

Agriculture Equipment Rental and Product Selling System

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Abstract: Farmers are facing lot of problems, They will cultivate crops and other agricultural products (fruits, flowers, vegetables), They want to sell their products according to the market price but lack of knowledge they will sell their huge amount of products for small amount of money to the brokers available in the local and customers will directly approach to the brokers because of this farmers are losing lot of money, they are getting cheated, Farmers know that they are selling products to broker for small amount of money, but lack of knowledge to the farmer we thought of doing an application that can help farmers can directly sell their own products to customer with no brokers. Customers can directly contact to farmers, Farmers can sell their own products retail or wholesale according to their quantity of production in the farming to the customer directly, To get aware of all these problems and to get knowledge to the farmers this application is needed and, To bring the choice to any kind of farmer to create an environment that will let them buy or sell their agricultural products, Languages used Java, Language available Hindi, English, Technologies using Android Application. Mobile internet will help the farmers to sell their products directly to consumer. This paper provides market information to a farmer using its easy interface on the mobile application. The mobile application is intended to be used for fast and updated information delivering system for farmers. Also, it has native language support to make the transaction easy for farmers. The mobile application treats farmers as a seller and a buyer. The intention behind this paper is to help farmers so they buy or sell their agriculture goods and products. Market prices provided by data.gov.in lets the system to keep the selling and buying prices in control. As the products are to be browsed and there may be plenty of products for the user. To make browsing easy many filters can provide. Farmers face many problems while selling their goods and products, this system promises to provide an easy and recreational way to sell the products. The system lets the farmers to sell goods at a reasonable price and makes business even fair and transparent. Consumers are the opposite side of the same coin. This system lets consumer to choose from a wide variety of products, select the product as per their requirement and also to apply price filters. Location is a one of parameter for consumer and producer while selling or buying their product it will helps the user to get the product nearby their location. The basic Agriculture Equipment Rental & Product Selling System objective of the system is to considers every one need and full fills their requirement with fair and transparent agriculture business.

Keywords: Android App, Users, Market, Rental, Agriculture, Android application

I. INTRODUCTION

In today's world, Farmers are the spine of India. As we step forward into the modern era of technology, we may find many engineering related applications very beneficial for improvements into the society. This is the world of technology where people use smart phones for completing their daily tasks like shopping, paying bills, managing work and much more. The idea of this project is to add its features into the lives of the people so that the food which they buy can be bought directly from the farm so that the profit can reach directly to the farmers. Because in India we follow a supply chain of farm products making things too indirect for the farmers due to which the farmer still remains poor and the intermediates are gaining profit which ultimately makes them rich. So in order to break that supply chain of indirect sales, we can make use of this application so that the farmer can be connected directly to the customer and the selling

can be done accordingly. Since the farmer will be dealing with the customer directly so the prices of the products offered by the farmer to the customer will also be affordable to the customer, which will help both the farmer and the customer where the customer can save some money and the farmer will gain extra profit that he deserved. Agriculture is the main occupation of the bigger part of Indian population. 60-70 % of Indian population is totally depends on agriculture sector for their living. The main difficult task for farmers is information access and management for the quantity of data and the complication of processes in precision farming. The data for farming like crop life cycle detail, seeds, crop selection, crop processes weather, pesticides, fertilizer etc. are accessible from a lot of different sources like newspaper, printed media, audio and, mobile, TV, internet, visual aids etc. but the structures and formats of data are different. So its extremely hard for farmer to get exact information and to know variety of information which have distributed from diverse sources. Sometime several manual steps are essential to handing out data for translating data from one format to another format. The succession in the crop growing production directly increases the Indian economy and vice versa is also correct. To modernize farmer's life there is necessary to give finest technological solutions to the farmers. A lot of techniques and methods are being developed in order to assist the agricultural routine activities. Mobile apps in the field of farming can be the most excellent option to boost farming production in country. The new inventions in technology in agriculture area are not easily getting to the farmers due to lack of knowledge.

