Farm2Fork
Project Proposal

Version 1.1

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IST 659 Team Project Proposal

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Introduction:

Supply chain management has become an important and crucial part of today's fast-paced and complicated food system. The path food takes from farms to consumers plates has lots of moving parts and very specific storage requirements that need to be met while often being on a time limit due to the perishable nature of food products. We plan to make the process of bringing food from farm to table as seamless as possible for farmers and food processors with our application Farm2Fork which would optimize supply chain management with a robust Database Management System.

Article Review:

Why is Supply Chain Management Software Essential for Your Organization - California Business Journal https://calbizjournal.com/why-is-supply-chain-management-software-essential-for-your-organization/amp/

Supply Chain Management has a large impact on companies that have physical products and taking that problem away from them and giving them an easy seamless way to solve that problem is needed and could have lots of demand.

Project Description:

Our supply chain management application for the food industry has these features to make out app appealing for potential users:

Seamless Farmer-to-Buyer Connection: Farm2Fork provides a digital marketplace where farmers can easily list their harvests, and buyers can bid on these crops based on weight and cost, tailored to their specific requirements.
Diversified Product Offerings: The platform supports various products, from fresh produce like tomatoes to raw materials for food processing. It enables buyers to transform these ingredients into a wide range of consumer products, all while keeping a structured database of product types and raw materials.
Warehouse Management: The application tracks the inventory in warehouses and provides real-time information on which warehouse holds which product. This ensures efficient storage and distribution, with warehouse data managed by the integrated DBMS.
Supply Chain Transparency: Farm2Fork offers full transparency by tracing the journey of each product, from the farm to the market. Users can easily determine the origin of products and their transformation along the supply chain, thanks to the DBMS's data tracking capabilities.

These features could lead to many benefits for users such as: increased supply chain efficiency, increased trust and transparency between farmers, buyers, and consumers, easy customization for buyers to tailor everything to their exact needs, and cost savings by merging most of the supply chain issue into one efficient application.

Implementation Details:

Front-end Framework: The front-end of the application will be developed using the Django framework, a Python-based web framework that is both flexible and secure. We will utilize Django's templating engine to create dynamic and responsive user interfaces.
Back-end Framework: Django will also serve as the back-end framework, enabling efficient data processing and routing. Django's built-in security features will be employed to create a secure platform.
Database Management: Microsoft SQL Server will be used as the database management system to store and manage the project's data. SQL Server offers robust data handling capabilities and integrates with Django through the Django database connector.
Version Control: Git will be used for version control, allowing for collaborative development and tracking of code changes.

Expected Outcome:

The expected outcome of this project is a Python-based application supply chain management application that can easily be used by farmers and food processing companies to sell, buy, transport, and store food products in an easy, efficient and streamlined process. The application will be integrated with a robust database, making getting information and data about products quick and easy for users.

Citations:

- “Food supply chain management and logistics: From farm to fork” by Samir Dani , Kogan Page Publishers,2015.