International Journal of Scientific Research in Engineering and Management (IJSREM)
Volume: 08 Issue: 04 | April - 2024 SJIF Rating: 8.448 ISSN: 2582-3930

FARMER TO CONSUMER E-COMMERCE APPLICATION

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Abstract — This paper presents an innovative system for Traditional agricultural marketing in developing countries that often traps farmers in low-profit cycles due to exploitative middlemen and limited market access. E-commerce platforms offer a promising solution, allowing farmers to sell directly to consumers, improve their profits, and reach wider markets. This app empowers farmers by connecting them directly to urban consumers, eliminating unnecessary layers and securing better profits. Beyond just sales, the app unlocks a wider market, fostering growth and improved livelihoods. While challenges like digital literacy and logistics exist, the potential benefits are vast. Farmers gain market transparency, diversification options, and potential access to financial services.

Index Terms: Traditional agricultural marketing, Developing countries, Middlemen, E-commerce platforms, Direct-to-consumer sales, Market access, Profit improvement, Urban consumers, Market transparency, Diversification options.

1. INTRODUCTION

A considerable number of Advanced agricultural technologies have the potential to revolutionize the way farmers produce food. However, many farmers in developing countries lack access to these technologies, which can lead to low productivity and poverty. In addition, farmers often face exploitation by middlemen when they sell their crops. This can further reduce their profits and make it difficult for them to make a decent living. E-commerce is a promising solution to the challenges faced by farmers in developing countries. By using an e-commerce website, farmers can sell their products directly to consumers, bypassing the middlemen. This can help them to get a better price for their crops and improve their profits.

The use of e-commerce for agricultural marketing is still in its early stages in developing countries. However, several e-commerce platforms are being developed specifically for farmers. These platforms are providing farmers with the tools they need to sell their products online and connect with new buyers. As e-commerce for agricultural marketing continues to grow, it has the potential to transform the way farmers produce and sell food in developing countries.

Although the adoption of e-commerce for agricultural marketing is nascent in developing countries, specialized platforms are emerging to cater specifically to farmers' needs. These platforms equip farmers with the necessary tools to establish an online presence and engage with potential buyers. As e-commerce for agricultural marketing continues to evolve, it holds the potential to revolutionize agricultural practices and livelihoods in developing countries

2. OBJECTIVE

E-commerce can be a promising solution to some of the challenges faced by farmers in India. By using an e-commerce platform, farmers can sell their products directly to consumers, bypassing the middlemen. This can help them to get a better price for their crops and improve their profits. In addition, e-commerce can help farmers reach a wider market and connect with new buyers. This can help them to grow their businesses and improve their livelihoods.
Your idea of developing an e-commerce platform for farmers is a great one. It has the potential to help farmers overcome some of the challenges they face and improve their lives.

Here are some specific benefits that your e-commerce platform could provide for farmers:
Farmers could get a better price for their crops by selling directly to consumers. This would help them to earn a fair wage for their hard work and improve their financial situation. Farmers could reach a wider market and connect with new buyers. This would help them to grow their businesses and increase their profits. Farmers could get information about prices and market trends. This would help them to make informed decisions about when to sell their crops and get the best possible price. Farmers could get access to credit and other financial services. This would help them to invest in their businesses and improve their yield. Farmers could get help with marketing and branding their products. This would help them to attract more buyers and sell their products at a higher price.

3. LITERATURE REVIEW

There are a variety of Mobile app developments in the marketplace, designed to make farming easy. Some mobile applications have been designed to specifically provide information services to farmers. In this work, various research papers and Mobile apps have been reviewed related to the agriculture sector.

Santosh G. Karkhile, Sudarshan G. Ghuge "A Modern Farming Techniques using Android Application" 2015[1]-In this paper, the researcher gave an entire idea about developing a mobile phone-based solution that helps in farm management, leads to agricultural yield improvement and helps in farm maintenance. Researchers explain that traditional farming

International Journal of Trend in Scientific Research and Development tolerates unexpected environments whereas, Modern farming provides the expected environment by weather forecasting. Traditional farming requires a large amount of labor and different activities for conducting farming. Alternatively, Modern farming does not require a huge amount of labor as the mobile, machines and new technology take care of the whole thing. This mobile application provides real-time weather information, news, and market prices at diverse locations and all information is provided in local languages. So, all the outcomes of the researcher application are to aid farmers in improving their agriculture to yield more earnings, the author expanded the System Architecture for the Farmer app which includes different operations like registration of farmers Weather forecasting, News and feeds, Multiple language support, and Market trading.

