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PROMOTE LOCAL AGRICULTURAL PRODUCTS USING E-COMMUNITY SUPPORTED SYSTEM

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Abstract: In modern generation of mobile technology, the number of smartphone and tablet ownership is rising continuously. People have been more concerned about their expectations in consumption and health. Therefore, the purpose of this is to create a web application and android application of e-Community Supported Agriculture (e-CSA) system which is done by software development life cycle (SDLC). The survey is conducted by concentrating on the impact of local agri. products through the web application and android application development. The target members are customers and farmers, this e-commerce application benefits both farmers and customers. Using this application, customers can get opportunities to pay a fair price, receive fresh organic and healthy products, and request rare products. Farmers will get opportunities to increase sales, sale price, minimize loss and achieve good control of transportation. Our survey suggest that this application increase the economic growth in the local area for development as the exportation facilities are more suitable for small agricultural businesses.

Keywords: FarmUS, Organic Products, Community Support Agriculture (CSA), Agricultural E-commerce.

I INTRODUCTION

Trends of organic products are always growing because people are concerned about their health and quality of food consumption [1]. Therefore, they are willing to pay for organic products or healthier products [2]. Over the past decade, customers usually go to the wet market for fresh products. However, the quality and cleanliness of those products are not guaranteed. Instead, most people have been going to the supermarket since this business had ensured the quality standards and build up an image that is reliable and has quality. However, these products waste time in transportation and reducing the expenses [3]. We are focusing on supporting and developing the agricultural sector, including standards of quality production and being environmentally friendly. Therefore, owners of small farms who are interested in the organic production will earn investment support and be provided about the knowledge in organic farming by the government sectors and other organizations in order to help them increase their income.

At the present, the use of technology in daily lives has continuously increased. Therefore, the developers created an e-Community Supported Agriculture (e-CSA) system which is called "FarmUS". It is a web application and mobile application for a local social enterprise as a community for supporting customers and farmers where the administration is a distributor. This web application will help customers shop online by clicking only on the website and waiting for delivery, and there is a distributor for screening products in terms of quality and safety for the reliable farms. Hence, this method is called Community Supported Agriculture or CSA [5]. It is created for supportive relationships and community for both the consumers and farmers in supporting welfare ideals on site. It meets people who like the same things, wish for fresh products in seasonal and organic produce for their health, and share the financial risk with farmers within their locals [4].

There is no need for customers to go to the supermarket because they can find organic products from a farm near their homes on the mobile app. These organic

products are certified as safe by **FarmUS** website while the order and pre-order of organic products through this web application help farmers save time and cost for transporting food, so consumers will get fresh goods and safe products at a low price; they also support local producers and improve their local economies. Therefore, this web application is a good choice and channel since it is helpful and convenient for both farmers and customers to sell and buy organic vegetables in a local community.

II EXISTING SYSTEM

Over the past decade, customers usually go to the wet market for fresh products. However, the quality and cleanliness of those products are not guaranteed. Instead, most people have been going to the supermarket since this business had ensured the quality standards and build up an image that is reliable and has quality. However, these products waste time in transportation and reducing the expenses [3]. We are focusing on supporting and developing the agricultural sector, including standards of quality production and being environmentally friendly. Therefore, owners of small farms who are interested in the organic production will earn investment support and be provided about the knowledge in organic farming by the government sectors and other organizations in order to help them increase their income.

III PROPOSED SYSTEM

Objective of this system is to promote local agricultural products at low cost. We are focusing on supporting and developing the agricultural sector, including standards of quality production and being environmentally friendly. There is no need for customers to go to the supermarket because they can find organic products from a farm near their homes on the mobile app.

This web application and mobile application also helps farmers to easily manage customer's orders and their production by showing graphs for decision making to produce, and they also get news and updates on the website and mobile app. Therefore, this web application is a good choice and channel since it is helpful and convenient for both farmers and customers to sell and buy organic vegetables in a local community.

