Learning Journal

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Course: Software Project Management (SOEN 6841)

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Key Concepts Learned:

New Terminologies

Project: - Set of activities with a definite start and end time and these activities are aimed at achieving some pre-defined goals. Projects are non-routine, planned, aimed at a specific target, carried out for a customer, and involve several specialisms.

Process: - Any task done by taking a series of steps that results in completion of the requested task.

Project Management: - Project Management can be defined as starting an activity to achieve some stated goals using limited budgets, resources, and time.

Software Project Management: - It can be defined as applying project management and software engineering methods to develop, maintain, a software product so that goal of developing/maintaining software product can be achieved using minimum possible resources and money and within minimum time possible.

Project Charter: - It is prepared by the top-level management and defines the purpose for starting the project. It is a place where big picture of the effort is captured.

Project Scope: - Project scope defines the boundaries of the project including the functionalities needed in the project, the level of quality needed in the software project.

Project Objectives: - The goals that are needed to be met after project completion. The objectives should be stated in a clear language and set of objectives should be kept as small as possible.

Main concepts covered in class.

Steps in project management include project initiation, project planning, project monitoring & control and project closure.

Software project initiation tasks include initial schedule estimates, project charter, project scope, project objectives, initial effort estimates, initial cost estimates.

Software product implementation initiation tasks consist of all the steps in software project initiation along with customization effort and migration from legacy system.

Software product initiation tasks consist of market analysis, product development cost estimate, product features, marketing channels, product delivery method and product.

Characteristics of software project metrics include relevancy, meaningfulness, practicality, calibration ability and activity level.

Software Project Initiation includes preparation of project charter and project scope. Initial budget and schedule estimates can be made using project scopes. A tentative project plan consists of following phases: - project schedule, project cost, communication plan, resource plan, quality plan, tool plan and risk plan.

The project objectives should be SMART i.e. specific, measurable, achievable, relevant and time constrained.

Application in Real Projects:

Why Software Project Management?

The significance of software project management cannot be overstated, especially considering its pervasive impact on our daily lives. The rapid proliferation of software products across various domains is a testament to its increasing influence. The demand for software development in previously unimagined areas has grown exponentially over the past decade. This surge is reflected in the escalating number of software projects and the substantial increase in workload associated with them.
On a global scale, the expenditure on IT and software projects has consistently risen by approximately 10% or more each year over the last three decades. This upward trend in IT spending is expected to persist in the foreseeable future. Undoubtedly, the software and IT industry stands out as the primary catalyst driving significant changes in our lives. Consequently, individuals involved in constructing and overseeing software and IT systems are assuming an ever more crucial role in shaping our society.

Challenges in Software Project Management

The software industry, a relatively recent development with a history spanning only about 60 years since the 1950s, faces challenges in software project management due to the absence of established engineering practices. Immaturity in requirements and software design specifications, ongoing evolution of tools and technologies, and the dynamic nature of education and training contribute to a scenario where individuals managing software projects often feel ill-equipped.

Managing large and complex software development projects adds further complexities, involving compliance with regulations, meeting deadlines, handling diverse teams across different locations, addressing cultural and linguistic differences, and contending with outsourcing challenges in the quest for skilled and experienced resources.

Challenges in Software Project Initiation Phase

Unrealistic expectations from stakeholders are bound to make a project fail. If the project manager is adept, then he can chart out some plan of action and can do some hard bargaining to get things going.
Another issue is unbounded expansion of project scope which happens due to user community wanting to add additional functionality after seeing partially made application. So, they keep making change requests throughout the development cycle. This makes the application susceptible to defects and causes an increase in volume of project work which results in escalation of costs. Secondly, poor requirements definition and understanding leads to changes required in later phases of project during software design or development which is costly to rectify.

Peer Interactions:
This week was mostly based on learning about the terminologies used in field of software project management. Discussed with peers about what their understanding about these new terminologies were, to get a broader understanding of the concepts.

Challenges Faced:
Identifying the difference between project management, software project management and Software Development Lifecycle Processes.

Understanding difference between project charter, project scope and project objectives.

Personal development activities:
Getting started with understanding the basic jargon of software project management.

Goals for the Next Week:
In depth study of next software project management phases namely software project effort and cost estimation and risk management.