

PROJECT

Topic : DairySync – A Dairy Distribution System with recommendation and analytics

DAIRY DISTRIBUTION SYSTEM

Dairy Distribution System is a software solution for the dairy society to manage and collect information of dairy farmers and manage the orders of customers in order to make the process more optimize and effective manner. In this project sellers can improve their milk production through recommendation messages which specify their drawback and deficiencies of their cattle and solve it by suggesting appropriate veterinarian.

Functionalities

Admin

- **Register Management:** Give authentication messages while registering a seller or customer.
- **Order management:** monitor order status, delivery and billing
- **Inventory management:** Monitor dairy product give restoke request to sellers if necessary
- **Recommendation:** Provide a recommendation message when lower the quality of milk as comparing with the cattle (suggest to a veterinarian or indicating deficiency of cattle)
- **Notification :** send automated updates to sellers and customers
- **Data Analytics:** visualize quality of product with respect to sellers through charts and graphs

Sellers

- **Profile management :** manages personal details, user id and password.
- **Notification :** receive updates about collection and payment details
- **Recommendation:** receive a recommendation message when lower the quality of milk as comparing with the cattle.
- **Product collection:** can view daily product collection details

Customer

- **Login and Registration management:** Customer obtain alert messages while registering
- **Billing and Payment:** Can make payment and view billing of the payment
- **Customisation :** order dairy product with customised quantity, types and delivery preferences resulting customer satisfaction.

Main project functionality

Admin

- **Register Management:** Give authentication messages while registering a seller or customer.
- **Inventory management:** Monitor dairy product give restoke request to sellers if necessary

- **Recommendation:** Provide a recommendation message when lower the quality of milk as comparing with the cattle (suggest to a veterinarian or indicating deficiency of cattle)
- **Notification :** send automated updates to sellers and customers
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Sellers

- **Notification :** send automated updates to sellers and customers
- **Recommendation:(Machine learning)** receive a recommendation message when lower the quality of milk as comparing with the cattle.

Customer

- **Login and Registration management:** Customer obtain alert messages while registering
- **Billing and Payment:** Can make payment and view billing of the payment
- **Customisation :** order dairy product with customised quantity, types and delivery preferences resulting customer satisfaction.

Modules:

1. Admin

- **User management:** manage all users accounts, give permissions, register sellers.
- **Farmer management:** register, modify and monitor farmer details including farmer name, milk quantity ,milk quality, payment to that product , recommendations etc..
- **Customer management:** monitor and manage customer orders, handle billing and receipts.
- **Product management:** keep track of dairy products, collection, restocking, and availability.
- **Report and analysis:** Analyse quality of milk after testing and generate report. Also generate report of collection details and income obtained
- **Notification system :** inform farmers and customers through automated notification alerts.
- **Security and settings:** To manage security and privacy on data.
- **Complaints and feedbacks:** can view complaints and feedback and give appropriate response for those reply.(rating)

2. Seller

- **Login :** Can login securely
- **Personal details management:** Maintain personal information, cattle information
- **Product management:** can add modify delete corresponding dairy product details like types, quantity etc.

- **Cattle management:** can add modify and delete corresponding cattle details like breed type, ear tag details, colour, health, weight, milk obtained etc.
- **Notification :** receive notification about collection ,orders, payment , and suggestions to improve milk quality and quantity if indicate any deficiency.
- **Complaints and feedbacks:** can give complaints and feedback (rating)

3. Customer

- **Registration and login:** create and manage accounts, login and maintain profile
- **Order management:** Place orders for products,specify quantity
- **Billing and payment :** make online payment, view receipt, receive notification
- **Customer support:** access for enquiries, contact, feedback and complaints.
- **Notifications:** Notify after order, payment and dispatch.
- **Complaints and feedbacks:** can give complaints and feedback (rating)

Technologies:

- Frontend :- React.js
- Backend :- Python
- Database :- MongoDB
- Framework :-React

Advantages of this project are:

Efficiency: Collection , order and distribution of milk and milk products involve streamline process. It reduces the user effort.

Transparency : Making payment and finance details are open to all users and farmers(sellers) can compare there details with others.

Financial management : Tabulate daily payment and income of products and are visible to all users.

Business growth : supports the growth of dairy society and eradicate unemployment by encouraging income through dairy farming. Also gives all helps and tools for growth.

Quality ensurance: Ensure product quality by regular testing and enable higher customer trust.

Data security and privacy : Ensure the Security like login details and privacy from others to know about mistakes like less quality, health issues of resources and recommend appropriate measures to improve quality.

Customer satisfaction: enable customers to ensure fast ordering, receive notification and notify the if there is less availability of products.

Moreover dairy distribution system improves inventory management , minimize wastage of products, digitalize processes among farmers, and make them recognising demand of their products, giving rewards to best farmers etc.

This project should bring a positive environmental impact through most sustainable and distribution practices.

Reference

- [chatGPT](#)
- [Youtube](#)
- [video](#)

Github link :