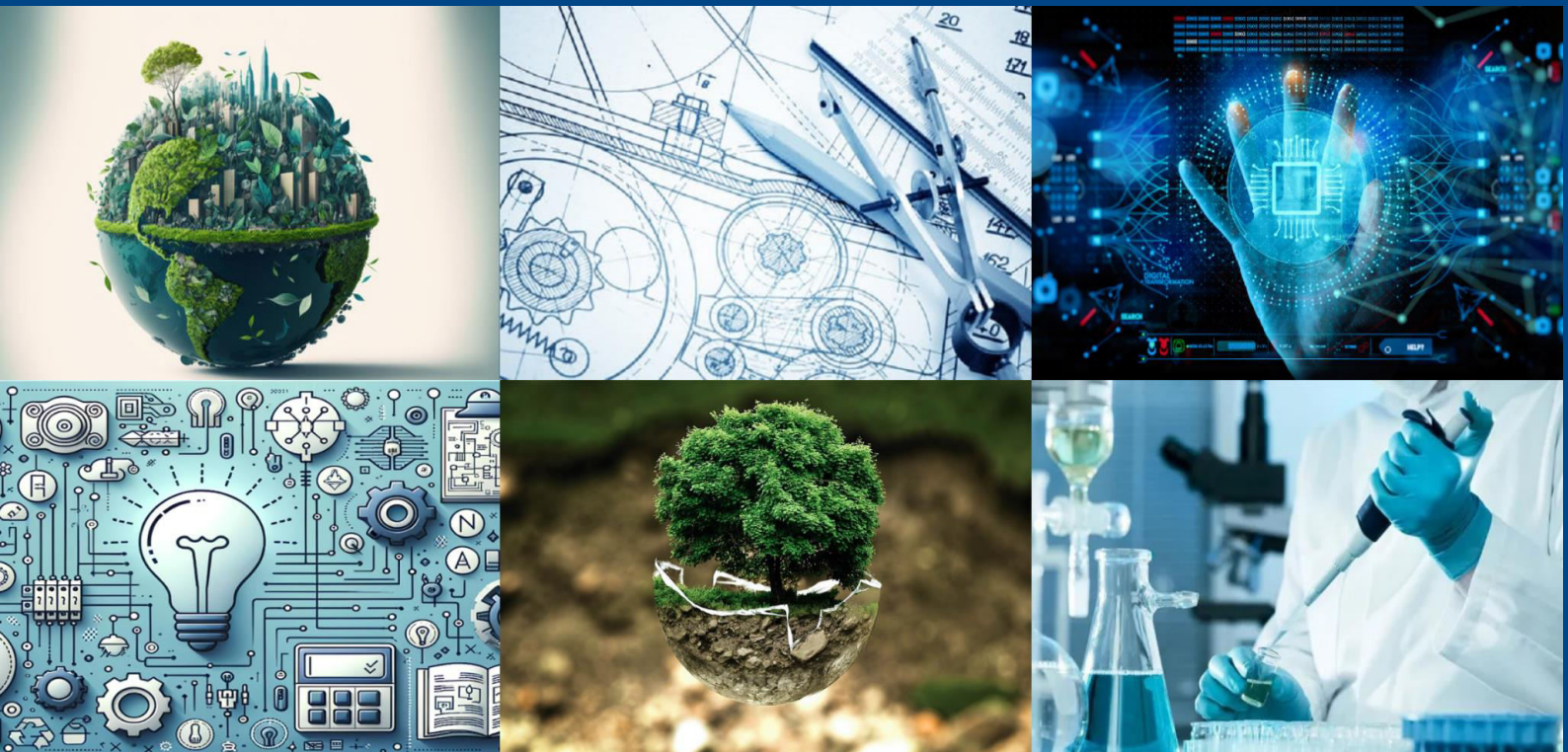




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Agroguide: The Farming Techniques App

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ABSTRACT: This paper presents Agro Guide, a mobile application designed to facilitate efficient agro -data management using Java and XML, with seamless integration to Firebase, a real-time database platform.

Agro Guide aims to empower farmers, agronomists, and stakeholders in the agricultural domain by providing a user-friendly interface for data input, analysis, and retrieval..Index Term.

KEYWORDS: Android application, local businesses, SmartCity, service marketplace, business promotion

I. INTRODUCTION

The Agro Guide App aims to improve the productivity and income of farmers by providing them with timely and relevant agricultural advice. The app will utilize machine learning algorithms to analyze weather data, soil conditions, and crop yields to provide personalized recommendations.

Problem Statement

Lack of Access to Information: Farmers often lack access to timely and reliable agricultural information, such as weather forecasts, pest and disease control, crop management, and market prices.

Climate Change & Weather Uncertainty: Many farmers are not adequately prepared for unpredictable weather patterns, which can severely impact crops and productivity.

Limited Awareness of Best Practices: Many farmers are unaware of modern farming techniques, new crop varieties, or sustainable practices that could improve their yield and income..

Solution (AgroGuide App)

Best Practices & Education: The app will offer tutorials, videos, and guides on modern farming techniques, crop management, sustainable practices, and new agricultural technologies. Farmers can learn about organic farming, soil health, pest control, water management, and more.