II. LITERATURE REVIEW

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

Gauravjeet Dagar in his study stated that the fundamental motivation behind promoting data framework Marketing Information System (MIS) is to support farmer to understand the different marketing strategy which advertising basic leadership and showcasing endeavors of business people and agriculturists. The Author said efficient information about the real market prices should know by the farmer and if it would be available in a single platform then the farmer will get the benefit. In any case, the data is additionally helpful for different sorts of associations, for example, government, advancement associations, academicians, and scientists. The accessibility of auspicious and exact data to every single invested individual is on sequent fundamental, regardless of whether it be given by the administration itself or by the private part.

Shakeel-UI-Rehman et al stated that there is a need to change the marketing strategy of the agriculture business author said its time to adopt the technology for selling and buying the agriculture products. It's also stated that there are various problems and challenges for agriculture business marketing lack of knowledge of the market, lack of knowledge in agriculture.

Abdul Razaque and MdSalleh Hassan in their study stated that the mobile phone playing the important role in agriculture development mobile phone use in developing nations is assuming a crucial part for the upgrade of farmer business towards farming. As of late, correspondence through mobile phones is viewed as essential in improving ranchers' entrance to better comprehend rural market circumstance. The usage of mobile phones internet is increasing rapidly among people for obtaining the information about related issues, problems and their solutions in the field of agriculture the mobile phones are playing important role in developing country like India it has also reducing the communication cost and information cost in agricultural business. Cultivating people group acknowledges mobile phone as a simple, quick and helpful approach to convey and find provoke solutions of individual issues.

The data correspondence innovations are expanding in creating nations for the advancement of various individuals, for example, educationist, specialists, and agriculturist. The ranchers are one of the huge groups in creating nations where they have not offices in their general vicinity for increment their item and pay. The cell phone is expanding among agriculturists yet at the same time, there is whole accessible among business, clients, and ranchers.

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

functionality in farming make simple using this application like Disease Detection and Diagnosis, Soil Study, Crop Water Needs Estimation, HR Management, Information System Applications, Extension Service Applications. This review paper focus that GPS and cameras are the most trendy sensors used in the smart phone application for farming.

K. Lakshmisudha and Swathi Hegde “Smart Precision based Agriculture using Sensors” 2016 Author represents wireless sensor networks which can help bring about a great revolution in automating agriculture field. This research project makes plant monitoring process easy as well as reduced human effort in farming day to day activity. User can produce customized environment to the plants. This application provides most favorable growth conditions using different sensors.

Shubham Sharma, Viraj Patodkar, Sujit Simant, Chirag Shah Prof. Sachin Godse “E-Agro Android Application “(Integrated Farming Management Systems for sustainable development of farmers) 2015 -In this paper author explain software application which is essentially for sustainable growth of farmers. A lot of time farmer is confused to get decision regarding selection of pesticide, fertilizer and specific time to do particular farming actions. So to minimize such type of problem this application is very useful for farmers. Fertilizer schedule is registered for various crops. Based on sowing date of crop, farmers get reminders about use of fertilizer as per plan. Additional advice are also given based on soil type, climatic condition etc. This system merges modern Internet technique and mobile communication systems with GPS for proficient and smooth farming.

III. PROBLEM STATEMENT

To make an efficient use of Android Tehcnology. To provide a platform to the farmers where the produce from the farms can be easily sold at better rates, pooling or sharing of the transport to take the produce to the markets and to help farmers in to take precautions based on the forecast of weather. Many farmers are not able to hire a agricultural equipment in normal amount or they do not find agricultural equipment easily. In another case, sometimes farmers are unaware about the price of the agricultural equipment on rent; so the agricultural equipment provider fools the farmers very easily, and cheat them by taking extra money. This system can easily overcome such problems for farmers where they can find agricultural equipment and other mechanism for their use easily. This application is created to help bring together all local vendors. We want to help make each stronger individually as a collective whole by providing simple lines of communication, logistics and support within the relationship of producers to buyers and producers to producers & essentially creating an online farmers market for that offers consistent connection between all producers and buyers. The main motive of the project is to sell local and buy local.

