

# ‘চাষী’ (The Farmer): A Virtual Marketing Platform for Producers and Consumers of Bangladesh

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**Abstract** – From the very starting of human civilization agriculture has been playing the most vital role in enrichment of society, country and world. But unfortunately in a developing country like Bangladesh, farmers remain unsatisfied with price value of their crops in spite of getting a good harvest. Due to lack of a good platform, in Bangladesh it is not being possible to assist farmer with a good price of their crops. Moreover, the overpricing system created by middlemen is responsible for sudden price hiking of vegetables and crops. Several apps have been developed for the betterment of farmers but still it was not satisfactory to introduce a reliable marketing system. To overcome this scenario, the "চাষী" (The Farmer) android application has been designed to provide a better marketing platform for both farmers and buyers of Bangladesh. In this system the selling procedure for farmers has been designed more simply than before. The purchasing system has been diagramed reliably with an easier cash sending medium like 'bKash'. Moreover users can check anytime their selling and purchasing reports via this application. But most positive feature is govt. can also be a part of this platform as a buyer so that they can purchase crops directly from farmers at a good rate.

**Keywords** – Bangladesh, Agriculture, Price, Producers, Buyers.

## I. INTRODUCTION

Agriculture is one of the significant contributing sectors to the GDP of Bangladesh. The economy of Bangladesh is primarily dependent on agriculture in terms of employment. But the farmers are not in a good condition from the economic perspective as they do not get the fair price of the products. There is a significant difference between the price what the consumers pay and the price what farmers get. This means that farmers of the country are not getting that price at which products are sold in the market. Marketing plays an important role not only in stimulating production but also in accelerating the pace of economic development. Efficient marketing system usually ensures higher level of producer's

share, reducing the number of middlemen and restricting the marketing charges, malpractices during marketing of farm products. Being a third world country, the importance of agricultural marketing sector has long been recognized by the Government of Bangladesh. At recent times Mobile phones has provided new approach to farmers to make tentative decisions such more easily than before. Phone could be good device to make strong relationship with all agriculture business stakeholders by communication, SMS, email thus benefiting farmers by timely market information to increase the income and decrease the poverty. Our app disseminates high quality farming information that is available both in static and dynamic form. With a view to making marketing systems easier and to provide best prices to rural farmers of

Bangladesh this app has been designed. ‘চাষী’ (The farmer) aims to connect millions of smallholder farmers with new buyers of their product and a virtual marketplace adapted to the needs of rural farmers.

## II. PROPOSED SYSTEM

The name of our proposed name is ‘চাষী’ (The farmer) which is a platform for both farmers and buyers to advertise and buy their desired crops. Farmers will be able to set price of their products according to present market price and buyers will also be able to purchase at a good rate. The proposed application has been designed to prevent the intervention of any third party (mediator). Farmers will be able to sell products directly to buyers without paying any extra taxes or charges. One can upload picture of his/her crops with

including quantity and price in this system. Thus the buyer will get a clear idea and his/her decision making will be easier. Govt. itself can play its role as a buyer in this system to purchase crops directly from farmers to pay a good price to them to avoid loss of our farmers. Moreover if any types of crops such as: rice, wheat etc. remain unsold govt. can easily contact and buy crops directly from farmers. We have put the user language in our system “Bengali” or “বাংলা” for easy understanding of marginal level farmers of Bangladesh. We have designed our system as android based. The front end was comprised with Xml, Java, Jdk8, JRE and Json. On the back end we had a server which had been designed and manipulated by PHP, Mysql and Android Studio (IDE).