Suporn Pongnumkul, Pimwadee Chaovalit, Navaporn Surasvadi "Applications of Smartphone-Based Sensors in Agriculture: A Systematic Review of Research" 2015[2] This research represents reviews on Smartphone applications that use Smartphone built-in sensors to give agricultural solutions. According to agriculture function applications are categorized. The researcher's literature review describes different types of agriculture applications like farming applications, farm management applications, information system applications, and extension service applications.

Various cie functionality in farming is made simple using this application like Disease Detection and Diagnosis, Soil Study Crop Water Needs Estimation, HR Management, Information System Applications, and Extension Service Applications This review paper focuses that GPS and cameras are the most trendy sensors used in the smartphone application for farming. end in Shailaja Patil and Anjali R. Kokate "Precision Agriculture: A Survey" 2015[6]-In this paper researchers explore how different mobile phone applications and precision agriculture services have impacted the farmer's life

1. **Smart Precision-based Agriculture using Sensors by K. Lakshmi Sudha and Swathi Hegde (2016):**
    a. Discusses the use of wireless sensor networks in automating agriculture.
    b. Aims to revolutionize plant monitoring processes.
    c. Focuses on reducing human effort in farming activities.
    d. Allows for customized environmental settings for plants.
    e. Enhances precision in agriculture through sensor-based technology.

2. **Multidisciplinary Model for Smart Agriculture using Internet-of-Things (IoT), Sensors, Cloud-Computing, Mobile-Computing & Big-Data Analysis" by Hemlata Channe and Sukhesh Kothari:**
    a. Proposes a multidisciplinary architecture for smart agriculture.
    b. Consists of five modules: Sensor Kit Module, Mobile App Module, Agro Cloud Module, Big-Data Mining, Analysis, and Knowledge Building Engine Module.
    c. Available in English and Gujarati languages.
    d. Functions include obtaining crop-wise information, monitoring suitable crops based on soil and season, and managing cattle in the herd.

3. **E-Agro Android Application" (Integrated Farming Management Systems for sustainable development of farmers) 2015**
    Authors: Shubham Sharma, Viraj Patodkar, Sujit Simant, Chirag Shah Prof. Sachin Godse:
    a. Develop a software application for promoting sustainable growth among farmers.
    b. Provide comprehensive agricultural management solutions.
    c. Integration of Technologies: Utilize IoT, sensors, cloud computing, mobile computing, and big data analysis.
    d. Decision Support: Assist farmers in making informed decisions regarding pesticides.

4. PROPOSED METHODOLOGY

[1] **Farmers Registration**: A farmer registers for an account with the platform. - Provides necessary information and uploads necessary documents.

[2] **Product Upload**: - Farmer uploads product details, including name, description, images, availability, etc.

[3] **Product Listing**: - Approved products are listed on the platform. - Customers can view the product listings

[4] **Customer Ordering**: - Customers browse through the available products. - Select products and place orders. - Orders are received by the platform.

[5] **Order Processing**: The farmer is notified about the received order.- Farmer confirms the availability of ordered products.- If available, the order is processed for packing and shipping.

[6] **Shipment and Delivery:** The farmer requests shipping services from the platform. - The platform arranges packaging and shipping. - Customer receives a notification about order shipment.

[7] **Multi Lingual:-**This feature would allow consumers to use the platform in their preferred language. This would make the platform more accessible to a wider audience. To develop this feature, we need to translate the platform into

[8] **Seasonal Calendar:-**Adding a seasonal calendar to farmers-to-consumers e-commerce platforms can enhance user experience and help customers better understand the availability of different products throughout the year.