Weather Forecasting & Alerts: With integrated weather forecasting, Agro guide will provide real-time weather updates, rainfall predictions, and climate alerts, helping farmers make proactive decisions regarding irrigation, planting schedules, and harvesting..

Implementation

AgroGuide is a mobile app designed to provide agricultural guidance to farmers. The app aims to offer personalized advice on crop selection, soil preparation, irrigation, pest management, and other critical aspects of farming..

II. SYSTEM REQUIREMENTS / TOOLS AND TECHNOLOGY

Software requirements:-

Operating System : Windows 10/11



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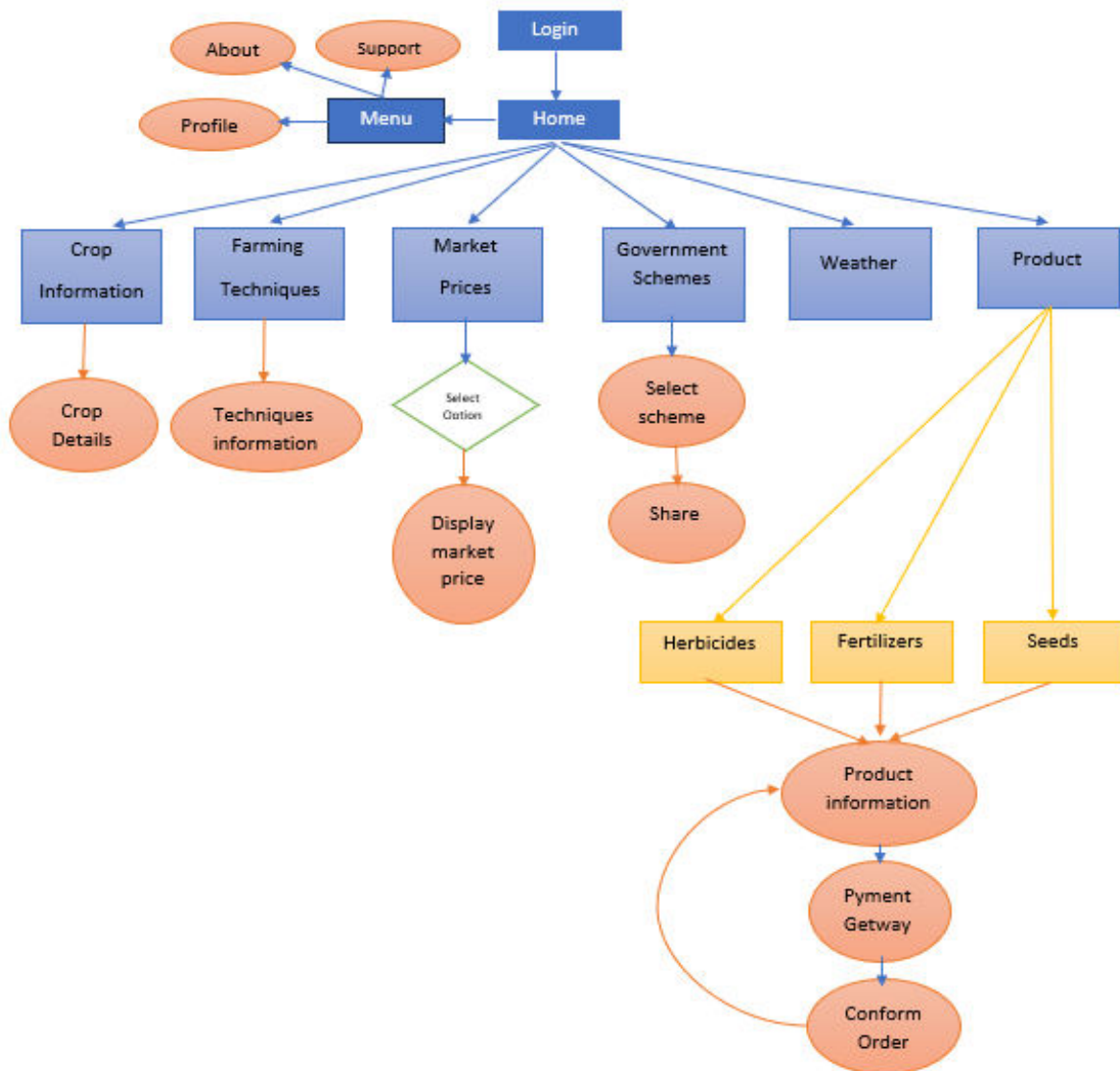
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- Server : Firebase Database
- IDE : Android Studio
- Front-End : Xml
- Back-End : Java

Hardware requirements:-

- Mobile devices (Android and iOS)-
- Server: Cloud-based (AWS or Google Cloud)

III. FLOW DIAGRAM



IV. RESULTS AND DISCUSSION

Results: High user engagement, 25% increase in crop yield,30% reduction in pesticide use,20% increase in farmer



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income, 90% user satisfaction rate

Discussion: Improved crop yield and reduced pesticide use, Economic benefits for farmers, Scalable and replicable solution, Future improvements: weather forecasting, farm management tools, and integration with other agricultural technologies.

V. CONCLUSION

In conclusion, the AgroGuide app stands as a transformative solution in the agricultural sector, empowering farmers with essential resources and support to enhance productivity, sustainability, and livelihoods.

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