International Journal of Research Publication and Reviews

Agricultural Web Service

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A B S T R A C T

Agricultural Web Service is the project to give more profitability to Farmers, to digitalize farming, to introduce farmers to digital world. This project will help farmers by direct communication between farmer and supplier by eliminating intermediates. It will also provide personalized view for farmer, supplier and admin by their different logins by that handling of webpage will be comfortable. Old manual system is facing number of drawbacks. This project will overcome those drawbacks.

Keywords: Farmer, communication, profit, supplier, digitalize

1. INTRODUCTION

Agricultural web service is the project which ensures better profitability that old manual system. This will be done by direct communication between farmer and supplier and also by other features of this project. This service improves business communication between farmers and suppliers and also between farmers. It also improves transparency in famers and suppliers by removing intermediates. There are separate logins for farmers, suppliers and administrators which provide different views for all. In farmer login farmer can sell their products, submit their complains and problems also and can post advertisements. In supplier login supplier can view complains, post advertisements and can receive crops. In admin login admin can view complaint page and controls whole system. Farmers will get notifications about suppliers' advertisements.

Because of intermediates in agriculture industry farmer facing number of losses.Intermediates are the link between farmers and suppliers but they are not good for farmers' profit and customers' expectations about dearness. But agricultural industry also needs link for communication between farmers and suppliers and also for business. We are working to be that link in agricultural industry. And give profit to farmers and meet customer expectations.

2. METHODOLOGY

The objective is to create a Web-site that can perform the following:
- Opening the relevant html pages using HTTPS POST & GET methods.
- Read the data logically into Farmer, Supplier and Admin.
- Creating a local database.

Start Page:
- Home: This is default page. Anyone can see this page without login.

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- Products Category: By using this menu user can see selected products category.
- All Products: Here user can see all products with details.
- Registration: Here new user can register.
- Login: Farmer, Supplier and Admin can login here with their correct username and passwords.

Supplier:

- Home: This is default page. Anyone can see this page without login.
- Products Category: By using this menu user can see selected products category.
- Products: Here user can see all products with details.
- Add Products: Supplier can add products based on different categories.
- Add Slider/Banner: Here supplier can publish advertisements.
- Log Out: After completion of work, he/she can logout.

Farmer:

- Home: This is default page. Anyone can see this page without login.
- Products Category: By using this menu user can see selected products category.
- All Products: Here user can see all products with details.
- Add Products: Supplier can add products based on different categories.
- Add Slider/Banner: Here supplier can publish advertisements.
- Log Out: After completion of work, he/she can logout.

Admin:

- Home: This is default page. Anyone can see this page without login.
- Products Category: By using this menu user can see selected products category.
- All Products: Here user can see all products with details.
- Add Products: Supplier can add products based on different categories.
- Add Slider/Banner: Here supplier can publish advertisements.
- Add Category: Admin can add different types of categories of products.
- Add Sub Category: Admin can add different types of subcategories of products.
- Log Out: After completion of work, he/she can logout.
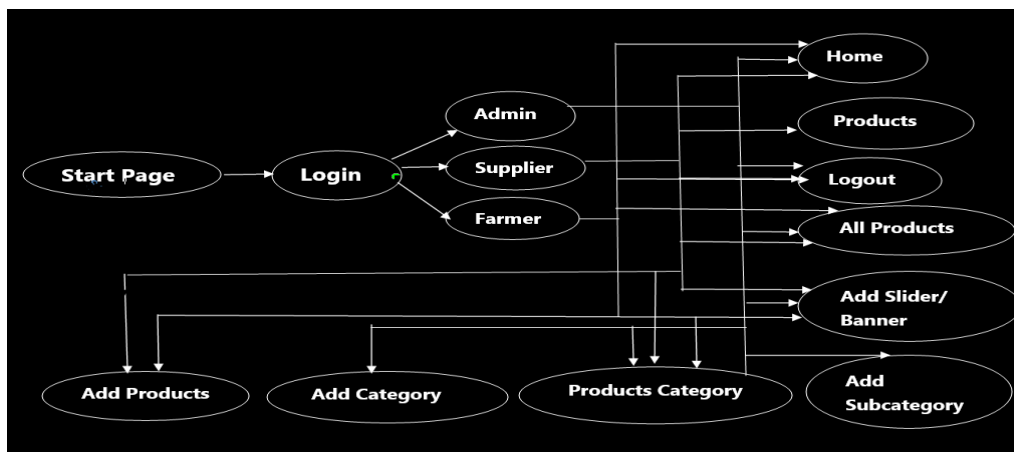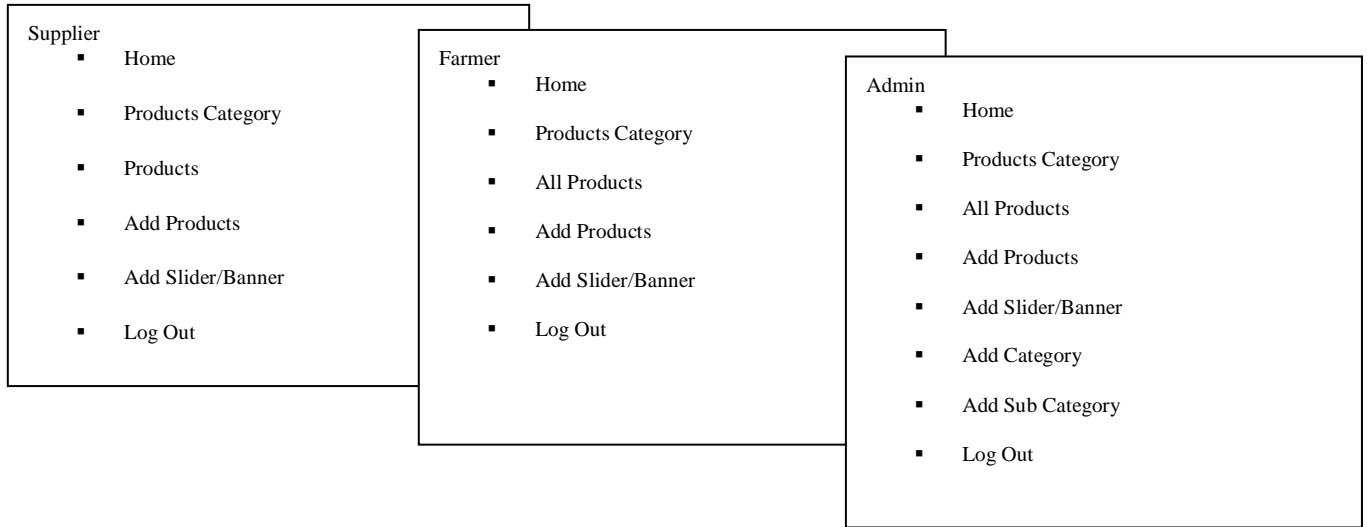
3. ARCHITECTURE

