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### E- Farming android application

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#### ABSTRACT

Farming is the Prime Occupation in India in spite of this, today the people involved in farming belongs to the lower class and is in deep poverty. The Advanced techniques and the Automated machines which are leading the world to new heights, is been lagging when it is concerned to Farming, either the lack of awareness of the advanced facilities or the unavailability leads to the poverty in Farming. Even after all the hard work and the production done by the farms, in today's market the farmers are cheated by the Agents, leading to the poverty. Agro marketing would make all the things automatic which make easier serving as a best solution to all the problems.

E-farming will serve as a way for the farmers to sell their products across the country just with some basic knowledge about how to use the website. Getting availed to the required information related to the markets and different products can be made possible through the SMS facility provided by the system.

**Keywords:** Website, farm-marketing, market rate, bill, learning, SMS facility.

#### INTRODUCTION

E-farming is the web application that will help the farmers to perform the agro-marketing leading to achieve success and increase in their standard of living. The Marketing facility would allow the farmers to have a view of the bills created and the related information in their accounts. An Authorized-agent would serve as a way for the farmers to sell their products in the market. The Centralized market committee will have control on the Agents through business activities review. Website will also provide market-wise, commodity wise report to the farmer in interactive way. In rural area, the SMS facility would give the required market information where internet cannot be availed. Government will put forward the new schemes for the farmers. Compensation will be provided for the farmers in case of any loss to the production due to some natural calamities. Unique

interface will be provided for applying and viewing the schemes Farmers and the Agents will be provided with a Unique ID for logging into their accounts leading towards secure access.

#### EXISTING SYSTEM

There is no computerized system for the farmer to sell their product. Currently, the farmer goes to nearest market handover his product to a particular agent, agent ask the farmer to visit the market after a specific time to collect the cash earned out of the sold product. Agent sells the product to another agent or a dealer at the cost of that market. Every Agent tries to cuts his commission out of that. There is no way for farmer to know about the deal and the exact amount at which their product was sold. There is no transparency. No facility is present for the farmers to know the product rates at

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different markets where they can sell their products for achieving high profits. Many times, farmers are not even aware of the schemes and compensation provided by government. In spite of all the opportunities banging the doors the farmers are not able to benefit out of those. Current system does not provide the way of e-learning for farmer that will provide the knowledge of new techniques in farming. So he doesn't get the maximum profit through the current system.

## PROPOSED SYSTEM

We are going to develop e-farming application that fulfill all needs of the farmer and give the solution. We have multiple sections like login for farmer/people to use it on their own way. As per requirement of our application who will using the application via mobile phone i.e. an android phone .Next section there is web panel from this the government agency and bank committee will login and feed up their important data and information. In this application we also included another one feature Weather Forecasting which helps to farmer to take prediction and get fruitful result and work according to weather. Our main goal is to help the farmer which is in trouble and give him to user friendly application.

## SYSTEM ANALYSIS AND DESIGN

The architecture of the whole project is analyzed. System analysis is the process of defining the architecture, components, and data of a system to satisfy specified requirements. Design is a method of studying a system by examining its component parts and their interactions.. In this section, use cases, requirement analysis, and other part are described in details.

### Requirement Analysis

Web service of farmer product required the following requirements. This has mainly four

actors. Those are Admin, Customer, Farmer and Dealer. This website give service of farmer product to sell holder is known as customer and dealer.

### Data Requirement

During requirement analysis the following data have been identified for a web service of farmer product system:

- Admin/Farmer need to login to the system to operate the system. Admin/Farmer has an individual or unique login user id and password. Through this user id and password admin/farmer can login to the system.
- A customer can select a product for buying and add to cart. Customer also can pay online or cash on delivery
- Admin can update the category list of the product. An admin can edit or delete a category from the product category list.
- Dealer gets the product from website with low price. Dealer should be register for this service.