IV. OBJECTIVES

The objectives are as follows:

- 1) To support requesting for required data within less time.
- 2) All users will have easy and fast access to the information.
- 3) To create a mobile application that the farmers can use to hire agricultural equipment as well as other machineries related to agriculture at a normal amount using their mobile phones.
- 4) To create an interface between farmers who want to hire and those who want to let out equipment.
- 5) To save time and money of Users.
- 6) The system which shows and helps you to farmer for buying equipment's.
- 7) To undertake the business of letting big farm machinery for farming at village level.
- 8) To take available service centre of sophisticated and costly farm implements (repairing facility)
- 9) To help farmers in improving their hectare production of agriculture produces.
- 10) To undertake regular visit, demonstration programmed, advice and inquiry about upliftment of rural economic by spreading value added centre work.

V. MODULES

This system is develop to solve the problems that usually happen when farmer want to rent a tractor for their agriculture purpose. In this all activities are done manually and have done on mobile technology. We are going to develop an android application of tractor hiring system for farmers in which there are four main modules. The system after careful

analysis has been identified to be presented with the following modules: Rent Based Agri Equipment System deals with the following modules:

Registration (App):

The Farmer, Customer, Buyer, Sellers fills the registration form by giving the personal information and successfully registers with the Application. Farmers have to visit the centres and they have to provide their details to the centre head. These details will be dynamically added to the db by the respective heads and farmers will be given a username and password.

Login (App):

The Farmer, Customer, Buyer, Sellers can Login the Application. Login module will verify if user exists and registration has been done for farmers. A separate credentials will be given for Centre, Zonal and State heads.

Product (Description/Images/Status):

After entering into Users homepage User will add his products by filling add product form, by providing sufficient details about product such as product id, available dates, rent etc and upload the image of that product. It consists of following sub modules:

Add Product: User can Add the New product details such as rent, available dates, etc. by entering the product id of that product.

View Product: User can View the existing product details such as rent, available dates, etc. by entering the product id of that product.

Update Product: User can update the existing product details such as rent, available dates, etc. by entering the product id of that product.

Delete Product: User can delete his products by entering the product id.

Manage product: Product can manage the product from the overall e – product it contains a product stock, sales, expenses and available of stocks, users orders.

Manage orders: Product can manage the order of users details from all e- product shops how many orders are shipped, calculate the pending orders and maintain the delivered also.

Update orders status: Product, once get the ordered from the user. Product can manage from end to end once get order product upload the status order placed like they doing next process added the status like product is shipped, on progress, delivered and cancel the orders.

Customer/Farmer:

In this module the Customer information is processed. This information includes giving username and password to login to this site. This is required to verify the user. The contact number of the Customer is used to confirm the Customers registered equipment and also to send promotional number. Customer can also see their registered equipment when they login on their account using their user id and password. The Customer after accessing the site searches for products, if he/she finds the required product then he/she need to fill the booking form and submit to the database.

OTP verification:

User can enter the all details for the registration like user name, address, phone number, etc. once user can enter all details and register their profile user will get OTP verification. It will successfully verified user profile was registered.

Search Product:

User will search the product using product name, locality, category and other details.

View Product details:

All product details like product name, cost, qty, mobile, shipping charge, category and etc

Add cart User:

can search the product and choose product to purchase without actually completing the payment. It has update the quantity of product and if remove some of item.

Add/ update shipping address:

A shipping address is an address where you will send the order. The billing address is the address connected to the user's wallet payment method.

