IT214: Database Management Systems

Database Project

FarmConnect: A Farmer-Buyer Bidding System

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1 Objective

- To create individual farmer accounts displaying their past harvest deals, present crop information, and profitability reports.

- To connect buyers and farmes directly, removing the middleman of marketing yards and benefiting farmers.

- To provide a database of marketing yards showing current price of individual agricultural items.

- To suggest profitable crops for farmers based on past reports and current trends.

- To predict profitable crops for future growth based on current crops grown.

- To enable buyers to select farmers based on crop, quantity, price range, and location.

- To allow farmers to get advance booking for specific crops from companies.

- To provide a bidding system that replace middleman bidding at marketing yards.

- To ensure data security and implement a maintenance plan.

2 Description

- FarmConnnect will be a digital platform that connects farmers and buyers through a bidding system, replacing the traditional middleman of marketing yards. The platform aims to help farmers get a fair price for their products while enabling buyers to easily find and purchase the agricultural products they need.

- The system allows farmers and buyers to create individual accounts where they can view and manage their inforamation. Farmers can add information about their past harvest deals, including the quantity of crop harvested, selling price of crops, profit-loss generated, and cost incurred in growing crops, as well as the crop presently sown in their field. Buyers can add information about the crops they want to buy, including crop name, quantity, and price range.

- FarmConnect also provide a database of marketing yards that shows the current price of individual agricultural items, which is updated regularly.Additionally, the system can give suggestions to farmers on which crop to grow for more profit based on previous year annual agriculture reports. The system can also predict which crop will be profitable in the future based on the present grown crops of farmers.

- From a buyer's perspective, they can select any number of farmers from a list provided by the system based on their query, including the location of the farmer. Buyers can also request to negotiate for the price, and if the farmer agrees at a particular price range, a date is fixed for selling their harvest. The nearby marketing yard is selected to fetch the farmer's product.

- The system computes statistical data of last year's agriculture report for crops and currently grown crops. It updates the price of different agriculture products based on the current market status. The system generates a list of nearby buyers for farmers, and vice versa.

3 Tentative list of Queries

3.1 From Farmer Side

- List profitable crops to grow for the current year.

- List nearby area buyers and their requirements.

- List company-wise needs of crops for advance booking

- Add harvested crop details, cost, and profit-loss to individual farmer profile.

- List crops that have been booked in advanced by companies.

3.2 From Buyers Side

- Add crop name, quantity, and price range to the system.

- Generate a query to negotiate at a particular price and add a notification to the farmer's profile if selected.

- Add price during negotiation from both the farmer's and buyer's side.

- Add a fixed deal date of other farmers for planning.

3.3 From Admin Side

- Compute statistical data of last year's agriculture report for crops.

- Compute statistical data of currently grown crops.

- Update the prices of different agriculture products based on the current market status.

- Generate a list of nearby buyers for farmers and vice versa.