Farm Kart: An Android Application for Indian Farmers

Umar Faruk Shaikh¹, Vaibhav Dongare², Roshan Sawant³, Harshal Kakade⁴, Pranjali Deshmukh⁵

U.G. Student, Department of Computer Engineering, Marathwada Mitramandal’s Institute of Technology, Lohegaon, Pune, Maharashtra, India¹

U.G. Student, Department of Computer Engineering, Marathwada Mitramandal’s Institute of Technology, Lohegaon, Pune, Maharashtra, India²

U.G. Student, Department of Computer Engineering, Marathwada Mitramandal’s Institute of Technology, Lohegaon, Pune, Maharashtra, India³

U.G. Student, Department of Computer Engineering, Marathwada Mitramandal’s Institute of Technology, Lohegaon, Pune, Maharashtra, India⁴

Associate Professor, Department of Computer Engineering, Marathwada Mitramandal’s Institute of Technology, Lohegaon, Pune, Maharashtra, India⁵

ABSTRACT: With help of mobile internet farmers can sell their products directly to consumers and food processing industries. Nowadays mobile applications are used for fast and updated information delivering system for farmers. Native languages are used which make it more user-friendly. Farmers simply play both the roles of seller and buyer while using this application. The main motto behind this paper is to help farmers in buying and selling their products. There are many problems farmers are facing while selling and buying products. With the help of this system farmers can sell goods at a reasonable price and makes business even fair and transparent. Consumer can choose from a wide variety of products and select the product as per their requirement, price filters are also applicable. One more important parameter is location, it helps both consumer and producer for selling and buying their products in nearby locations. To make fair and transparent agricultural business is the basic objective of the system.

KEYWORDS: Middle man brokers, Farmers, consumers, market

1. INTRODUCTION

Farming sector in India represents 17 to 18 percentage of GDP (Gross Domestic Product). Hence farmers playing an important role in the Indian Economy. Farmers work hard throughout the year for providing us a good quality product; they face lots of difficulties like characteristic disasters, unpredictable rain, and unviability of water resources etc. Even after managing all this issues and produce their product second major issues arise of the price they won’t get the expected market price because of the market strategy. Other than farming farmer also needs to manage the transportation, stockpiling or storage which is incorporated into the agribusiness market. Some factors like transportation which are demotivating the farmer. Farmers needs to pay huge cost for transportation because the marketplace is far away from the farming location. Sometimes the farming areas are not connected with the marketplace by roads. As Farmers need big amount for transportation they do not invests more money to use the improved seeds and fertilizers so the quality of the product is very poor due to which they get low prices in the market. Another major issue with storage, storage facilities are required by the producers as well as by the government. Lot of product is damaged because of lack of storage facilities. To overcome all these problems Indian farmer need a platform where he can easily get all the related information about every problem.
II. MOTIVATION

Our farmers are not able to get the real price of their products because of the third party involvements. The big share of farmer’s income is going to those third parties without having that much effort. Farmers are not aware of various sales taking place at various places or best deals for his product. Third party peoples wants to take the big commission hence they provides this information in a limited quantity. The intermediate person is getting more profit as they buy the huge amount of products from the farmers at very low price and then they selling the same products to the food processing industry with high prices. Our system ensures the stable market, it resolves the issues of farmers by giving them better returns. The main motive of our system is to create a platform where farmers can directly interact with consumers.

III. PROBLEM STATEMENT

Our traditional marketing system is not very useful for farmers as well as consumers. Middle man brokers are getting more and more benefits from it instead of farmers and consumers. Farmers are putting lot of efforts to provide us good quality products but they don’t get good returns on their input. Consumers are also not happy with the high prices of all products. Most of the profit is going to the third party brokers.

IV. SYSTEM ARCHITECTURE

The design is based on client-server architecture where the client is an android device and server is a firebase. This application basically considering to provide the user-friendly interface so the user can access and browse the information with easy steps.

The application provides the basic authentication for the user i.e farmer and Food Processing Industry. The user can register as a producer or consumer with the minimum details. It provides two different areas for producer and consumer for better accessing internal data

A. Notification
The notification is generated when someone will produce. The notification can send to the farmer and consumer. Once an order will have placed it will send the notification to the farmer with details of the product i.e. product name, quantity and contact details.

B. Product
If the seller upload their product details with real images in this system and also updated information related to their product i.e. product name, cost, specification, quantity, and price. It has also automatically identified the location of the buyer and seller while they are uploading the details.

C. Order
The user can order more than one product in the shopping cart, the shopping cart will display all selected product and their prices, once you place the order it’s automatically calculated the total amount of the product.

D. Real time database
The real-time database is used to store all data of the app. The responses time of this service is very short and it also provides listeners to update app data when changes are encountered in the database. The Firebase SDKs for Cloud Storage add Google security to file uploads and downloads for Firebase apps, regardless of network quality.

E. Authentication
This service dispense authentication such as Google login, Facebook login, Anonymous login, Email-password login, Mobile number logins. The app used login with a mobile number. An OTP is sent to the user’s device which is used to authenticate the users.
F. Client side
The Android mobile app is developed in java with inbuilt APIs. The necessary APIs to communicate with Firebase. App also supports multi-language; all strings are translated in various languages when the language of an app is changed the strings are replaced with the string of that language.

G. PreOrder
Consumer can also post preorder for a product required in future. Farmer can take that preorder and start preparing for that product so that it gets delivered before specified duration.

![Architecture of proposed system](image-url)

**Fig.1 architecture of proposed system**

V. METHODOLOGY

The proposed system is defined in the way the application developer can be maximum utilized. This paper is intended to use for fast and updated information delivering system for farmers. Also, we intend to use native language support to understand certain modules so that farmers, personnel can also utilize the features provided by the application. So paper scope can be summarized as fast and efficient support for newer information available the consumer and Food Processing Industry or Agro Industry can find the same product with different farmers and their cost and quality in a single window.
VI. EXPERIMENTAL RESULTS
The paper speaks about the project which will help the farmers to sell the products directly without intermediates. This system will help farmers to get the better return and food processing industry and users get goods in affordable prices. This application is a single platform where all the agriculture industry, farmers and user will come together and get their product with comparative prices. This system will help the farmers to compare the prices with the market and sell their goods according to it. This system will be having a location tracker which will help the consumer to find the nearest farmer to him; this will save his time and money too. With the help of this application people will be able to get fresh food to eat and will be able to explore different products, maintain good relations with farmers, gain profit by saving their money and help farmers to get their deserved profit.

REFERENCES
