

Learning Journal 3

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Course: [Software Project Management(SOEN 6841 W 2244)]

Journal URL: [<https://github.com/Bailin-Xu/Class-6841>]

Dates Range of activities: [0210-0223]

Date of the journal: [Last update on 23 Feb]

Key Concepts Learned:

From chapter6:

Software Project Planning:

Software project planning refers to the systematic activity of outlining all necessary actions, resources, timelines, and budgets required for successfully completing a software project. It is considered the most time-consuming aspect of project management and occurs continuously from initial conception to final system delivery, requiring regular adjustments as new information emerges.

Work Breakdown Structure (WBS)

A Work Breakdown Structure is a systematic approach to decomposing a large, complex project into smaller, manageable tasks. WBS clearly identifies task relationships and dependencies, indicating sequencing and resource requirements. This structure is critical for effective resource allocation, scheduling, and monitoring project progress.

Milestones and Deliverables

Milestones are significant checkpoints in the project schedule used to assess and measure progress, such as completion of critical phases or approval of key documents. Deliverables, on the other hand, are concrete outputs or products that are completed and provided to the client at designated points in the project lifecycle, demonstrating tangible progress and fulfillment of requirements.

Critical Path Method (CPM)

The Critical Path Method is a project management technique that identifies the sequence of dependent tasks forming the longest pathway through the project, determining the minimum completion time required. Tasks along this critical path have zero slack (float), meaning delays in these tasks directly impact the project's final completion date, thus guiding project managers to prioritize resources effectively.

Iterative vs. Waterfall Planning

Iterative planning refers to a cyclical approach in software project management, dividing the overall project into multiple iterations, each developing and delivering incremental parts of the final product, allowing flexibility and continuous improvement. In contrast, waterfall planning adopts a linear, sequential model where each phase must be completed fully before moving to the next, limiting the ability to adjust scope or incorporate client feedback during the process.

Application in Real Projects:

The In developing a crowdsourced mental health data platform aimed at identifying barriers in accessing mental healthcare in Canada, **Software Project Planning** ensures systematic organization by clearly defining necessary tasks, allocating appropriate resources, scheduling timelines, and budgeting effectively from initial concept to deployment. Using a **Work Breakdown**

Structure (WBS), the complex project is decomposed into smaller, clearly defined tasks such as user interface design, database management, AI integration, and privacy compliance, facilitating better resource allocation and progress tracking.

Throughout the project lifecycle, **Milestones and Deliverables** are set to track progress clearly, such as the completion of the user feedback module or the successful deployment of the secure data analysis functionality. These checkpoints provide stakeholders with tangible evidence of advancement and ensure adherence to project goals. The **Critical Path Method (CPM)** identifies essential tasks, like AI-driven data processing and secure data collection infrastructure setup, whose timely completion directly affects overall project timelines, guiding the project manager to prioritize these activities to avoid delays.

Considering the evolving nature of user requirements and technological advancements, an **Iterative planning** approach is preferred. It allows the project team to release incremental versions of the platform, collect feedback, and continuously refine the system, thereby better addressing patient pain points and adapting to the complexities of mental health service accessibility.

Conversely, a **Waterfall** approach would be less suitable due to its rigidity and limited scope for incorporating feedback and adjustments during development.

Peer Interactions:	Challenges Faced:	Personal development activities:	Goals for the Next Week:
Our team made a lot of discuss and finally assign different parts of next deliverables to each member, and I got the Risk Assessment and Mitigation part.	I find it hard to relate the concepts learned in class and textbooks to the real projects, and there are a lot of controversy in risk management and different risk response strategies.	Review for the midterm exam, went over all the ppts and textbook chapters.	Refine Risk Assessment and Mitigation part, and mix it into the whole deliverable.
Our team made a lot of preparation for the project pitch, and finally decide who to do the presentation, and we created script for him.	A lot of deliverables in the coming deliverable, everyone in group should at least do a single part, it is hard to connect them in a whole and make all parts in a same pace	Started to do the Risk Assessment and Mitigation, searched for different risk response strategies and tried hard to distinguish them	Prepare for pitch, practice and do a mock pitch within our group
I discussed the potential problems that might appear in mid-term with my team members.		Take part in all group discussion	Enhance communication efficiency in our group