Learning Journal 3

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Course: SOEN 6841 (Software Project Management)

Journal URL: https://github.com/sushanth16012002/SOEN6841_40267400

Dates Rage of activities: 09/01/2025 – 23/02/2025

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Key Concepts Learned:	**Application in Real Projects:**	**Peer Interactions:**	**Challenges Faced:**	**Personal development activities:**	**Goals for the Next Week:**
Configuration management – need to store, archive, identify, retrieve and release work products and information. Stored using project name, document number, time stamp, author, document type and version number. Version control – important aspect of the topic.	GitHub repo is an example of version control. Tools like GitHub Actions, GitLab CI/CD help keep the environment consistent. Maven, Gradle (Build types) are used to manage dependencies and automate builds.	Spoke on the introductory topics of configuration management. We discussed on the working of GitHub and its benefits. We spoke how a team in the corporate world is managed with the aid of other CM tools.	No challenge faced.	Reviewed the working of GitHub. Worked on forking, branching, pushing, committing and publishing a branch.	Read on more examples covering the CM tools. Work on them.
Best practices – Centralized configuration management system, secured access mechanism with role - based access control, continuous integration software, easy branching mechanism and audit facility. Artifacts include – build files, work products, documents.	Many large organizations, such as Microsoft, Google, and Facebook use GitHub Enterprise (or similar tools like GitLab, Bitbucket, and Azure DevOps) to manage software development, configuration management, security, CI/CD and audit trails.	We implemented a small easy to do project which involved the use of GitHub, thereby directly utilizing the tool with a “developer”.	Found difficulty using GitHub using prompts, so resorted using the GUI interface.	Working with GUI interface eventually made using the prompts easier.	Work on the GitHub prompts, work. Work on other CM tools by exploring other tools.
Project Planning – Top-Down Plan, Bottom-Up Plan. Planning components – Risk, resource, schedule, communication, configuration management, quality, scope and supplier planning. Cost and effort estimates are calculated. Work Breakdown Structure is made.	A government agency, in collaboration with private firms, is planning a metro rail system in a major city to ease traffic congestion. The project involves multiple stakeholders, complex scheduling, risk management, resource allocation, and supplier coordination and project planning is done.	We talked about various big scale, heavy stake projects that would have had rigorous project planning. We read project plans for small construction projects, software projects to understand the topic more.	Was held back when supplier and risk planning were to be made.	Watched tutorials and snippets on how to brainstorm and plan a project.	Read more project plans, project proposals and find more use cases for the same.

Project planning techniques – Critical Path Method and Goldratt's Critical Chain Method. The main difference is that the latter allocated buffer is only provided for uncertain tasks as opposed to allocation buffers for any tasks. Project planning accounts for 10% of the project effort.	A city government and a private healthcare provider are collaborating to build a multi-specialty hospital with advanced medical facilities. This project requires careful planning to ensure timely completion, manage resources, and handle risks effectively with the project following Critical Path Method (for absolute certain tasks) and Goldratt's Critical Chain Method (for uncertain tasks) for planning and execution.	We talked about the various certain and uncertain tasks engulfing a project which results in different plan method being chosen.	No challenge faced.	Learnt more on Critical Path Method and Goldratt's Critical Chain Method (YouTube) and by reviewing various project plans.	Read chapter 5 and 6 once more for in depth understanding of all the concepts and topics covered.

Final Reflections

Overall Course Impact:
This course has provided a strong foundation in project planning and configuration management, equipping learners with both theoretical knowledge and practical skills. Key skills developed Project planning and management, Configuration Management Practices, Version Control Proficiency, application of project planning techniques and understanding the Version Control Tools.

Application in Professional Life:
The knowledge and skills acquired in configuration management, version control, project planning, and scheduling techniques are essential for various roles in software development, DevOps, IT project management, and large-scale infrastructure projects. The course would prove to be useful and give a leg up in the corporate world. The practical knowledge garnered would prove very useful.

Peer Collaboration Insights:
As my peer had worked in a software company, his insights proved extremely useful in understanding various software concepts. The learnt theory was further enhanced and supplemented by a practical example given by my peer. The live use of GitHub, looking up project plans and proposals reinforced the theoretical aspects of the topics read from the textbook.

Personal Growth:
I learnt on various software project management topic namely project planning and configuration management and understood that creation and management of software is extremely complex. I look forward to learn more topics on the same so that I am better equipped to handle real like software applications.