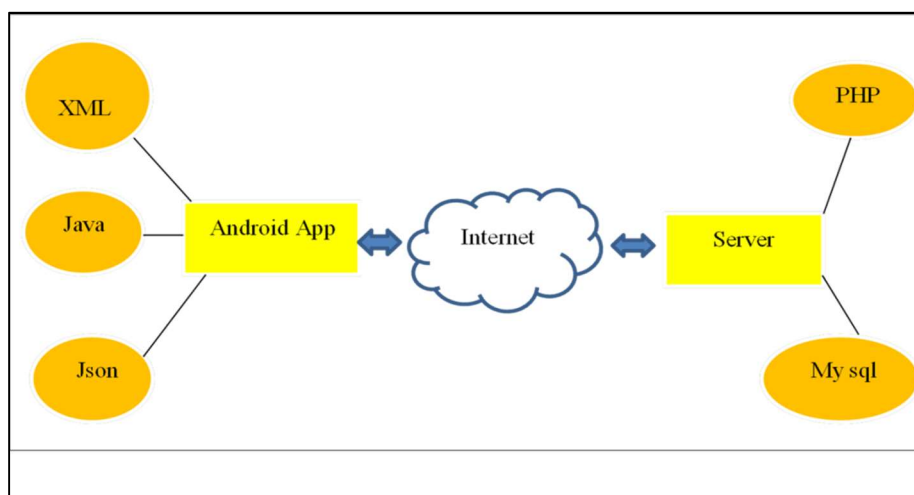


Figure 1 Software design of proposed system

### 2.1 System Development Methodology

Basically we focused on two (2) types of users

- 1) Farmers
- 2) Buyers:

- a) Regular buyer
- b) Government organizations; e.g Department of agriculture extension (DAE)