[9] **Advanced Product Enrollment:-** Farmers/providers can enroll in products in advance.Input details like product name, expected harvest date, quantity, etc. Products are listed in an "Upcoming Products" section

Our development plan follows a systematic and user-centered approach, encompassing multiple phases to ensure an app for users and different Service providers. The initial phase involves thorough market research and user needs analysis, forming the foundation for feature ideation and design Subsequently, we proceed with app prototyping and development, iteratively incorporating user feedback to enhance usability and functionality. Rigorous testing and quality assurance measures ensure a seamless user experience The development plan for a local service web application with document verification involves defining project goals, analyzing requirements, designing the system, selecting the technology stack, integrating document verification, implementing user registration and authentication, creating service booking and management features, ensuring data security and privacy, conducting quality assurance and testing, and deploying the application with ongoing monitoring and iterative improvements. The on-demand service marketplace has witnessed remarkable growth, driven by a surge in consumer demand for a convenient and reliable means to access a wide array of services. This literature survey explores the multifaceted landscape of service marketplaces, with a specific focus on the integration of document verification within platforms similar to UrbanClap. Document verification has emerged as a pivotal component of these marketplaces, enhancing user trust, safety, and overall platform effectiveness. By examining existing literature, this survey aims to elucidate the scope, significance, and technological advancements in this domain, shedding light on the evolution of this innovative approach.

