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AgroMart: A Digital Platform for Agricultural E-Commerce

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Abstract

AgroMart is a web-based e-commerce platform developed to assist farmers in accessing essential agricultural resources and services digitally. This project focuses on enabling farmers to buy farming equipment, seeds, and fertilizers while also providing crop consultancy and a directory of agricultural agencies. The system is designed with a user-friendly front-end using HTML and CSS, backed by Spring Boot and SQL for server-side and database functionalities. This paper presents the project's objectives, system architecture, key implementation strategies, and its benefits for rural agricultural communities.

Key Words: agriculture, e-commerce, Spring Boot, SQL, HTML, CSS.

1. INTRODUCTION

The agricultural sector in India faces challenges due to limited access to modern tools and services, especially in rural areas. AgroMart aims to bridge this gap by introducing a digital platform tailored for farmers. By digitizing the process of accessing agricultural resources, AgroMart promotes transparency, efficiency, and empowerment.

2. SYSTEM OVERVIEW

The AgroMart system is divided into frontend, backend, and database components. Additional functionalities include modules for soil testing, weather forecasting, training for farmers and agro students, and a blog section to keep users updated with agricultural news and best practices.

3. IMPLEMENTATION DETAILS

Frontend: HTML and CSS are used for creating a responsive and accessible user interface.
Backend: Spring Boot handles the server logic, APIs, and interaction with the SQL database.
Database: SQL is used to manage product listings, user details, and order information.
Modules include: Product Browsing, Consultancy Contact, Crop Information, and Agriculture Agencies Listing.

Additional Features:
- Soil Testing Module: Helps users understand soil health and suitability.
- Weather Forecasting: Provides timely updates for crop planning.

- Training Modules: Includes separate training resources for farmers and agricultural students.
- Blogs: Platform to publish expert articles and user experiences.

Table -1: Comparison between Traditional vs Digital Agricultural Access

Criteria	Traditional Method	AgroMart Platform
Accessibility	Limited to local markets	Available online 24/7
Information	Word-of-mouth or local experts	Expert directory and crop info
Reach	Local vendors only	Pan-regional access

4. CONCLUSIONS

AgroMart successfully demonstrates a scalable digital approach to modernizing agricultural resource access. It simplifies the buying process, brings expert advice closer to farmers, and connects users with reliable agencies. This model can be expanded to include additional features such as mobile compatibility and AI-driven crop recommendations.

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REFERENCES

1. FAO. (2021). E-Agriculture in Action: Rural advisory services going digital. Food and Agriculture Organization of the United Nations.
2. Indian Meteorological Department. (2023). Weather Forecast Services for Agriculture. Government of India.
3. ICAR. (2022). Agricultural Education in India: Challenges and Prospects. Indian Council of Agricultural Research.
4. Krishi Vigyan Kendra. (2023). Role of KVKs in Training and Empowering Farmers. Ministry of Agriculture.
5. Soil Health Card Scheme. (2023). Department of Agriculture, Cooperation & Farmers Welfare.