Explain the industry standards in software project management including PRINCE2, ISO 10006, ISO 12207 along with the SEI's CMMI methods.  Integrate relevant standards into a project.

Our software project integrates relevant standards, including PRINCE2, ISO 10006, ISO 12207, and CMMI, to deliver high standards of quality and process improvement throughout the project lifecycle.

We followed PRINCE2's principle of defining project stages. In the planning phase, I identified the MVP and core features, creating wireframes. The execution phase involved implementing the features, while the testing phase we focused on performance. (Kloda, 2025a; Kloda, 2025b).   
As Project Owner, I defined the product vision and prioritized the backlog, ensuring value delivery to users. Martin, as Scrum Master, facilitated the Agile processes and addressed any roadblocks to keep the team productive.

We applied “Learn from Experience" principle which aligns well with CMMI's emphasis on continuous improvement. We organized retrospective and planning sprint meetings. (Kloda, 2025c) It helped us focus on what went well, what didn't go so well, and what actions can be taken to improve in the next iteration.

We followed practice of creating Pull Requests it triggered a code review process for other team members to examine the changes for quality and bugs before they are merged.  This relates to ISO 10006 (Quality Management) and CMMI (Process and Product Quality Assurance) by emphasizing the importance of ensuring the quality of the code. (Kloda, 2025d)

Phase 1: Planning

During the planning phase of our movie recommendation project, we followed principles outlined in ISO 12207 (Software Life Cycle Processes). I created wireframes and developing design ideas using Figma.In brief I defined the scope, project MVP, core features and timeline phases.   
We focus on common understanding of the project and prioritized list of the features you plan to implement. We identified user need creating user stories. We determined our core requirements and eventually identified a dataset that contained keywords for each movie, which would be valuable for our recommendation algorithm. We also determined that we’ll need to fetch movie posters from TMDB based on movie titles.

Phase 2: Algorithm Development

We did research about different types of recommendation algorithms and wanted to focus on content-based filtering and TF-IDF. However, because of human resources and lack of time required for similarity calculation, we opted to explore the capabilities of a Large Language Model (LLM) for our movie recommendation project.

Phase 3: Integration

Develop a user-friendly interface that allows users to interact with the movie recommendation system. Connect the front-end interface to backend.

Phase 4: Testing

We used pytest and jest testing to test individual components. (Kloda, 2025e) Evaluated how the system performs under different loads (e.g., how quickly recommendations are generated). We also used postman to test APIs and pdb – python debugger to identify and resolve issues in recommender algorithm. (Kloda, 2025f)

Phase 5: Deployment

We planned to final deployment, ensuring that the product can be launched.

# References

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