5. FLOW CHART:-

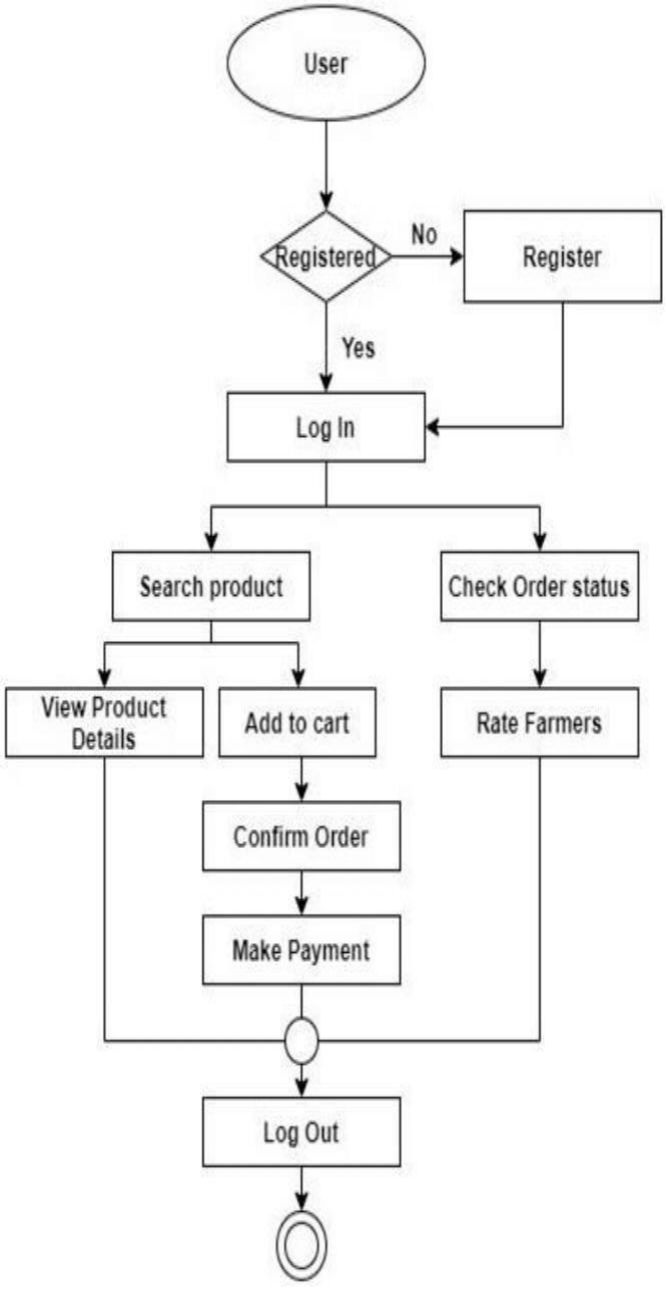
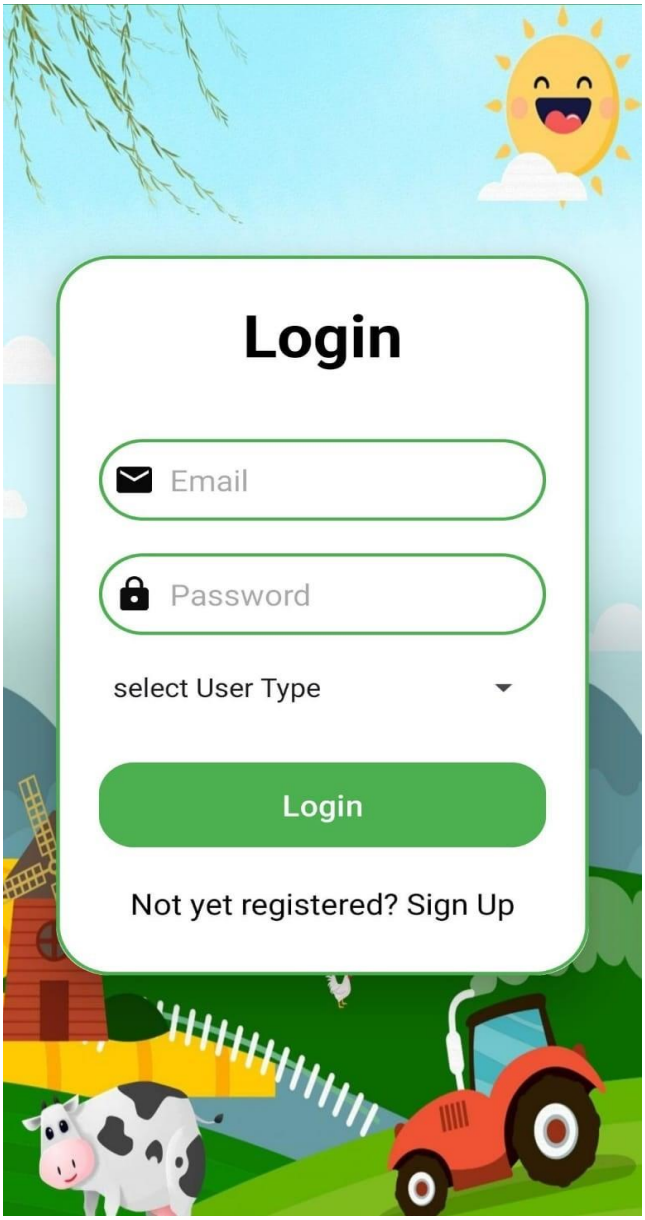
