Learning Journal
Week 3

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Course: SOEN 6841 - Software Project Management

Journal URL: https://github.com/mahimrahman/SOEN-6841-Software-Project-Management

Week 3: Feb 4 – Feb 10

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Key Concepts Learned:

Even though we studied chapter 5 last week but this was covered this week as week as we couldn't finish last week in the class. And we finished chapter 6 in last half an hour of the class.

Chapter 5: Configuration Management

- The need and benefits of configuration management, which is a supporting process that runs alongside the development process.
- Configuration management involves
  - Storing
  - Archiving
  - Identifying
  - Retrieving
  - releasing
- Includes version control, auditing, security, access control, and continuous integration
- Should be centralized, dependable, safe, and auditable.
- Needs additional tools like test management, automation, and defect tracking systems.

- Main goal is software artifacts traceability, consistency, and quality.
- Smoke Test
- I got to know different configuration management techniques, such as
  - version control
  - continuous integration
  - role-based security.

Chapter 6: Project Planning

- Project planning can be done using a top-down or a bottom-up approach, depending on the time frame and scope of the project.
- Planning involves making trade-offs among quality, schedule, cost, and organization benefits of a software project.
- Project planning consists of several components, such as communication, configuration, resources, schedule, effort, cost, and quality planning.
- Project planning also depends on the software development life-cycle method chosen for the project, such as waterfall, iterative, or concurrent engineering models.
- Project planning techniques include work breakdown structure, resource allocation, supplier management, configuration management, communication management, defect prevention, project duration, project cost, tool management, scope management, effort estimate, and risk management.

- Project planning tools include critical path method, Goldratt's critical chain method, earned value management, and project management software.
- Project planning artifacts include
  - project plan document
  - project schedule
  - project budget
  - project organization chart
  - project risk register
  - project communication plan

- project quality plan

- project configuration management plan.
- Project planning in agile models is done at three levels:
  - product development roadmap
  - major version release
  - iteration.
- Project planning is an iterative and dynamic process that requires constant monitoring and adjustment throughout the project life cycle.

New Concepts Learnt: One of the new concepts I learnt from chapter is configuration management, which is a process of managing the changes and versions of software artifacts throughout the project lifecycle. I learnt how to use different configuration management tools to store, identify, retrieve, and release software artifacts. I also learnt how to conduct configuration audits to verify the consistency and compliance of software artifacts with the project standards and specifications. Another new concept I learnt from chapter 6 is quality management, which is a process of ensuring that the software product and the software process meet the quality standards and criteria. It is important to evaluate the quality of software products based on various quality attributes, such as functionality, reliability, usability, efficiency, maintainability, etc. I also learnt how to perform different quality testing techniques, such as unit testing, integration testing, system testing, and acceptance testing, to verify the quality of software products.

Reflections on Case Study/course work:

Main takeaways from the case study that we completed this week:

The case study showed how a centralized configuration management system can help in managing the versions, changes, and integration of software artifacts produced by multiple teams working on the same project. A configuration management system can also provide security, access control, and auditability for the project artifacts.

It also showed how version control can help in tracking the history, status, and ownership of each software artifact. Version control can also facilitate collaboration, communication,

and coordination among the project teams and stakeholders. Version control can also prevent conflicts, errors, and inconsistencies in the software artifacts. Continuous integration can help in ensuring the quality, reliability, and compatibility of the software product. Continuous integration can also enable faster feedback, testing, and delivery of the software product. Continuous integration can also reduce the risks, costs, and efforts associated with software development.

The case study explained how smoke testing can help in verifying the basic functionality and stability of the software product after each integration. Smoke testing can also help in detecting and fixing defects early in the software development life cycle. It can also save time and resources by avoiding unnecessary testing of faulty software builds.

Collaborative Learning:

- This week we all collaborated on our final reports for deliverable 1.
- We finalised our project name.
- We are maintaining common file sharing platforms so that we can track progress and give each other our opinions.
- Also, we talk about study materials as well apart from the project which is also helping a lot.

Personal development activities:

This week, I engaged in several personal development activities to enhance my skills and knowledge. **I** reviewed about the different phases, processes, and techniques involved in managing software projects, such as requirement analysis, design, testing, quality assurance, and risk management. I also learned about the agile methodologies, such as Scrum and XP, that are widely used in the software industry. I exchanged feedback with my classmates on our software project proposals. I learned how to give constructive and specific comments, as well as how to receive and incorporate feedback from others. I also learned how to improve my communication and presentation skills.

Further Research/Readings:

- ❖ Read case study 5 which gave a real-life scenario on configuration management.
- ❖ Also read a lot of articles (reference given on report) on different project management tools.

Adjustments to Goals:

Goals I fulfilled from previous Week:

- Finished my Market research.
- Completed writing the reports.

Goals for the Next Week:

- Meet and have another discussion session with project group members regarding project pitch next week.
- Have further discussion on the insights we are going to get from TA.
- Focus on my learning process and trying to ensure the timely submission of my learning journal and exercise.
- Prepare for the midterm.
- Find a teammate for the poster presentation.