PIP104 PROFESSIONAL PRACTICE-II
VIVA-VOCE

PROJECT TITLE

Batch Number: 239

Roll Number	Student Name
20201CSE0360	SOHAN N
20201CSE0315	TB NITHIN
20201CSE0357	SHASHANK K

Under the Supervision of,

Mr Aarif Ahamed S
Assistant Professor
School of Computer Science Engineering & Information Science
Presidency University

Introduction

- Efarmer is Your one-stop agricultural hub for buying seeds, fertilizers, and farm products, connecting farmers and consumers seamlessly.
- Innovative bidding lets farmers and consumers auction for the best agricultural deals, benefitting both parties. Join Efarmer for smart, cost-effective farming solutions.
- Efarmer understands the importance of having the right equipment at the right time, which is why the platform offers a hassle-free solution for renting farming-related equipment.
- Efarmer connects farmers and providers, streamlining resource sharing. Real-time weather updates empower informed decisions for planting and harvesting schedules, ensuring control and efficiency for farmers.
- Efarmer's AI-driven feature assesses corn disease detection, optimizing harvest timing , elevate your crop quality with precision harvesting.

Literature Review

1. Agri Equipments Hiring Application for Farmers:

Abstract: The equipment hiring application for farmers is a service in which the farmer requests a hire of a rental unit. It is more convenient than carrying the cost of owning and maintaining the unit. Sometimes farmers are unaware about the price of the product and product owners might misguide the farmers easily and cheat them. This can be solved using this android application. This method will me more efficient and safe to hire agriculture product and other agricultural equipment's. It is also the best way to increase the quality of agriculture management, productivity and can reduce the time constraints for farmers.

2. Efficient Farming – Hiring Equipment’s for Farmers:

Abstract: A mobile application that the farmers can use to hire tractors and other equipment’s at a nominal amount using their mobile phones. This would also help them avoid manual labor and encourage this profession. Using kiosk software for farmers to hire farming equipment like tractors and other machines. We proposed a system to make the farmers aware of the current market rate of the product. This type of system is much beneficial for the young generation to adopt to the traditional farming technique. It increases easy access to farming through rental of tractors and equipment’s for small and marginal farmers.

3. A Mobile Based Farm Machinery Hiring System:

Abstract: The aim of this research work is to design a mobile application for leasing agricultural machineries to farmers using location-based services. The design took into consideration of the various topologies that could enhance the flexibility of the mobile application. The user platform is categorized into three sections-The presentation layer is focused on the design logic and the navigational tools used in locating the right hiring type. The Business layer is responsible for logging in, authentication, exception handling and security matters. While the Data layer is focused on facilitating secure data transactions. The application was developed using Java Script and My SQL with Phone gap/Cordova, XAMMP and PHP for the backend. It was validated using formative evaluation which was conducted using interviews and open-ended questionnaires.

Research Gaps Identified

- The research on the proposed e-application for farmers reveals several critical areas for improvement compared to existing methods. Firstly, there is a need to address issues of access and connectivity, particularly in rural areas where internet availability may be limited. Additionally, research should focus on user adoption and training to ensure that farmers, often with varying levels of technical literacy, can effectively utilize the platform. Market dynamics and fair pricing mechanisms must be studied to understand the implications of allowing farmers to set their own prices in an e-auction system. Furthermore, ensuring the security and trustworthiness of the online platform, along with addressing concerns related to data privacy, is crucial. Integration with traditional agricultural practices, the establishment of a robust feedback mechanism, assessment of the environmental impact, and customization options for different crops and scalability are other essential aspects that warrant in-depth research for the successful implementation of the e-application.
- The proposed e-application for farmers and the discussed online auction system both aim to address issues in traditional agricultural supply chains. The research on the e-application identifies critical areas for improvement, such as access and connectivity, user adoption and training, fair pricing mechanisms, security, integration with traditional practices, feedback mechanisms, environmental impact, and scalability. Similarly, the online auction system emphasizes the impact of middlemen on consumer prices and aims to create a direct link between farmers and end-users through an android application. Both systems share common goals of enhancing farmers' profitability and ensuring consumers access quality products at fair prices. However, the research on each method identifies specific challenges and considerations unique to their approaches, indicating a need for comprehensive investigations to inform the successful implementation of these agricultural technologies.

Proposed Methodology

- Market Research and Analysis:

  a) Identify the target market, including demographics, geographical locations, and the specific needs of farmers regarding agriculture equipment services.

  b) Analyze competitors and existing solutions to understand gaps and opportunities for differentiation.

