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Interlink Platform for Dairy Importer and Seller

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Abstract*: The dairy supply chain traditionally relies on multiple intermediaries, which increases product cost and reduces profit margins for producers. This paper proposes a web-based platform that directly connects dairy producers with importers or consumers through an interactive bidding system. Sellers can list their products, and buyers place bids based on their preferred pricing. Sellers then choose the most favorable bid, and an order is created accordingly. The platform also features a transparent feedback system that allows buyers to rate and review sellers, fostering accountability and informed purchasing decisions. The system is developed using PHP, MySQL, Bootstrap, and JavaScript technologies, offering an accessible and secure interface for both parties. This research outlines the platform's design, implementation, and potential to streamline the dairy trade, reduce costs, and empower local producers through direct market access.

Keywords: Dairy, Importer, Online Platform, Seller, Interlink

I. INTRODUCTION

The dairy industry is a cornerstone of the agricultural economy in many countries, contributing significantly to both food supply and employment. However, traditional dairy supply chains are often plagued by inefficiencies, including reliance on intermediaries, limited market access for small-scale producers, and lack of price transparency. These issues often result in reduced profits for producers and inflated prices for consumers.

With the advancement of digital technologies, there is a growing opportunity to modernize this sector through e-commerce and platform-based models. The proposed Interlink Platform for Dairy Importer and Seller is a web-based system designed to address these inefficiencies by creating a direct connection between dairy producers and buyers. By integrating features such as real-time bidding, order management, and user feedback, the platform introduces a fair, transparent, and efficient trading environment. This paper explores the design, development, and impact of such a platform, highlighting how it can transform dairy commerce and support the livelihoods of farmers.

II. OBJECTIVES

The main goal of this research is to develop and evaluate a digital platform that facilitates direct interaction between dairy sellers and buyers. The specific objectives include:

1) To eliminate middlemen from the dairy trade and enable direct buyer-seller interaction.
2) To develop a real-time bidding system where sellers can list products and buyers can competitively bid on them.
3) To design a secure, scalable web application with separate dashboards for buyers and sellers.
4) To implement an order management system that automatically creates orders upon bid acceptance.
5) To enable a feedback and rating system that promotes seller accountability and helps buyers make informed decisions.
6) To improve market accessibility for small and medium dairy producers.

III. LITERATURE RIVIEW

Dairy products found their way into global market thanks to the reforms and the ensuing of economic liberalization. The Indian dairy industry has grown impressively, driven supply, a growing home market, and an emphasis on supplying the growing demand of demand for dairy products abroad. If this growth rate is maintained, India may be able to actively pursue dairy exports. Forecasts for local demand support this optimistic picture by showing that India could increase its exports of dairy products. It is clear that India’s geographic location makes it advantageous to supply milk to neighbouring countries milk deficient regions. It is projected that the need for dairy products in these underdeveloped nations would increase offering India a chance to take use of its advantageous location. India must prioritize raising the calibre and hygienic standards of dairy products as well as increasing the productivity of milk production and processing if it hopes to fully benefit of milk production and processing if it hopes to fully benefit from these advantages. The proposed Interlink Platform for Dairy Importer and Seller is a web-based system designed to address these inefficiencies by creating a direct connection between dairy producers and buyers.

By integrating features such as real-time bidding, order management, and user feedback, the platform introduces a fair, transparent, and efficient trading environment. One of the core goals is to reduce the dependency on middlemen by facilitating direct communication and transactions between dairy producers and buyers. This not only minimizes product markups but also increases the profit margin for producers. The platform should have an intuitive user interface that can be easily navigated by both tech-savvy and non-technical users. This includes simplified navigation, clear bid placement features, and seamless order tracking.

IV. METHODOLOGY

The platform was developed using a structured software development lifecycle (SDLC) approach, involving the following stages:

A. Requirement Gathering

Interviews with dairy producers and buyers were conducted to understand user expectations. Functional requirements like product listing, bidding, order generation, and feedback were defined.

B. System Design

An entity-relationship model and use case diagrams were created to design the platform architecture. A three-tier architecture (frontend, backend, database) was chosen for scalability and modularity.

C. Development

- Frontend: Built using HTML, CSS, Bootstrap, and JavaScript to ensure a responsive user interface.
- Backend: PHP was used for server-side logic and session management.
- Database: MySQL was used to store users, products, bids, orders, and feedback.

D. Testing

Functionality was tested through unit and integration tests. User acceptance testing was done with sample users to gather feedback on usability and performance.

E. Deployment and Evaluation

The system was deployed on a local web server (XAMPP) and evaluated based on performance, user satisfaction, and system reliability.

V. ADVANTAGES

1) Direct Trade: Eliminates intermediaries and reduces cost for buyers while increasing revenue for sellers.
2) Real-Time Pricing: The bidding mechanism ensures dynamic and fair pricing.
3) Transparency: User reviews and ratings help maintain trust and promote quality assurance.
4) Accessibility: A simple, mobile-friendly interface makes it accessible for rural producers.
5) Automation: Order generation and bid tracking are automated, reducing manual work.
6) Market Expansion: Sellers gain access to a broader market beyond their local area.