### Process Requirement

#### The following process requirements are identified for system

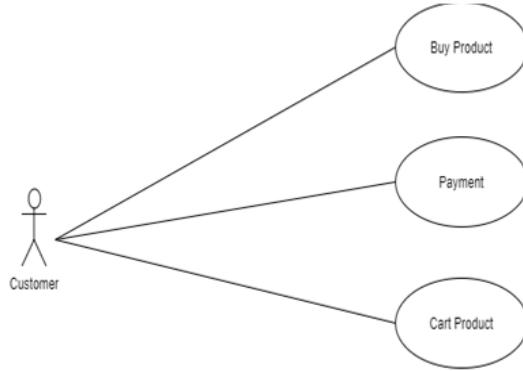
A valid login is required for all process to be performed. A valid login is required for every registered users and admin. All of them have a valid user id and password. System will authenticate their valid login.

### Use Case Diagrams

A use case diagram is a graphical depiction of the interactions among the elements of a system that shows the relationship between the user and the different use cases in which the user is involved. It is a methodology used in system analysis to identify, clarify, and organize system requirements. A use case diagram can identify different types of users of a system in this chapter use cased.

**Use case Diagram for Customer Management**

The Use case Diagram for Customer Management is shown below:



**Figure 4.2 Customer Management**

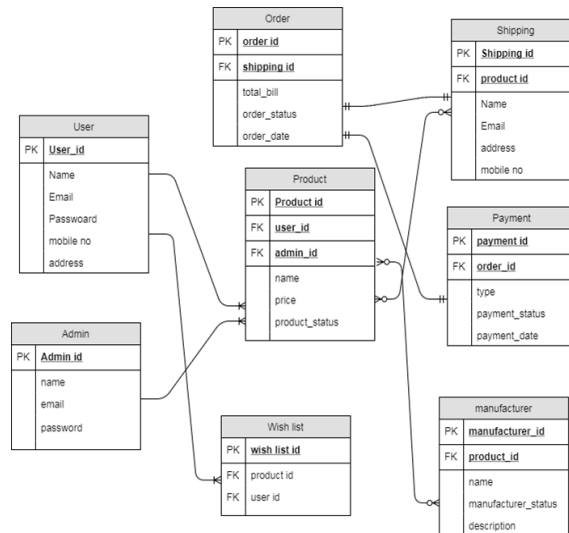
- **Login:** After completing registration customer login to perform necessary job.
- **Cart Product:** Dealer can product to cart even they are not registered but they cannot pay the bill. If they want pay bill than must be registered.
- **Payment:** The Dealer can buy the product from website and pay online or cash.

software engineering an ER model is commonly formed to represent things that a business needs to remember in order to perform business processes. Consequently, the ER model becomes an abstract data model that defines a data or information structure that can be implemented in a database, typically a relational database.

**Entity Relationship Diagrams**

An entity-relationship diagram (ERD) is a graphical representation of an information system that shows the relationship between people, objects, places, concepts or events within that system. In

- User (id, name, email, password, mobile no)
- Admin (id, name, email, password)
- Shipping (id, name, email, address, mobile no)
- Order (id, total, status, date, comments)
- Payment (id, type, status, date)



**Figure 4.3 Entity Diagram**

## MODULES

“E FARMING ANDROID APPLICATION” basically has four main modules for proper functioning:

### ADMIN MODULE

- Can add/update and Active/Deactivate Agriculture products.
- Can insert, update or delete a entry from all the forms like Products,Nursary Tools etc.
- Can easily generate a various reports like Total Sales,User,Postal code for Delivery option, Item Stock wise etc.
- Can easily Active/Deactivate users comments and rating.
- Admin can Add Agriculture Products & Tools for Sales.
- Easy stock maintenance for the admin.

### USER MODULE

- Users can get Login Password Through a mail and users can easily Update their Password and Profile
- Easy Search Require Products like Seed, Planter, Nursaty Tools etc.
- User can Create cart for shopping more products.
- Easily add/remove quantity and product from shopping cart.
- Search Product By Lower Price, Higher Price, and alphabetically.
- User can make comments and rating in any product.