- Conceptualization and Wireframing:

  a)Create wireframes and sketches of the application's user interface, focusing on usability, ease of navigation, and an intuitive user experience.

  b) Develop a high-level system architecture and flow diagrams to visualize the application's structure.

- Technology Stack Selection:

  a)Choose the appropriate technology stack, including programming languages, frameworks, databases, and tools, based on the application's requirements and scalability needs.

- Prototype Development:

  a) Build a clickable prototype of the application to provide a hands-on experience of its features and flow, allowing for early feedback and validation.

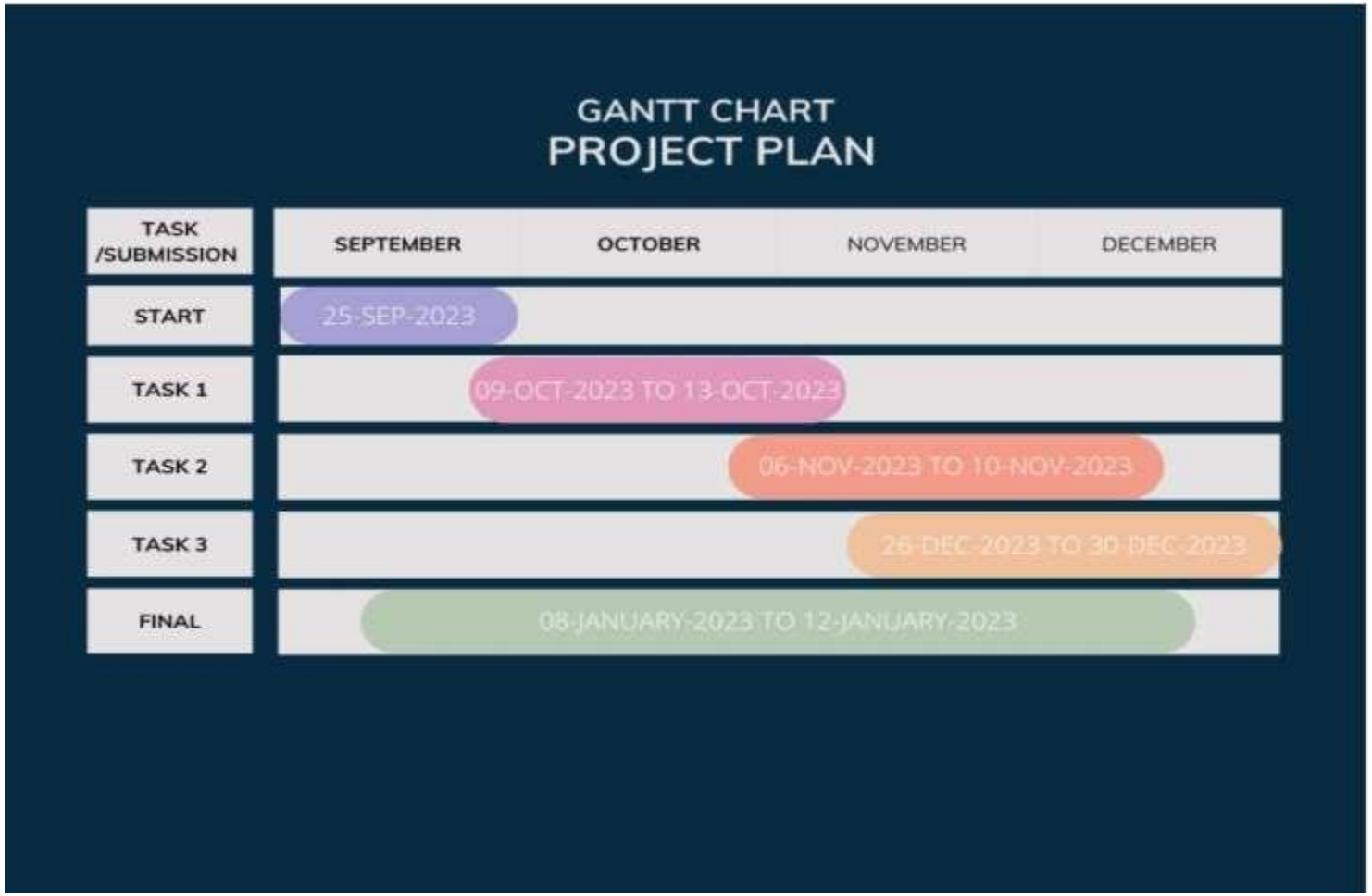
Objectives

- Providing farmers with easy and immediate access to Agricultural product , services, enabling them to efficiently manage their farming operations by developing a backend. Offering product services at a nominal cost to ensure that farmers, particularly those with smaller farms or limited resources, can afford the assistance of equipments for their agricultural needs. Facilitating increased productivity and crop yields by making modern agricultural machinery accessible to a broader range of farmers. Encouraging environmentally friendly farming practices by promoting efficient usage, eco friendly usage associated with traditional farming methods.