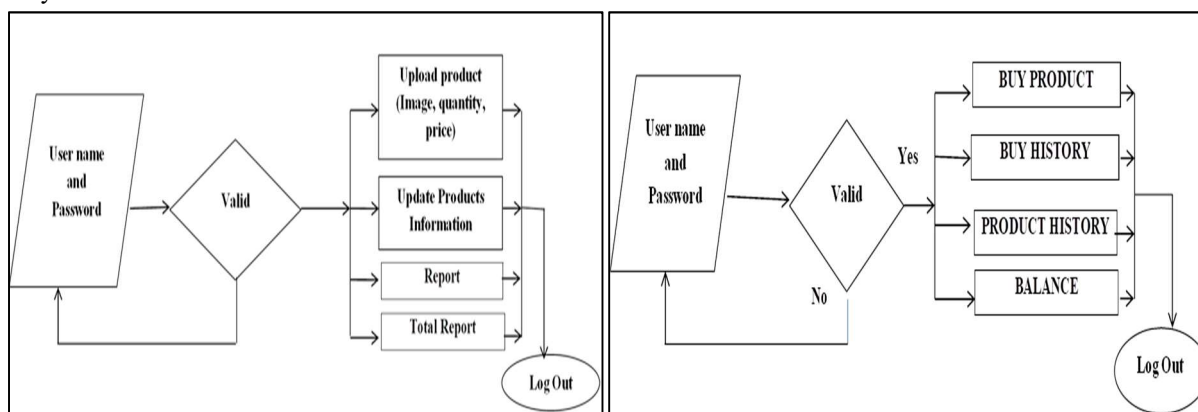


Figure 2 System development methodology of proposed system

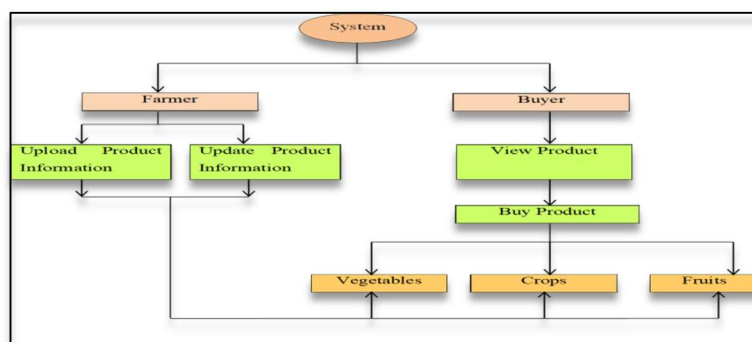


Figure 3 System structure of the proposed system

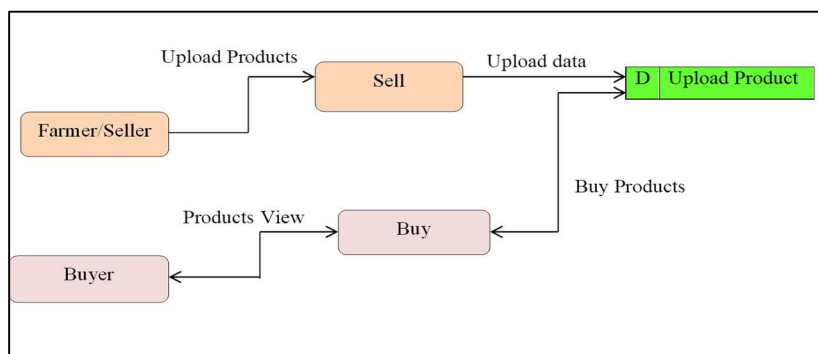


Figure 4 Data exchange diagram of the proposed system

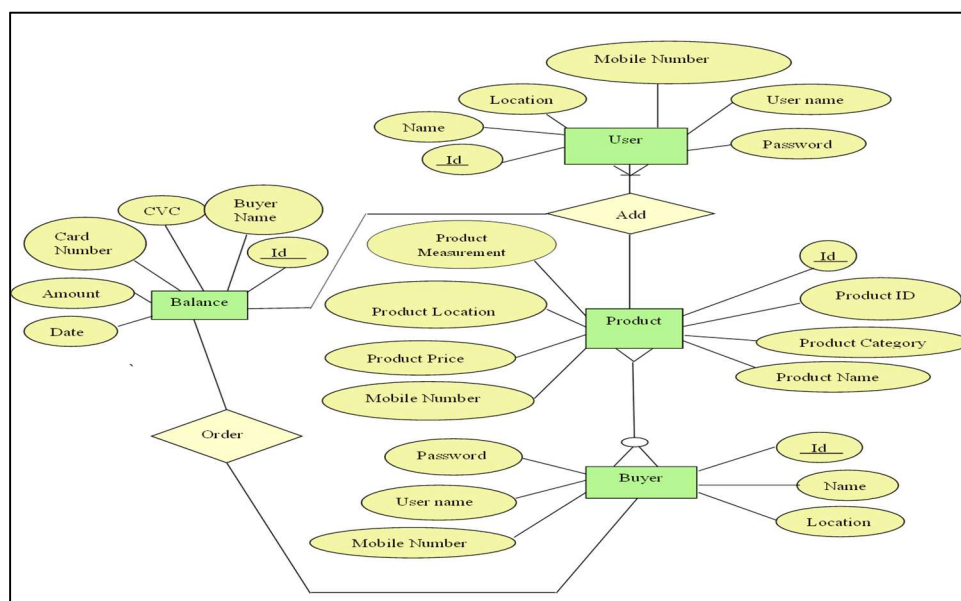


Fig 5 Entity relationship diagram of the proposed system

## 2.2 Features of proposed system

- Virtual marketing platform
- Easy involvement of marginal level farmers
- Details information of available products
- Individual and total marketing report for farmers
- Buy history and product history for consumers
- Easy and reliable cash payment system
- Participation of govt. as buyer