## FEASIBILITY STUDY

As the name implies, a feasibility study is an analysis of the viability of an idea. All activities of the study are directed toward helping answer this question. A feasibility study is undertaken to determine the possibility or probability of either improving the existing system or developing a completely new system. It helps to obtain an overview of the problem and to get rough assessment of whether feasible solution exists. This is essential to avoid committing large resources to a

project and then repent on it later. If a project is seen to be feasible from the results of the study, the next logical step is to proceed with it.

The research and information uncovered in the feasibility study will support the detailed planning and reduce the research time.

## TECHNICAL FEASIBILITY

This will require a close examination of the present system.

The technical feasibility should ask questions related to:

- Adequacy of available technology.
- Adequacy of hardware.
- Available of computer.
- Operating time and support facilities, etc.

Technical feasibility determines whether the technology needed for the proposed system is available and how it can be integrated within the organization. Technical evaluation must also assess whether the existing system can be upgraded to use the new technology and whether the organization has the expertise to use it. It happens that after a system is prepared a new technology arises and the user wants the system based on that technology. There should be printer attached to the network for printing of Bills, purchase receipt, sales receipts and other reports.

### Economic Feasibility

Economic feasibility looks at the financial aspects of the project. Economic feasibility concerns with the returns from the investments in a project. To carry out an economic feasibility for a system, it is necessary to place actual money value against any purchases or activities needed to implement the project. The organization plans to acquire the necessary hardware and software requires for the system and there is no hindrance whether economical or otherwise towards its purchase

### Operational Feasibility

Operational feasibility covers two aspects.

- One is the technical performance aspect and other is the acceptance within the organization.

- Operational feasibility determines how the proposed system will fit in the current operations and what, if any job restructuring and retraining may be needed to implement the system.

**Schedule Feasibility**

A project will fail if it takes too long to be completed before it is useful. Typically this means estimating how long the system will take to develop, and if it can be completed in a given time period using some methods like payback period.

**Pre-Feasibility Study**

A pre-feasibility study may be conducted first to help sort out relevant alternatives. Before proceeding with a full-blown feasibility study, you may want to do some prefeasibility analysis of your own. If you find out early-on that the proposed business idea is not feasible, it will save you time and money. However, if the findings lead you to proceed with the feasibility study; your work may have resolved some basic issues.

**IMPLEMENTATION**

The system will be having only one User-name and Password section on the front page, as per the

user-name and password the system will know whether user is Farmer, Customer and Dealer.

We follow the MVC design pattern for developing our system. Model-view-controller (MVC) is a software design pattern for implementing user interfaces on computers.

**Database Implementation**

After getting the requirement of a logical design and structural design of our database, we can move to the implementation stage. The implementation phase is where you install the DBMS on the required hardware, optimize the database to run best on that hardware and software platform, and create the database and load the data.

**Database of Users**

In database, user database gather into user table. When user create an account, then all information of user store into user table. In user table store user password, email, name, mobile number, user type, date of birth, city, address, gender and profile image. If user wants to login website then need that information.

	id	name	email_address	mobile_number	dob	profile_image	city	password	address	registration_type	gender
Copy Delete	10	asim	asikurani@gmail.com	0194215	2017-07-14 00:00:00	/profile_image/keimgpe-spa-web-design.jpg	dhaka	a3601725e01af5c3c7629b059	dhaka	1	male
Copy Delete	11	tamin	asikurani@gmail.com	0194215	2017-07-09 00:00:00	/profile_image/mapes_111.jpg	dhaka	827c0b0ea076c424a1681804e7b	dhaka	2	male
Copy Delete	16	abtan	asikurani@gmail.com	0194215	2017-07-15 00:00:00	/profile_image/mapes.jpg	dhaka	59315747426358d6e37573e6c74d	dhaka	2	male
Copy Delete	17	abtan	asikurani@gmail.com	0194215	2017-07-15 00:00:00	/profile_image/banner1.jpg	dhaka	59315747426358d6e37573e6c74d	dhaka	1	male
Copy Delete	18	mita	asikurani@gmail.com	0194215	2017-07-07 00:00:00	/profile_image/mapes_113.jpg	dhaka	827c0b0ea076c424a1681804e7b	dhaka	1	male
Copy Delete	19	abtan	asikurani@gmail.com	0194215	2017-07-08 00:00:00	/profile_image/web-design-hat2.jpg	dhaka	59315747426358d6e37573e6c74d	dhaka	2	male
Copy Delete	20	adil	asikurani@gmail.com	0194215	2017-07-07 00:00:00	/profile_image/mapes2.jpg	dhaka	827c0b0ea076c424a1681804e7b	dhaka	1	male
Copy Delete	21	adil	asikurani@gmail.com	0194215	2017-07-07 00:00:00	/profile_image/mapes3.jpg	dhaka	827c0b0ea076c424a1681804e7b	dhaka	1	male
Copy Delete	22	adil	asikurani@gmail.com	0194215	2017-07-07 00:00:00	/profile_image/mapes4.jpg	dhaka	827c0b0ea076c424a1681804e7b	dhaka	1	male
Copy Delete	23	moni	asikurani@gmail.com	0194215	2017-07-13 00:00:00	/profile_image/web-design-hat3.png	dhaka	827c0b0ea076c424a1681804e7b	dhaka	1	male