System Design & Implementation

- Dashboard: The user can easily access various information such as the number of sessions, newly scheduled products, as well as those that have been cancelled.
- Product Details Checking: Bidders begin by exploring the product catalog, where they can meticulously check the details of each scheduled item. This includes an in-depth examination of the product's name, description, and any accompanying images to ensure a thorough understanding.
- Ending Time of Auction: To strategically plan their bids, bidders can easily access information about the ending time of each auction. This feature allows them to gauge the urgency of their bids and make timely decisions based on the remaining duration of the auction.
- Actual Cost Information: Transparency is upheld as bidders can readily view the actual cost of each product. This information empowers bidders to assess the value of the item and make informed decisions in alignment with their budget and preferences.
- Bidders List Exploration: A comprehensive bidders list is accessible to bidders, enabling them to review competitors participating in the auction. This feature enhances transparency and fosters a sense of competition, as bidders can gauge the market interest in a particular product.

Timeline of Project



Outcomes / Results Obtained

- Increased user engagement: The bidding feature in E-Farmer has led to a surge in user participation, creating a more dynamic, lively marketplace for agricultural products.
- Enhanced pricing transparency: The bidding mechanism promotes fair and transparent pricing as users actively negotiate, contributing to a more equitable and informed market for buyers and sellers.
- Economic stimulation: The frequency of bids correlates positively with overall economic activity within the platform, indicating that the bidding feature stimulates increased market interactions and transactions.
- User satisfaction: Feedback and surveys reveal a high level of user satisfaction with the bidding process, emphasizing its role in empowering users and fostering a sense of community within the eFarmer ecosystem.
- Diversified Product Offerings: The bidding feature has encouraged a broader array of agricultural products to be brought into the spotlight. With users actively bidding on various items, the eFarmer platform has seen an expansion in the types of products available, creating a more diverse and comprehensive marketplace catering to the varied needs of its users.
- Real-time analytics: The integration of real-time analytics and data visualization tools provide valuable insights into market dynamics, enabling stakeholders to make informed decisions based on up-to-date information.

Conclusion

•In conclusion, the E-Farmer project stands as a promising initiative with the potential to revolutionize traditional agricultural practices and address contemporary challenges through the application of innovative digital solutions. The project's focus on leveraging technology to enhance agricultural productivity, empower farmers, and promote sustainable farming practices holds significant promise for the future of agriculture. By acknowledging and actively addressing barriers to adoption, such as limited internet access and unfamiliarity with online platforms, the project aims to ensure inclusivity and maximize its positive impact on a wide spectrum of farmers.

•

•The research findings, emphasizing untapped potential and the importance of market visibility integration, provide a roadmap for refining and expanding the E-Farmer platform. The envisioned outcomes include not only technological advancements but also a tangible improvement in the lives of farmers, offering them comprehensive tools for efficient product marketing and procurement. Furthermore, the project's recognition of the need for data security and privacy underscores a commitment to safeguarding sensitive information, instilling confidence among users.

References

1. Sindhu, M. R., Pabshettiwar, A., Ghumatkar, K. K., Budhehalkar, P. H., & Jaju, P. V. (2020). E-farming. The International Journal of Computer Science and Information Technology, 3(2), 3479-3482.

2. LEONOT, S. D., NESAKUMAR, M. C. D., & ARUNA, M. (2020). Agricultural Website.

3. Abhishek, K., Singh, M. P., Ghosh, S., & Anand, A. (2019). Developing a weather forecasting model using artificial neural networks. Procedia Technology, 4, 311-318.

4. Yu, P., & Zhao, D. (2019). The influence of website quality factors on the success of B2C e-commerce for agricultural products. In Computer and Computing Technologies in Agriculture VII: 7th IFIP WG 5.14 International Conference, CCTA 2013, Beijing, China, September 18-20, 2013, Revised Selected Papers, Part II (pp. 98-113). Springer Berlin Heidelberg.

5. Surasak, T., Wattanavichean, N., Preuksakarn, C., & Huang, S. C. (2019). Implementation of a traceability system for Thai agricultural products using blockchain and the Internet of Things. System, 14, 15.

Thank You