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Course: SOEN 6841 Software Project Management

Journal URL: <https://github.com/Shariar-007/SOEN-6841-Software-Project-Management>

Dates Range of activities: Oct 10 - Nov 22

Date of the journal: 22-11-2024

Key Concepts Learned:

- Recognised the project's features and description, giving particular attention to the software project.
- Educated about software project management practices and stressed the importance of integrating tools, processes, people, and technology.
- Gained knowledge about stakeholder identification, feasibility studies, and project launch, as well as the purpose and content of project charters.
- Acknowledged the procedures for starting a project and understood the documentation outlining its goals and scope.
- Compared effort estimate methods like expert judgement and parametric estimation with cost estimation tactics like Function Point Analysis.
- Acknowledged the usefulness of resource estimation methods and the significance of schedule estimation methods in project planning.
- Acquired understanding of Configuration Management Systems and the importance of their constituent parts in software development.
- Recognised the fundamental components of a software project plan, understanding the various types and their goals.
- Emphasised the importance of project data, useful management strategies, and the monitoring and control of project parameters.
- Examined strategies for identifying and fixing schedule and budgetary irregularities.
- Acquired knowledge of risk management strategies to mitigate the impact of deviations.
- Stressed the necessity to release resources for optimal project performance, acknowledging the importance of project data for project management activities.
- In addition to regularly evaluating and updating project data and procedures for continuous development, I also learnt how to obtain project data and emphasised the need of data security and privacy.

Application In Professional Life:

We embarked on an innovative project titled "**Food Expiration System**" and developed a poster on "**How Can I Best Deal with Project Teams Larger Than Twenty**". Grasping the concepts learned in our course, we applied them to craft a comprehensive project proposal:

Problem Identification:

Epidemic of Food Waste:

- Every year, more than 1.3 billion tonnes of food—or one-third of all food produced—are wasted worldwide.

- Due to inadequate inventory control and a lack of knowledge about expiration dates, households and grocery stores are the main sources of food waste.

Insufficient Knowledge of Expiration Dates:

- Perishable goods kept in cupboards or refrigerators are frequently overlooked by consumers.
- Large inventory expiration dates are difficult for grocery retailers to keep track of, which results in losses.

Absence of Useful Tools:

- Current solutions are ineffective (e.g., no expiration alerts) or excessively laborious (e.g., handwritten lists).
- Businesses and consumers cannot keep track of food expiration dates using a centralised, automated system.

Environmental Impact:

- Methane, a powerful greenhouse gas, is produced when food rots, thus food waste greatly increases greenhouse gas emissions.
- Inefficient methods of production and disposal put a pressure on natural resources and worsen climate change.

Economic Costs:

- Every year, households lose hundreds of dollars as a result of throwing away food that has gone bad.
- Because of unsold and spoilt goods, grocery stores lose out on prospective sales.

Missed Redistribution Opportunities:

- Many people in need go hungry because expired but still edible food is not efficiently sent to food banks or donation programs.

Absence of Integration with Modern Technology:

- A lot of food management systems do not take advantage of technology like AI, IoT, and barcode scanning to improve and streamline tracking procedures.
- Usability is limited by a lack of interaction with e-commerce platforms and smart home gadgets.

An inconvenience in day-to-day living:

- Food inventory management done by hand takes a lot of time and is prone to mistakes.
- Customers frequently lack culinary inspiration, which results in underutilised ingredients that eventually go bad.

An automated, user-friendly, and scalable system is desperately needed to track food expiration, cut waste, and enhance inventory management for businesses and consumers alike. Additionally, this approach can make a substantial contribution to community welfare and environmental sustainability.

key objectives of Food Expiration System:

- Reducing Food Waste
- Increasing Savings
- Improving Inventory Management

- Promoting Sustainability
- User Convenience
- Leveraging AI for Insights
- Community and Industry Impact
- Scalability and Future Proofing

The purpose of the Food Expiration Alert System project is to create an intelligent and automated system that will help businesses and households manage their inventory more efficiently, cut down on waste, and keep an eye on food expiration dates. Through emails, mobile notifications, or smart home integrations, the system seeks to proactively notify customers of impending expiration dates so they can take prompt action. It makes use of contemporary technology like AI for meal planning and personalized recommendations, IoT for smart kitchen integration, and cross-platform usability for accessibility. In addition to helping consumers save money by making the most of already-existing supplies, the project promotes sustainability by minimising food waste and the environmental impact it causes. It also helps companies track products that are about to expire, manage large inventories, and arrange for discounts or donations. This system seeks to develop a sustainable, effective, and scalable solution for responsible food consumption and management with an emphasis on user-friendly interfaces and data-driven insights.

Cooperative Knowledge:

In the software project management course, peer collaboration was very beneficial in several significant ways. Through discussions and group projects, peer collaboration also fostered a pleasant learning environment where we could benefit from each other's successes and failures, adding valuable knowledge to the course's academic components. Collaborating with peers encouraged accountability and responsibility in the team. Here are the things I've learnt from working with others:

1. Reflection and Guidance
2. Invited speakers and expert panels
3. Tools for Internet-Based Collaboration
4. Group Workshops and Simulators
5. Problem-Solving Activities and Case Studies
6. Group Initiatives
7. Group discussions and brainstorming

Working together throughout the course allowed us to create efficient channels of communication and have a single location for all of our contributions. Peer collaboration enhanced my overall educational experience by enabling me to share my knowledge, engage in interactive learning, and get assistance from others.

Personal Development:

Collaborating in groups improved my ability to work well with others in addition to helping me comprehend novel concepts. Additionally, it gave me a chance to hone my organizing skills. Scheduling with colleagues proved to be a significant challenge in project management. I frequently had trouble juggling several obligations at once, which occasionally caused scheduling issues.

I've made significant improvement in a number of important areas thanks to the software project management course. First off, I now have a much better understanding of the principles of

project management from start to finish. I've gotten good at planning and carrying out projects using tools like risk matrices and Gantt charts. My ability to handle risks has improved as a result of learning useful techniques to reduce uncertainty. Working with peers has improved my communication and teamwork skills. Last but not least, I now understand stakeholder management, which is essential to project success. All things considered, this course has greatly advanced my professional development and given me the tools I need to manage software projects effectively.

Developing Bridges to Achievement:

To effectively manage any project, it is essential to understand these core concepts. I want to express my gratitude to Professor Joumana Dargham for her outstanding instruction in this course and her unwavering commitment to its quality. I also want to express my gratitude to the teaching helpers for their steadfast dedication, which has greatly aided all of the pupils. Together, they have significantly enhanced the educational experience, encouraging both achievement and personal development.