IV MODULES

1) Admin Panel

To manage the system we design the Admin panel from where products, customers, farmers, customer orders can be managed. Generally Admin panel is used by the admin of the farmer group.

2) Shopping Portal

Customers uses shopping portal to place orders, registration is necessary before placing the order.

ADVANTAGES

- Fresh and organic product availability at doorstep.
- It Save time of peoples as there is no need to go to market daily for purchasing vegetables and food.
- Availability of good quality product with less price.
- Nowadays, health issue by consumption of chemical products is increasing, it will be also overcome by our system.
- Farmer will also get more profit, as there is no interference of middle person which will avoid chances of corruption.
- Requirement is known to farmers hence wastage is avoided.

V DESIRED IMPLICATION

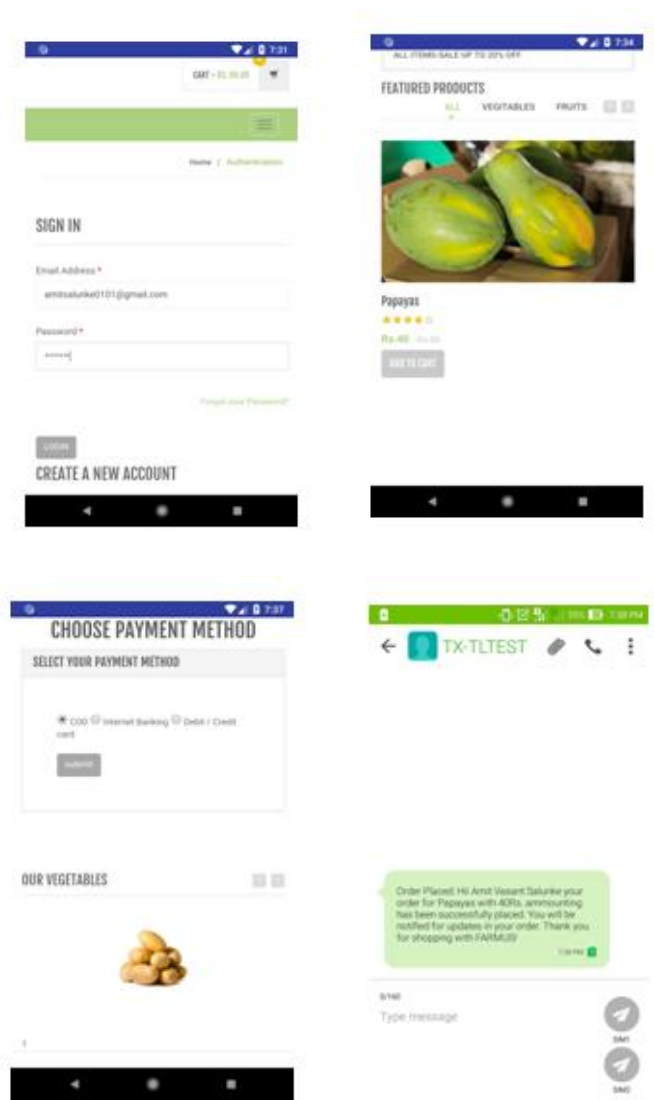
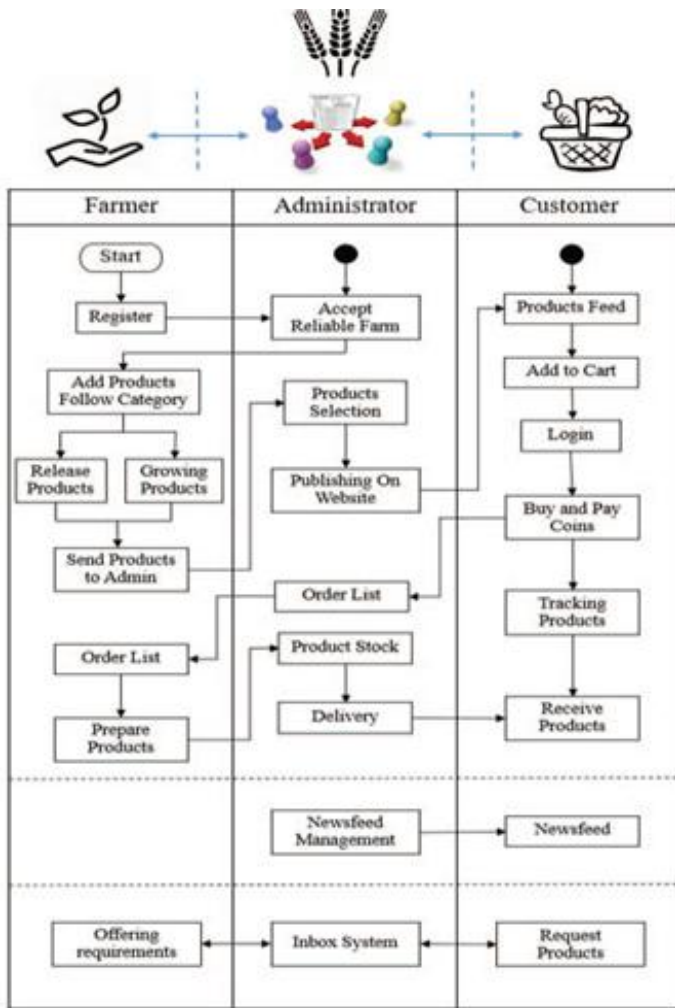
FarmUS web application was created by using Software Develop Life Cycle SDLC) to develop the system by planning step by step. The developers divided teams to work as well as possible within the time limited. The developer team improved the system by using Laravel framework 5.2 with other technologies such as Sublime Text and Bitbucket. The last step was that the developers brought Technology Acceptance Model (TAM) to evaluate the satisfaction in using e-CSA system (**FarmUS**) and receive the suggestions to improve the system in the future. The findings from the farmer gave a positive feedback for "**FarmUS**" website that it was easy to understand and use. This website was valuable for increasing the sales channel and profits, and also useful for more employment in the local region. Moreover, the web application promoted the economy in the local area for expansion since the export logistics are more convenient for small agricultural businesses. The findings from customers also gave a positive feedback for "**FarmUS**" website. Customer satisfaction overview was in a good level. In terms of the benefit and adoption, customers needed more information about the presentation of the activities of the organization and farmers to trust that the organization had truly helped the farmers and their community.