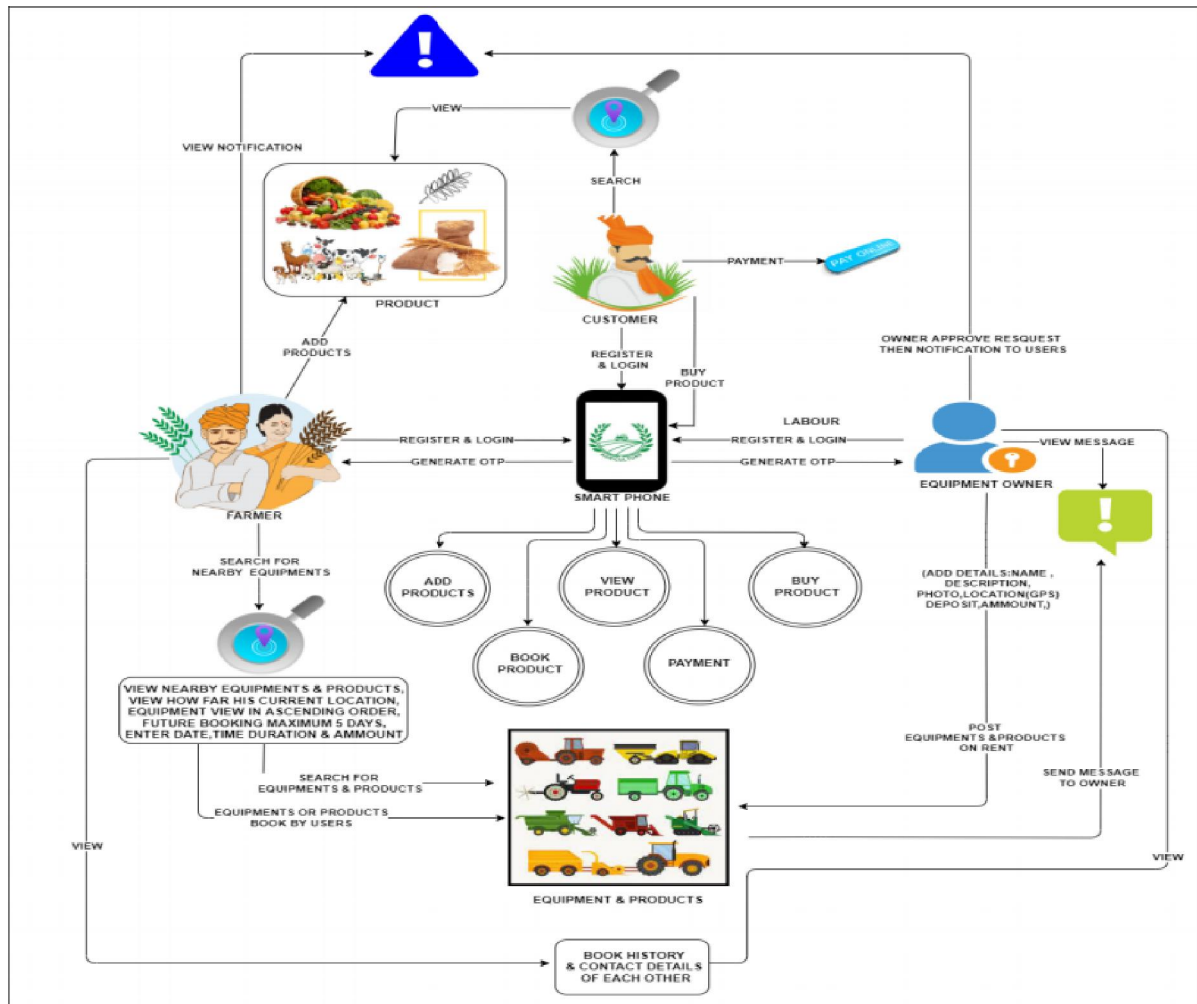
Place order:

User once choose the product and add to be cart then get placed purchase product.

View order status:

User once order the product then it will place order for corresponding address and user will check their status for ordered product like order placed, shipped, delivered.

VI. SYSTEM ARCHITECTURE



VII. CONCLUSION

We have designed a mobile application, Our application is user-friendly, open source and is Free to use. It positively impacts the environmental situation by using fewer products more number of times. Concentrating on customer satisfaction and the four dimensions, “Reliability”, “Responsiveness”, “Tangibles” and “Quality” helps us to serve the users in a better manner and thus give us a competitive edge over the others. By implementing the project, we conclude that the problem statement is totally being eliminated through the deployment of this project. And the objective is achieved through the android application. The part of our system has been developed with much care that it is free of errors and at the same time it is efficient and less time consuming. The important thing is that the system is robust. We have tried our level best to make the site as dynamic as possible. Also provision is provided for future developments in the system. The entire system is secured. The main motive for the project was to provide dynamic online farmers’s management system to help farmers in every possible way and provide them a stable platform where they can perform every transaction with ease. This system will help farmers and user to get the better return. It protects the interest of both consumers and producers. The communication gap between farmers and retailers/ will be reduced by the app as it will provide a platform for farmers to sell their goods at an affordable price and

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