READING JOURNAL

SOEN 6841- SOFTWARE PROJECT MANAGEMENT

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Week 1: Introduction to Software Project Management

Lecture Date: September 11, 2023

Part I:

Learning Objectives and Goals:

→ Understand the fundamental concept of Software Project Definition, their definitions, and a basic understanding of Agile Methodologies.

Course Content Reflections:

→ Writing down key takeaways, concepts learned, and any relevant information after each class or learning session including lecture notes, discussion insights and comprehension of the course material.

Important Concepts:

→ Organisation, Project, Acquirer, Supplier, Work Product, Software Project Deliverable, Software Project Agreement, Mile Stone, Work Task, Software Project Management are the main concepts defined.
→ The Project has five main characteristics. Temporary, one-of-a-kind, and limited in resources.
→ The roles of the supplier and acquirer in software management.
→ Software Project Observations (PDF Bulletins)
→ Software Project Objectives.
→ Discussions and agreements concerning Software Project Management.

Personal Thoughts/Concepts:

→ Changes in Software Management techniques over years and recent transitions to Agile Methodologies.
→ Gaining better insight to management techniques of Software Industry.

Self-Learning:

→ Find an example of an App Development case study highlighting the use of Agile.

Progress towards Goals:

→ Key concepts have been learned; they will be revisited for revision next week.
→ For a better understanding, read a case study/Medium blog that highlights the use of agile in development.

Preparation for Test 1:

→ Revisit the definitions.

Part II:

Learning Objectives and Goals:

→ Understanding the fundamental concepts of Agile Project management model, principles of agile project management, Management roles and responsibilities in software engineering, software project manager.

Course Content Reflections:

→ Writing down key takeaways, concepts learned, and any relevant information after each class or learning session including lecture notes, discussion insights, and comprehension of the course material.

Important Concepts:

→ Moving from General Software Management to Software Project Management and finally to Agile Software Project Management.
→ Principles of Agile Project Management: Minimum Critical Specification, Autonomous Teams, Redundancy, Feedback and Learning, Technical Excellence.
→ Management Roles and Responsibilities In Software Engineering: Independent roles, Specific roles, and responsibilities.
→ Skills of a Project Manager: Technical Skills, Strategic and Business Management Skills, Leadership Skills.
→ Cultural Principles
→ Software Engineering code of Ethics

Personal Thoughts/Concepts:

→ Understanding how agile management works, by reading through the lecture notes and by studying from various internet resources.
→ Getting a better idea of the skills required to be a Software Project Manager

Self-Learning:

→ Reading about “The Peter Principle” and “The Dilbert Principle”

Progress towards Goals:

→ Gaining practical knowledge about agile methodologies by discussing with friends who are in the industry.
→ Learning about the roles and responsibilities of Software Project Manager and standards for professional practice of software engineering.

Preparation for Test 1:

→ Revisit the definitions.

Week 2: Introduction to Software Project Assessment

Lecture Date: September 18, 2023

Part I:

Learning Objectives and Goals:

→ Diving deep into the assessment of Software Project, its viewpoints, Software project failures, success criteria for Software Project.

Course Content Reflections:

→ Writing down the important points from the lecture notes.

Important Concepts:

→ Software Project Assessment: Delivery viewpoint and Progress viewpoint
→ Examples of Project failures
→ Feasibility rules
→ Cost of Project Failures
→ Understanding the Outcome of Software Project
→ Software Project Success, success factor their classification as Classification Scheme 1, Classification Scheme 2, Classification Scheme 3

Self-Learning:

→ Difference in "practice" and "best practice"
→ Practical lower limit for quality and practical upper limit for cost
→ Learning about Egocentric Bias

Progress towards Goals:

→ Research paper reading: June Verner, Jeniffer Sampson, Narciso Cerpa *What factors lead to Software Project Failure?* , Published in: 2008

Preparation for Test 1:

→ Revisiting the topics covered so far.

Part II:

Learning Objectives and Goals:

→ Continuing learning Software Project Failures and its reasons' classification and about project retrospectives.

Course Content Reflections:

→ Writing down key takeaways, concepts learned, and any relevant information after each class or learning session including lecture notes, discussion insights, and comprehension of the course material.

Important Concepts:

- → Relationship between Software Project Assessment and Software Development Process
- → Classification for reasons for software project failure into Classification Scheme 1: Necessary/ Sufficient, Classification Scheme 2: Internal/External, Classification Scheme 3: Preventable/Inevitable
- → Reasons for Software Project Failure: Communication, Estimation, Knowledge, Involvement, Management, Education, Risks and Tools

Self-Learning:

- → Reading about “Casual Reductionism”, “Star Graph”
- → Non-Linear behaviour of Communication Complexity

Preparation for Test 1:

- → Collecting the resources to study for Test 1 and revising the important concepts taught in week 2

Week 3: Introduction to Stakeholder Management

Lecture Date: September 25, 2023

Learning Objectives and Goals:

→ Learning about Stake Holder including definition, evolution, role in organized initiative, role in software process environments and Management

Course Content Reflections:

→ Writing down key takeaways, concepts learned, and any relevant information after each class or learning session including lecture notes, discussion insights, and comprehension of the course material.

Important Concepts:

→ Who is a stakeholder and why stakeholder analysis is required.
→ Understanding the software ecosystem, People Factor and Peopleware
→ The evolution of stakeholders
→ Stakeholder Management and challenges including Tractability, Variability
→ Challenges in identification of stakeholders: Incorrectness, Incompleteness, oversizing

Self-Learning:

→ Different types of value a software project can provide to stakeholders, the influence of software project on stakeholder

Progress towards Goals:

→ Learning about all different kinds of stakeholders involved in a software project.