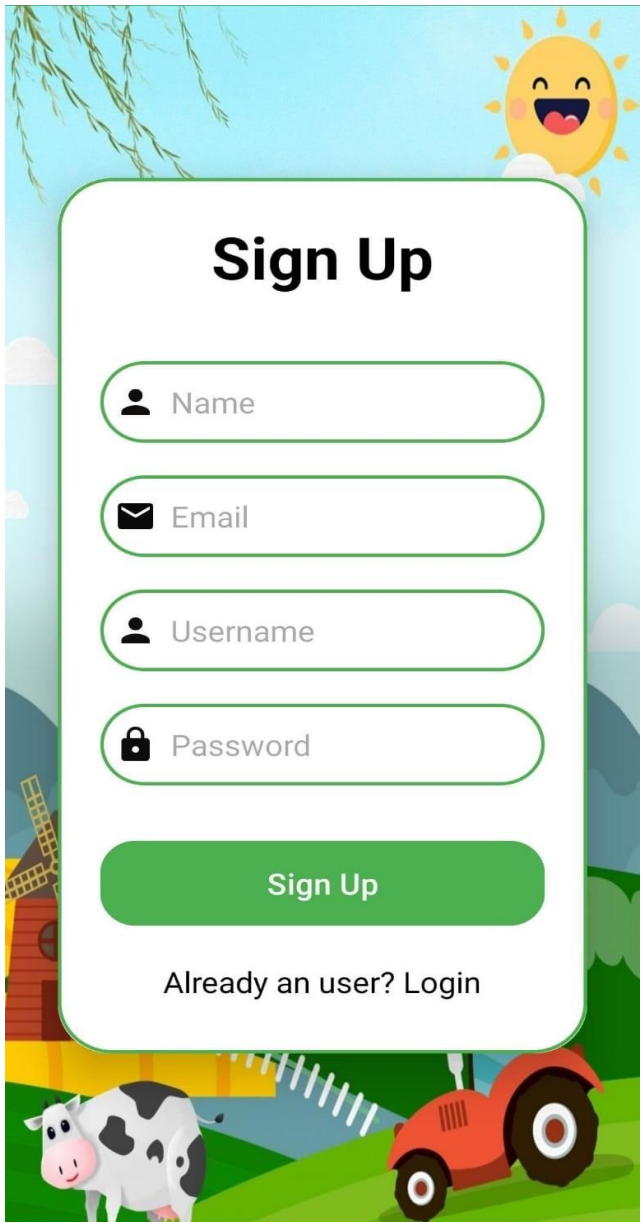
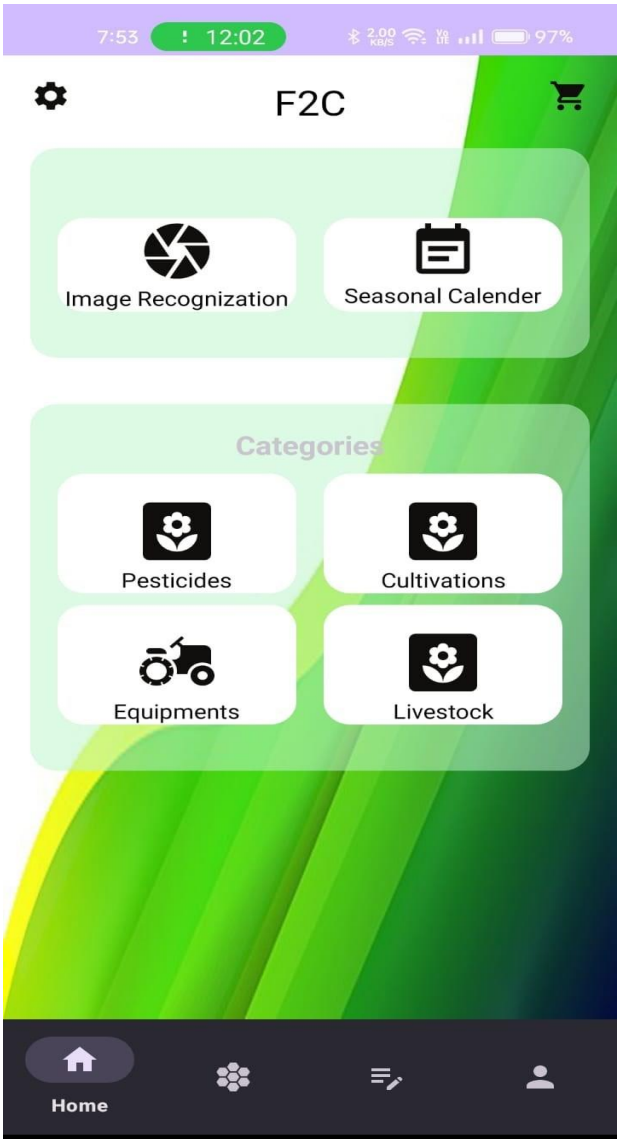


