stage decision-making in project planning.

Effort = 2.94 × EAF × (KLOC )E

where

EAF is the effort adjustment factor derived from cost drivers E is the exponent derived from scale drivers

KLOC is the kilo lines of software code

Schedule duration is calculated as

Duration = 3.67 × (effort)SE

**Wide Band Delphi Technique:**

Wide Band Delphi is a consensus-based estimation method that gathers input from a group of experts to estimate project parameters like effort and duration. It improves communication and decision-making by leveraging collective expertise, reducing individual biases in estimates.

**Schedule Estimation for Software Project Management:**

Schedule estimation is about predicting the time required for the completion of a software project. Techniques include expert judgment, analogous estimation, and three-point estimation. Expert judgment involves experienced professionals providing time estimates, analogous estimation uses historical data, and three-point estimation considers optimistic, pessimistic, and most likely scenarios to calculate expected durations.

**Resource Estimation for Software Project Management:**

Resource estimation involves determining the types and quantities of resources required for a software project. Techniques include expert judgment, bottom-up estimation, and parametric estimation. Expert judgment relies on the insights of industry experts, bottom-up estimation breaks down resource requirements for individual components, and parametric estimation uses statistical relationships between project parameters and resource needs.

**Application in Real Projects:**

* Case Study:

Ai News Summarizer: We have worked on our 1st deliverable which is Project initiation and business analysis.

**Peer Interactions:**

As a part of group 23, We have had our 2nd meeting on 2nd February and we have divided the project responsibility among ourselves.

**Challenges Faced:**

A group member have to leave our group and we had a new member. We meet with the new member to help him catch up on the project.

**Personal Development activities:**

* Reading material for the week was Chapter 3 and understanding the topics.
* Assignment 3.2
* Communicating with the group members for the project
* Discussing the project proposal

**Goals for the Next Week:**

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