VI ALGORITHM

1. Login to Account
2. Search and Select the Product
3. Select the Quantity of the product to buy.
4. If we want only one Product then click on Checkout and Pay
5. Else Click in 'Add To Cart'.
6. Repeat step 2nd
7. Go to Cart
8. Click on Checkout
9. Select Payment Method (i.e. Net banking, COD, Credit Card, etc.)
10. Click on Place Order

VII SYSTEM ARCHITECTURE

IX RESULT



VIII MATHEMATICAL MODEL

- Let S be the system used for the Promoting Local Agricultural products consist of = {I, O, F, FAIL, SUCCESS, DD, NDD}
- Take Input I = {Agricultural products, quantity}
- Give output O = {Report generation and Successfully Delivery of products}
- Identify functions F = {f1, f2, f3, f4, f5, f6}
 - F1 = {registration() }
 - F2 = {add_products() }
 - F3 = {place_order() }
 - F4 = {generate_receipt () }
 - F5 = {order_accept() }
 - F6 = {generate_report() }
- Identify failure condition
 - Fails when Internet failure
- Successful when system perform as per expectation
- DD = {customer, farmer }
- NDD = {product, product_price, product_quantity, customer, farmer }

X CONCLUSION

Web application is created by using Software Development Life Cycle (SDLC) to develop the proposed system by planning step by step.

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