Fig. 2 Block Diagram of Proposed

6. RESULTS: FARMER USER INTERFACE:



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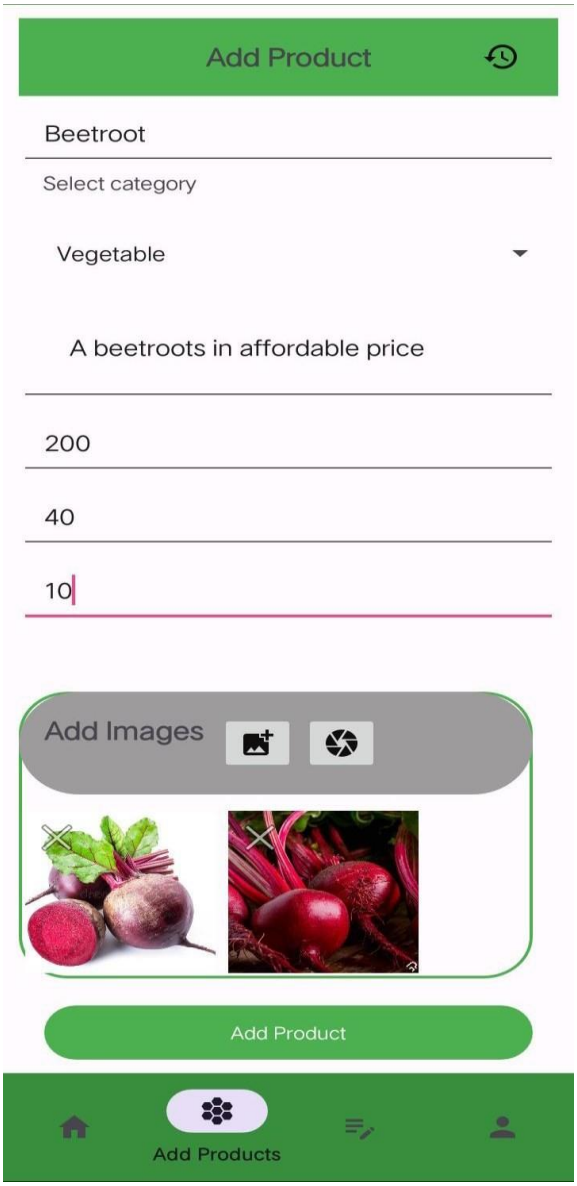
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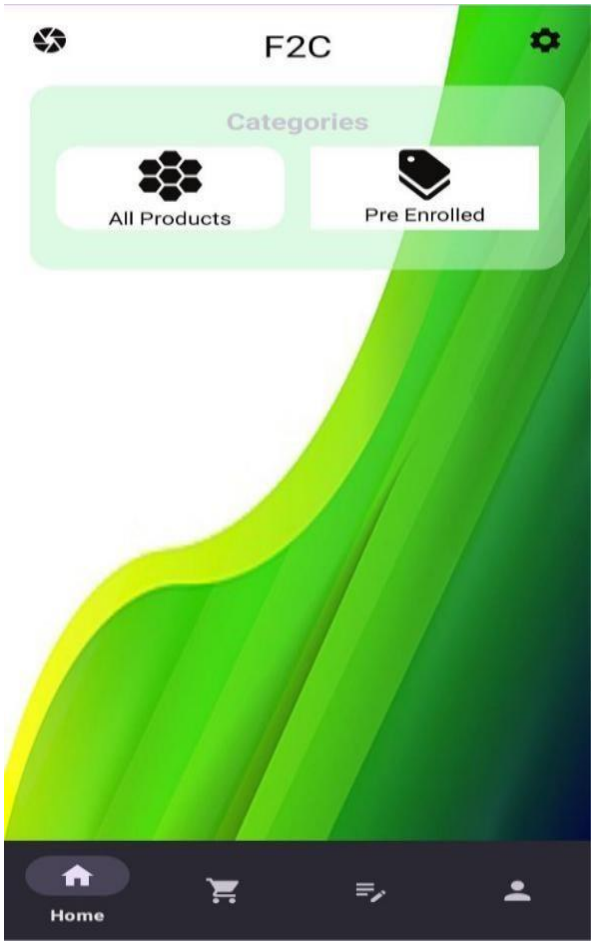
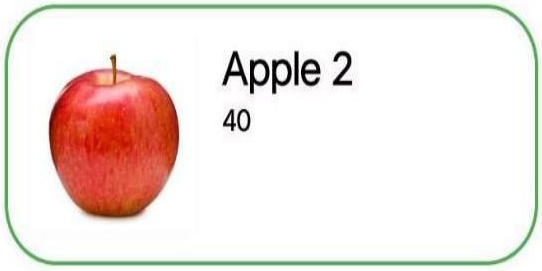
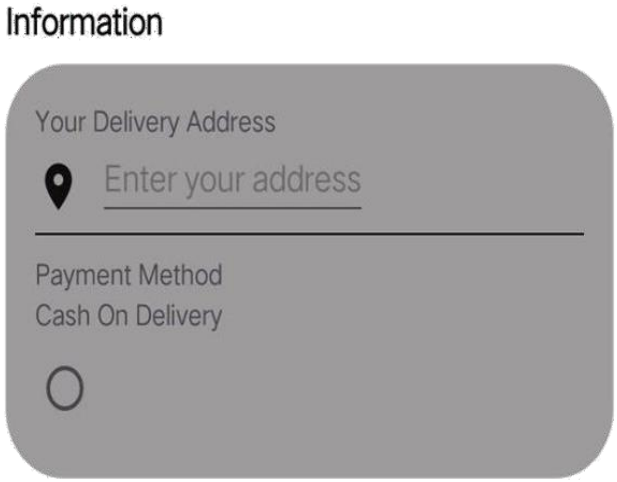
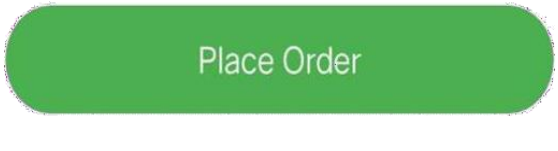
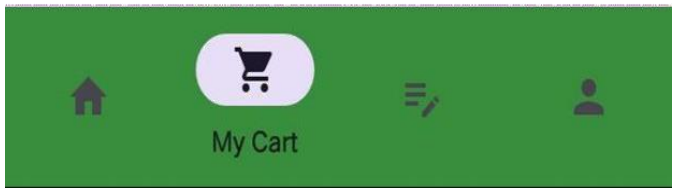
- **CONSUMER USER INTERFACE**