### III. IMPLEMENTATION AND RESULTS

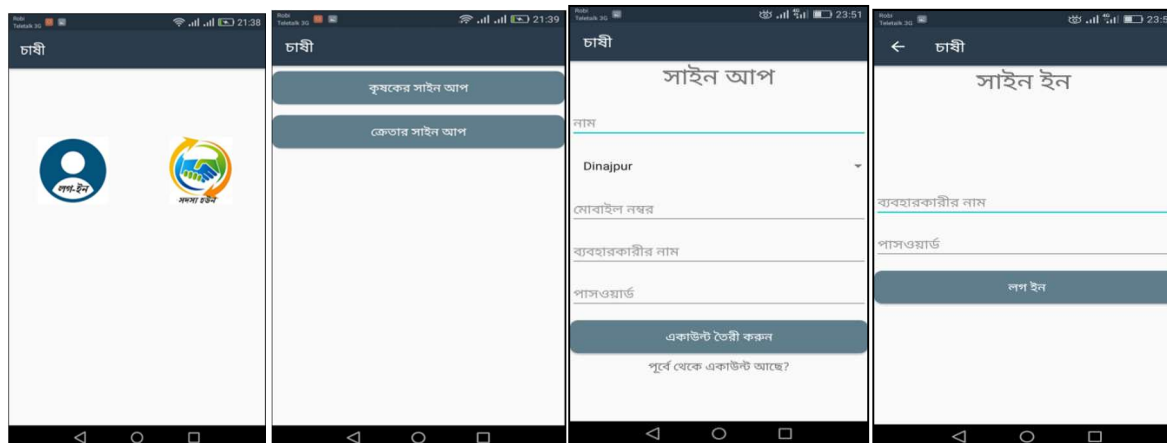


Figure6: Registration, sign up and sign in

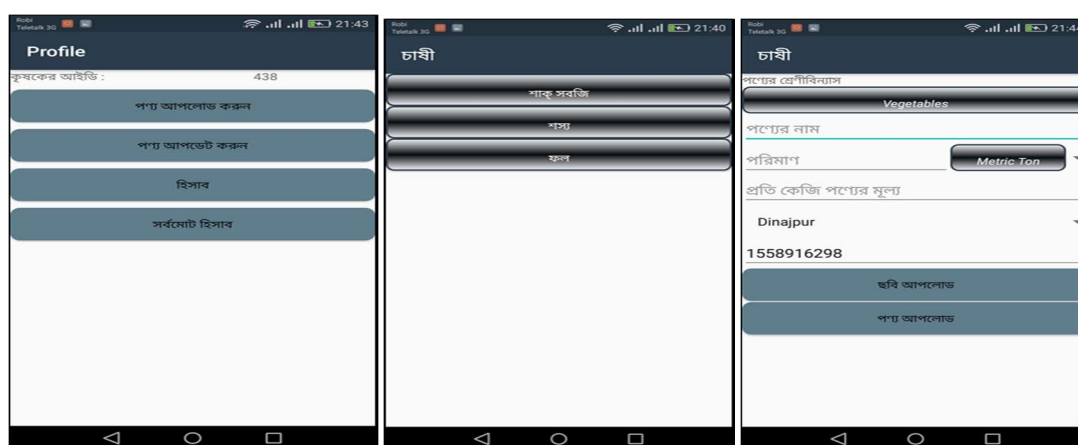


Figure7: Upload farmer's products

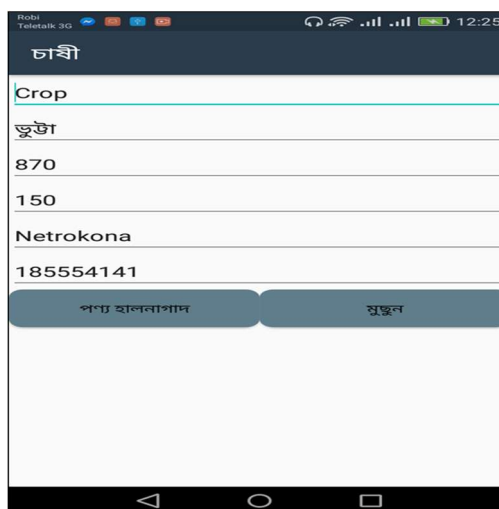


Figure8: Farmer's updated or deleted product

| চাষী            |             | চাষী            |             |
|-----------------|-------------|-----------------|-------------|
| পণ্যের নাম :    | Apple       | পণ্যের নাম :    | potatoes    |
| পণ্যের ওজন :    | 850         | পণ্যের ওজন :    | 2           |
| পণ্যের মূল্য :  | 127500      | পণ্যের মূল্য :  | 80          |
| তারিখ :         | 2020-03-09  | তারিখ :         | 2020-02-15  |
| পণ্যের নাম :    | Apple       | পণ্যের নাম :    | Paddy       |
| পণ্যের ওজন :    | 93          | পণ্যের ওজন :    | 100         |
| পণ্যের মূল্য :  | 13950       | পণ্যের মূল্য :  | 5000        |
| তারিখ :         | 2020-02-16  | তারিখ :         | 2020-02-15  |
| পণ্যের নাম :    | Apple       | পণ্যের নাম :    | Rice        |
| পণ্যের ওজন :    | 50          | পণ্যের ওজন :    | 20          |
| পণ্যের মূল্য :  | 7500        | পণ্যের মূল্য :  | 1200        |
| তারিখ :         | 2020-03-05  | তারিখ :         | 2020-02-15  |
| পণ্যের নাম :    | Paddy       | পণ্যের নাম :    | Paddy       |
| সর্বমোট ওজন :   | 993 kg      | সর্বমোট ওজন :   | 9588 kg     |
| সর্বমোট মূল্য : | 148950 Taka | সর্বমোট মূল্য : | 658110 Taka |