VI. DISADVANTAGES

1) Digital Literacy Barrier: Users unfamiliar with technology may find it difficult to use the platform.
2) No Integrated Payment System: Transactions need to be completed outside the platform, reducing convenience.
3) Risk of Fake Bids: Without verification, some users may place non-serious or fraudulent bids.
4) No Delivery Tracking: Product delivery and logistics are not handled within the platform.
5) Security Risks: Without advanced encryption and SSL, data breaches may occur.
6) Internet Dependency: The system requires stable internet connectivity, which may not be available in all rural areas.

VII. CONCLUSIONS

The Interlink Platform for Dairy Importer and Seller provides a modern, efficient, and transparent solution to traditional dairy trade challenges. By enabling direct interaction between producers and buyers, the platform promotes fair pricing, eliminates unnecessary costs, and empowers local producers.

The inclusion of a bidding system and feedback mechanism enhances competitiveness and trust. Although the current version has some limitations—such as the lack of integrated payment and delivery systems—the core structure offers vast potential for future enhancements. As digital infrastructure continues to improve, such platforms could play a pivotal role in transforming agricultural commerce and supporting inclusive rural development.

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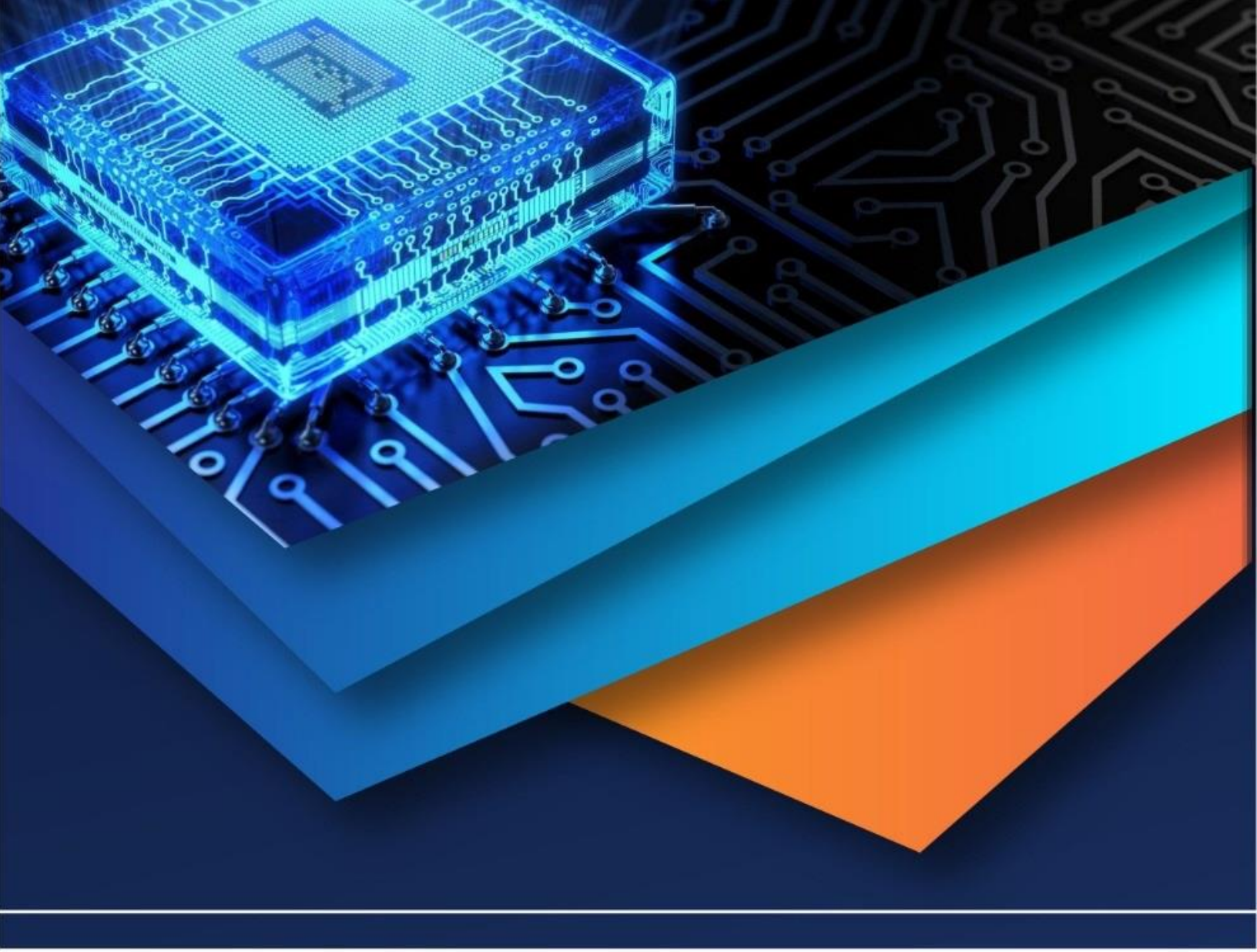

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