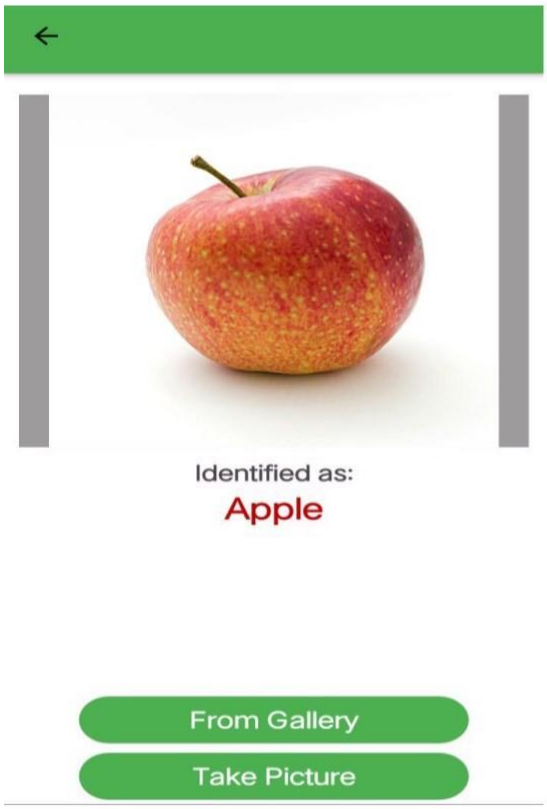








- **IMAGE RECOGNITION FEATURE**



- **MULTI LINGUAL FEATURE**

7. CONCLUSION

In libraries to resolve it. On the other hand, Ecofert works within the rapidly expanding digital ecosystem, the mobile apps. list of marketable fertilizers hosted in a database in the In Cloud, where the composition and cost are updated daily. In one has surfaced and attained enormous importance. In addition, Ecofert shows a low computational cost, even in introduced to help the farming community. India is the advancement of the agriculture sector, mobile apps are for a huge number of fertilizers (>20). Ecofert is a simple application that easily executes on mobile devices, giving arc country which is mostly dependent on agriculture.

There are farmers and crop-growing technicians who a powerful tools for various new technologies for agriculture. Indian support for agricultural tasks. government also provides extra facilities for the farmers to improve their productivity. All the imperative information and plans regarding farming do not reach the farmers due to unfair management. The majority of the farmers do not know about the uses of new technologies in agriculture. Thus, in order to bridge this gap between farmers and new technology as well as government aid to improve agricultural growth researchers will develop a novel solution. This mobile app will define the necessary procedure and model to make farmers aware of new diverse knowledge about agriculture and also help them to improve agriculture in our nation.

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