Figure9: Individual and total selling report

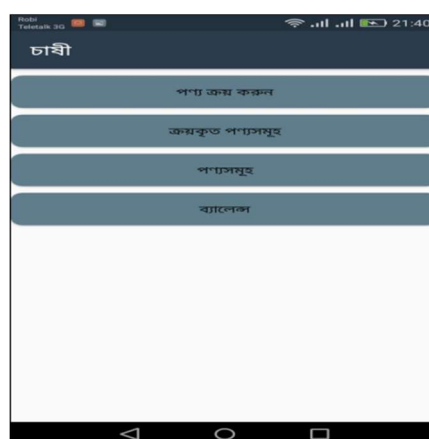


Figure10: Buyer Profile

| চাষী                                                                                |                                                                                     |                                                                                     | চাষী                                                                                |                                                                                      |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |  |  |  |  |
| Mango                                                                               | শিটু                                                                                | Apple                                                                               | জুটা                                                                                | Paddy                                                                                |
| 50 taka                                                                             | 100 taka                                                                            | 150 taka                                                                            | 150 taka                                                                            | 50 taka                                                                              |
| Chittagong                                                                          | Dinajpur                                                                            | Dinajpur                                                                            | Netrokona                                                                           | Chandpur                                                                             |
| 850                                                                                 | 900                                                                                 | 0                                                                                   | 1000                                                                                | 9000                                                                                 |
| Metric Ton                                                                          | Metric Ton                                                                          | Metric Ton                                                                          | Metric Ton                                                                          | Metric Ton                                                                           |

Figure11: Product list

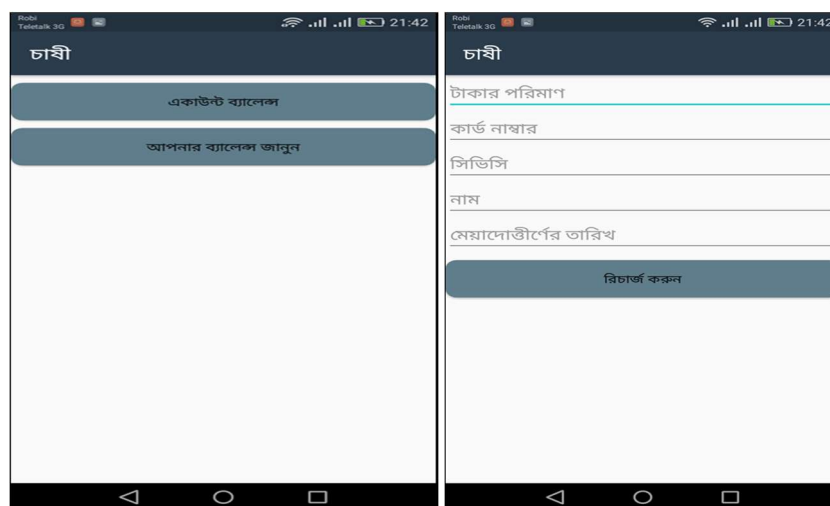


Figure12: Recharge Buyers Balance

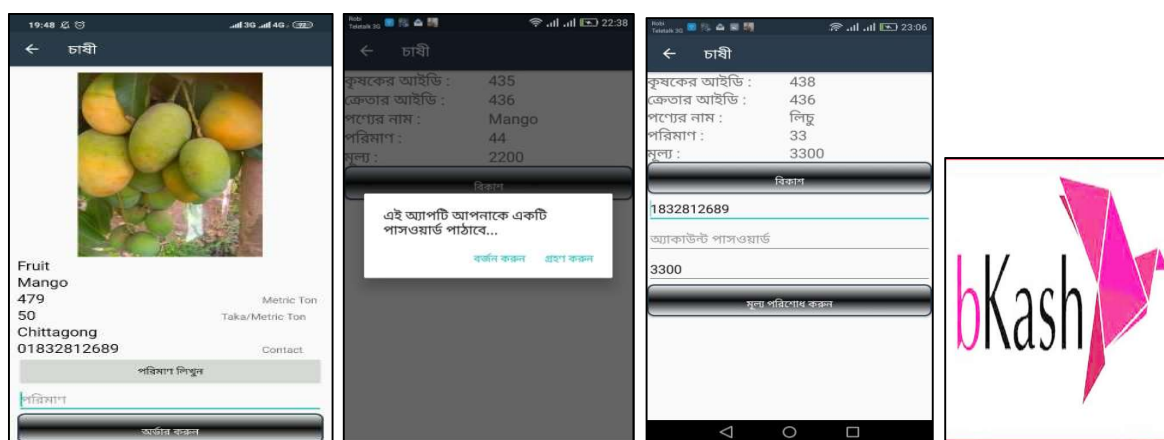


Figure13: Purchasing procedure of products



Figure14: Buy history and product history

#### IV. CONCLUSION

To promote agriculture in our country, providing best price of products to our farmers is much needed. Our application will surely provide that facility. The application will reduce sudden price hiking created by middlemen with the option selling/buying directly to the farmer/buyer. We also firmly believe govt. participation in our virtual platform will be a big achievement for us

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