Preparation for Test 1:

→ Revising the concepts.

Part II

Learning Objectives and Goals:

→ Learning about Negative stakeholders, properties of stakeholders, prioritization of stakeholders, relationships between stakeholders, stakeholder models, states of a stakeholder.

Course Content Reflections:

→ Writing down key takeaways, concepts learned, and any relevant information after each class or learning session including lecture notes, discussion insights, and comprehension of the course material.

Important Concepts:

→ Negative stakeholders
→ properties of stakeholders
→ prioritization of stakeholders

→ relationships between stakeholders
→ stakeholder models
→ states of a stakeholder.

Self-Learning:

→ Watched Stakeholder Mapping video provided in the lecture notes

Week 4: Introduction to Software Project Cost Estimation

Lecture Date: October 2, 2023

Learning Objectives and Goals:

→ Learning about Software Project Cost Estimation, Quality of Estimation, Estimating Quality Factor, Cost Estvimation Models

Course Content Reflections:

→ Writing down key takeaways, concepts learned, and any relevant information after each class or learning session including lecture notes, discussion insights, and comprehension of the course material.

Important Concepts:

→ Software Project Cost Estimation: Definition, motivation, feasibility study, risk analysis
→ Challenges in Software Project cost estimation: Complexity, Human-Dependency, Circularity, Psychology (Human-Dependency Redux)
→ Quality of Estimation: consistency, dependability, and axiology
→ Estimating Quality Factor: metric for assessing the accuracy of the prediction process
→ Cost Estimation Models:
    - Classification Scheme 1: Cost Models (Eg COCOMO), Constraint Models (Eg SLIM)
    - Classification Scheme 2: First-Order Models, Second-Order Models, Third-Order Models

Preparation for Test 1:

→ Revising the topics learnt

Week 5: Fall Break

→ Posterathon topic assigned and started building the poster as well as preparing for the T1 Test.

Week 6: Posterathon

Lecture Date: October 16, 2023

Key Points:

→ Poster Presentation
→ Read and take an overview of the case study assigned.
→ Highlighted the key takeaways and objectives of the case study.
→ Discuss with my peer on the key findings of case study.
→ Learned how to make a poster and finalised a template.
→ Summarised case study findings on the poster.

Week 7: Test 1

Exam Date: October 23, 2023

Key Points:

→ Review the Lecture notes and personal short notes.
→ Skim through key topics.
→ Identify weak sections that need revisiting and discussion.
→ Explore the Case Studies in detail that were originally skipped.
→ Went to group study sessions.

Week 8: Introduction to Software Project Teams

Lecture Date: October 30, 2023

Learning Objectives and Goals:

→ Understanding about team, it's characteristics, team philosophy, team configuration, team quality, Decision making, Team leader, team members.

Course Content Reflections:

→ Writing down key takeaways, concepts learned, and any relevant information after each class or learning session including lecture notes, discussion insights, and comprehension of the course material.

Important Concepts:

→ Team: Compact group of individuals with diverse skills united by a shared purpose, performance objectives, and a collaborative approach, holding themselves mutually accountable.
→ Team Development: The Tuckman Model of Group Dynamics
→ Excessive behavior: Scoping, hogging, mobbing
→ Models of Team Quality includes :
    - Model 1: The necessary quality attributes of a team are: Adaptability, Stability, and Unity.
    - Model 2: The necessary quality attributes related to a team member, in order of significance, are: Psychological Safety, Dependability, Structure and Clarity, Meaning, and Impact.
→ Decision making
→ Conflict Resolution model: Vertical Dimension: assertiveness, Horizontal Dimension: cooperation. Using these two dimensions, there are five modes for resolving conflict: competing, accommodating, avoiding, collaborating, and compromising
→ Team Leader and Team Member : Characteristics , responsibilities

Self-Learning:

→ Read about the "Liebig's Law of the Minimum", stated as "the growth of a plant is restricted by the resource that is most scarce, not by the total amount of resources available"
→ Political reasons for instability in a software project team.

Preparation for Test 2:

→ Collecting the resources to study for Test 2 and revising the important concepts taught in week 8

Week 9: Introduction to Software Risk Management

Lecture Date: November 6, 2023

Learning Objectives and Goals:

→ Learning about Software Risk management including its scope, standards and classification

Course Content Reflections:

→ Writing down key takeaways, concepts learned, and any relevant information after each class or learning session including lecture notes, discussion insights, and comprehension of the course material.

Important Concepts:

→ Risk: a potentially adverse circumstance.
→ SWOT is an acronym for Strengths, Weaknesses, Opportunities, and Threats, techniques for strategic thinking and decision making
→ Characteristics of Risk: risk is function of time
→ What is Software Risk Management and how it is important.
→ Risks are very common in projects and how we should proactively mitigate them.
→ Black Swan and Grey Swan terminology.
→ Limitations, Weaknesses, Vulnerabilities, Threats, And risks.
→ Using SWOT Analysis for decision making.
→ Various models of risk and their continuous management.
→ Risk Resolution Strategies.

Self-Learning:

→ Learning about Illusion of Control, Optimism Bias, Confirmation Bias, Holism
→ Self-study on Risk Reduction Leverage formulas and examples.

Preparation for Test 2:

→ Collecting the resources to study for Test 2 and revising the important concepts taught in week 8