Figure 7.1 Database for users

### Database of Products

Database of products store all information into product table of database. Here store product id, category, manufacturer id, product name, product

comment, product price, and stock and product image.

product_id	category_id	manufacturer_id	product_name	product_description	product_price	product_stock	product_image	product_status	publication_status
1	40	1	winter vegetable	lightbrown	40	-10	product_image5.jpg	1	1
2	44	1	Risa	hhastach	10	70	product_image7image-Santa.jpg	1	1
3	49	2	Agro Tools	adhojo	40	-70	product_image9.jpg	1	1
4	40	2	Swebs	gaghtg	40	34	product_image27.jpg	1	1
7	48	1	Swebs	thgyff	10	15	product_image2.jpg	1	1

Figure: 7.2 Database for products

### Database of Contacts

Contact database store into contact table. Here store user feedback about product or other service. Contact table also store contact id, name, email

address and enquiry from user who give feedback about our website. This table also store complains

contact_id	contact_name	email_address	enquiry	captcha
1	Fanuk	farukmia@gmail.com	This web service ...	fd30c7
2	Adnan	adnan11@gmail.com	WEB farming in bd	fd30c7

Figure 7.3 Database for contacts

### Database of Shipping's

Database of shipping store all information into shipping table. Here store shipping id, name, email address, mobile number, city, country and zip code.

Shipping table also store product shipping address and product delivery place or city. Figure 6.4 shows the database of shipping's.

shipping_id	name	email_address	mobile_number	address	city	country	zip_code
1	Alamin	alaminmia24@gmail.com	01913944215	dhaka	dhaka	BD	12
2	alamin	alaminmia24@yahoo.com	01913944215	dhaka	dhaka	BD	1212
3	adnan	atekuralamin1@gmail.com	01913944215	dhaka	d city	BD	1212
4	Aladin	atekuralamin1@gmail.com	01913944215	dhaka	d city	BD	1212
5	adnan	alaminiatekur11@gmail.com	01913944215	dhaka	d city	BD	1212
6	adnan	atekuralamin1@gmail.com	01913944215	dhaka	d city	BD	1212

Figure 7.4 Database for shipping user

SELECT \* FROM 'tbl\_order'

Number of rows: 25

Sort by key: None

Options	order_id	shipping_id	payment_id	order_total	order_status	order_date	order_comments
<input type="checkbox"/> Edit Copy Delete	70	11	43	102	53.75 success	2017-07-30 02:26:45	
<input type="checkbox"/> Edit Copy Delete	71	11	44	103	53.75 success	2017-07-30 03:34:36	
<input type="checkbox"/> Edit Copy Delete	72	17	45	104	172.00 success	2017-07-30 23:27:53	

Figure 7.6 Database for orders

### Database of Wish List

Database wish list store into wish list table. This table store user wish list product. Wish list table

also store wish list id, product id and user id who add product into wish list.

SELECT \* FROM 'tbl\_wish\_list'

Number of rows: 25

Sort by key: None

Options	wish_list_id	product_id	id
<input type="checkbox"/> Edit Copy Delete	1	1	1
<input type="checkbox"/> Edit Copy Delete	3	3	1
<input type="checkbox"/> Edit Copy Delete	5	4	1
<input type="checkbox"/> Edit Copy Delete	6	7	11

Figure 7.5 Database for Wishlist

### Database of Orders

In order database store order status and order total price which user order in website. User can order many products in same time that time order id will be different. There have user id; shipping id and payment id for ensure all formality.

### Database of Admin

Admin database store admin login info into admin table. This table store admin name, id, email address, and password. This table also store access label which type of admin login into admin panel. Our website has two type admin so we use two access labels.

SELECT \* FROM 'tbl\_admin'

Number of rows: 25

Sort by key: None

Options	admin_id	admin_name	email_address	admin_password	access_label
<input type="checkbox"/> Edit Copy Delete	1	Alamin Mia	alaminatetur111@gmail.com	593d157474526586bbe37573efed37e0	1
<input type="checkbox"/> Edit Copy Delete	2	Atekur Rahman	atekuralamin@gmail.com	593d157474526586bbe37573efed37e0	2

Figure 7.7 Database for Admin

### Database of Category

Category database store category info into category table. This table store product category which category product add into website. Category

table also store category id, name and category comment. Add category have to select which category publish or unpublished in website.

category_id	category_name	category_description	publication_status
32	Sapling	A young tree, especially one with a slender trunk.	1
47	Seeds	Seed is an embryonic plant enclosed in a protectiv...	1
48	Vegetable	The vegetable is any part of a plant that is consu...	1
49	Instrument	use for cultivating crops.	1
53	Rice	Rice is BD main food.	1
54	Tools	tools use for the manufacture crops	1

Figure 7.8 Database for Category

### Database of Payment

This database store payment info into payment table. This table store payment id and date. This table also store payment status which type of

payment is completed by user. User can pay cash or card if pay cash then cash on delivery and if pay bay card then pay bay card status store into database.

payment_id	payment_type	payment_status	payment_date
21	cash_on_deliver	success	2017-07-18 06:00:21
22	cash_on_deliver	success	2017-07-18 06:01:33
23	cash_on_deliver	success	2017-07-18 06:01:33
25	cash_on_deliver	Pending	2017-07-18 06:06:38
26	cash_on_deliver	Pending	2017-07-18 06:08:33
27	cash_on_deliver	Pending	2017-07-18 06:09:26
38	pay_by_card	success	2017-07-26 01:21:31
39	pay_by_card	success	2017-07-26 01:24:21

Figure 7.10 Database of Payment

### Database of Order Details

In order details database store order id, order detail id, product id and order each product price

which user order in website. User can order many products in same Order details database also have order quantity which amount product order by user.

order_details_id	order_id	product_id	product_name	product_price	product_sales_quantity
1	1	1	winter vegetable	40.00	2
2	2	1	winter vegetable	40.00	1
3	2	7	Seeds	10.00	1
4	4	1	winter vegetable	40.00	1
5	5	1	winter vegetable	40.00	1
6	6	3	Tools	40.00	1
7	7	3	Tools	40.00	2
8	8	1	winter vegetable	40.00	1
9	9	1	winter vegetable	40.00	2

Figure 7.11 Database of order Details

## Interface

A critical aspect of systems design is to create the user interface to the new system. Input and output design focuses on the content of that interface – the specific fields that should be included in screens and reports that are viewed by the users. Once the content is determined, the format for human-computer interaction (HCI) is determined. The user interface (UI) is the way the system talks to the users, using screens/forms, reports, and error messages.

## Home page

This is the home page for Farming Assistant website and Online Product buy, sell and add product. In the top menu there is my account login, about us, shopping cart, compare and checkout in part and in middle there is featured product part. Between top menu and middle part there are category name of product and login or register part too. In the bottom part there are latest products of the website given.

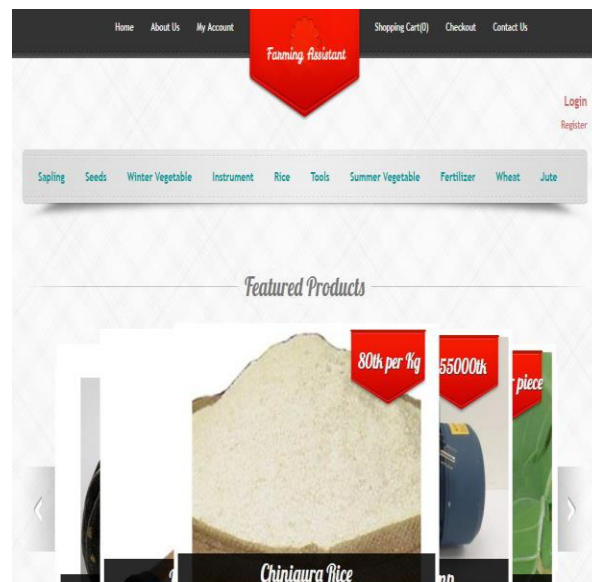


Figure 8.13 Home page

## Wish list page

This is the wish list page for Farming Assistant website. Here user can add product to wish list and also can remove from wish list. From wish list user

can add product to shopping cart. For all access user must be registered. If user register then can get all access and next time not needed to register for access, only need login.

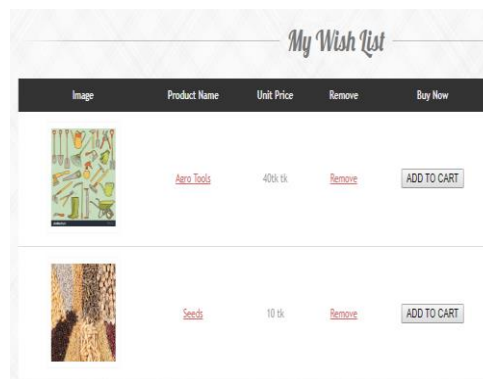


Figure 8.15 Wish List

### Account Login page

This is the account login page for Farming Assistant website. Here user can login to access his account. User must need to register for login. User

fills up the form with registered email address and valid password which is used at registration.

**Figure 8.16 Account login**

### Registration page

This is the account registration page for Farming Assistant website. Here user can register an account to access website all service. User must

need to give requirement information for registration. User fill up the form with require all info which is complete the registration. If a person fills the form and submits, then he or she becomes a user of the site.

**Figure 8.17 Registration page**

### Shipping Info page

This is the shipping info page for Farming Assistant website. Here user should register an account to access shipping info in website. If user

add product to shopping cart then user try to checkout product, at this moment user should fill up shipping info for completing shopping in this website.

**Shipping Information**

\* Name:

\* Email Address:

\* Mobile Number:

\* Address:

\* City:

\* Country: --- Please Select ---

\* Zip Code:

Save Shipping

**Figure 8.18 Shipping Information**

**Shopping Cart page**

This is the shopping cart page for Farming Assistant website. Here user should register an account to access shopping cart in website. If user

adds product to shopping cart then user try to checkout product, at this moment user should register for completing shopping in this website. User can update his product quantity and can remove product from shopping cart.

Home > Account > Shopping Cart

**Shopping Cart**

IMAGE	PRODUCT NAME	QUANTITY	UNIT PRICE	SUB TOTAL
	winter vegetable	5	BDT 40	BDT 200
	Seeds	1	BDT 10	BDT 10

Total: BDT 210  
 VAT 7.75%: BDT 15.75  
**Grand Total: BDT 225.75**

CONTINUE SHOPPING      CHECKOUT

**Figure 8.19 Shipping cart page**

**Payment info page**

This is the payment info page for Farming Assistant website. Here user should register an account to access payment info in website. If user

add product to shopping cart then user try to checkout product and give shipping info, at this moment user should pay for completing shopping in this website. There are two type payments such as cash and card.

**Payment Information**

Cash On Delivery

Pay by Card

Comments . . .

Place Order

**Figure 8.20 Payment Information**

### Successful Order Mail Page

This is the successful order mail page for Farming Assistant website. When he/she pay for his product then get a successful email for

completing shopping in this website. User gets all info by email, about shopping get shipping info, order info & billing info too. This email sends from admin for user.

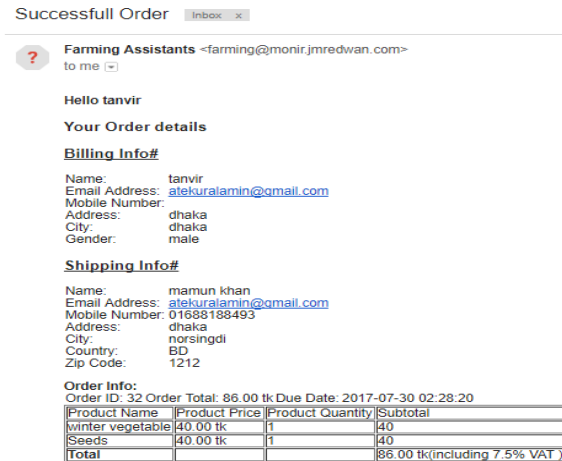


Figure 8.21 Mail Page

### Manage Manufacturer page

This is the manage manufacturer page for Farming Assistant website's admin panel. When

admin add manufacturer of product and publish it then user see those manufacturer of product. Admin can edit manufacturer name and delete manufacturer in this website.

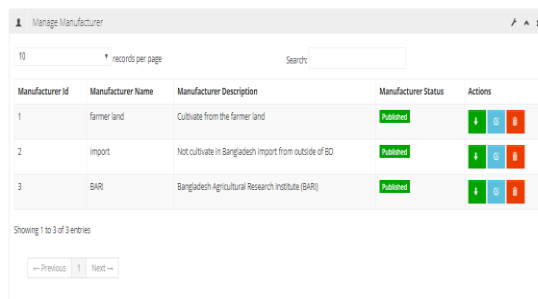
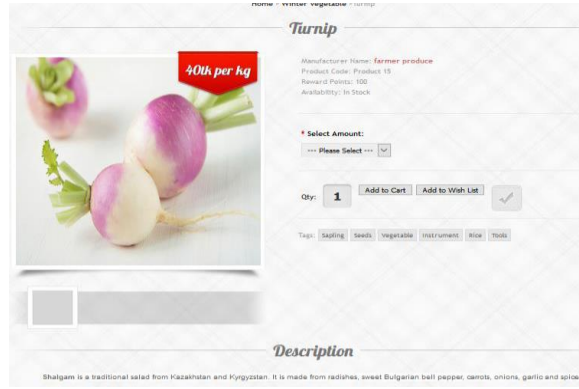


Figure 8.24 Manufacture page

### Products page

This is the product page for Farming Assistant website. When admin add product and publish it then user see those product in this page. This page

show details of product information. User can add product into shopping cart from this page and also add to wish list if he/her registered. In the bottom part there are related product and product reviews of the product given.



**Figure 8.25 Product Page**

**Stripe Payment page**

This is the Stripe payment page for Farming Assistant website. Here user should register an account to access payment info in website. After

shopping cart then user try to checkout product and give shipping info, at this moment user should pay for completing shopping. There is pay by card payments option use stripe test payment gateway. Here we use test card and zip number.

**Stripe Payment**

Shopping Cart

Name

Grand Total

Card Number

Expiration (MM/YY)  /

CVC

Billing Zip

**Figure 8.28 Stripe Payment**

**CONCLUSION**

The “E-Farming: An E-Commerce Site for Agricultural Product” is successfully designed and developed to fulfill the necessary requirements, as identified in the requirements analysis phase, such as the system is very much user friendly, form level validation and field level validation are performing very good. The old manual system was suffering from a series of drawbacks. The present project has been developed to meet the aspirations indicated in the modern age. Through the developed project,

anyone can visualize the effectiveness and efficiency in the real life. It is very helpful for computerization or doing automation of a personal information management system. This program helps reduce the manual method and stress which is done by a person and that is time consuming and lengthy process. With this application user’s information are stored very efficiently in a secured database. of human and improve their standard of database storage.

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