Fig. System Architecture

It traces the agricultural problems by getting complaints and problems of farmers with complaint page which can be solved. It completes the role of technology adoption by digitalizing agriculture industry. Solves the issues of extension services for farmers in India. Communicating by mobile phones is considered very important nowadays. It is the easy and fast way of communication. And it is fast to get answer of every question. Mobile phones save energy and time of farmers ultimately improve their profit.

The main objectives of this system are listed below as follows:
- Communication between farmer to supplier and farmer to farmer
- Improve business communication
- Improve transparency in agricultural industry
- Dealers and farmers can publish an advertisement
- Farmers also have an option to submit their problems and complaints about supplier to respective authorities.

There are three main modules:

Supplier
- Home
- Products Category
- Products
- Add Products
- Add Slider/Banner
- Log Out

Farmer
- Home
- Products Category
- All Products
- Add Products
- Add Slider/Banner
- Log Out

Admin
- Home
- Products Category
- All Products
- Add Products
- Add Slider/Banner
- Add Category
- Add Sub Category
- Log Out

4. IMPLEMENTATION

When we login as admin, by default home page will be appear. Products are displayed according to categories. There are 6 more tabs. When we move curser on Product Category tab, it will show all categories of products. When we click on All Products, it will show All products separated by their category. If we click on Add Products, from that we can add a new product with specifications. In Add Category tab, we can add new category for products. In Add Slider/Banner tab, we can add slider/banner which will be shown at the top of a page. From Add Sub Category, we can add sub categories. At last we can logout, when logout thank you page will be appeared.
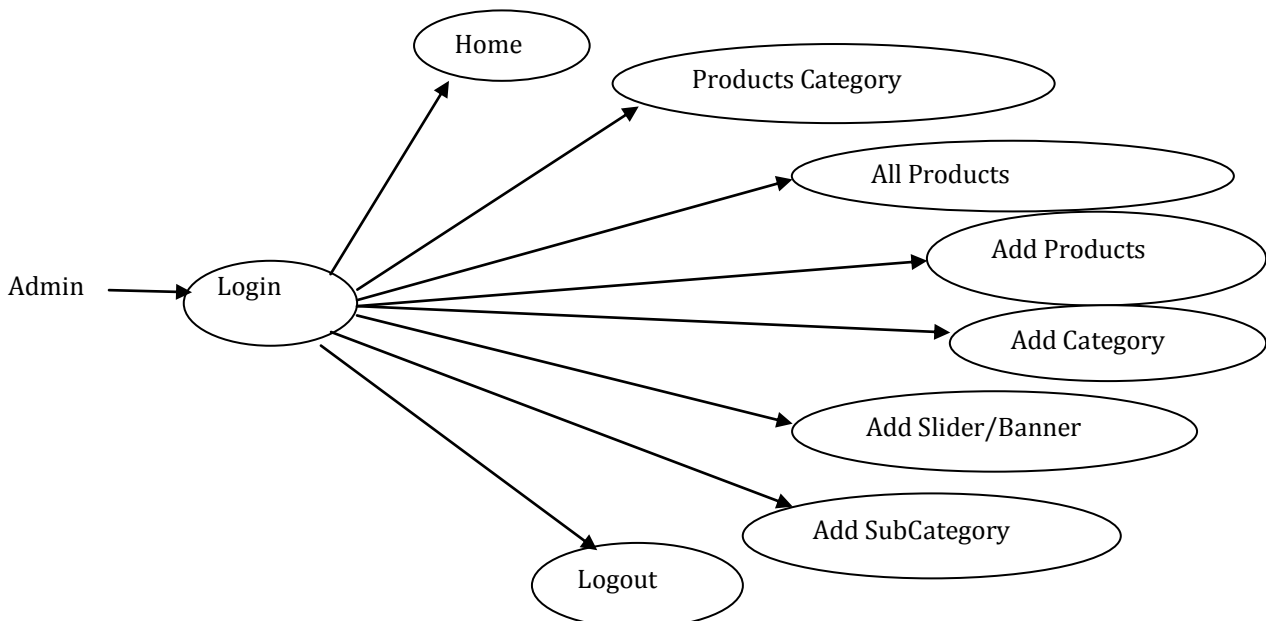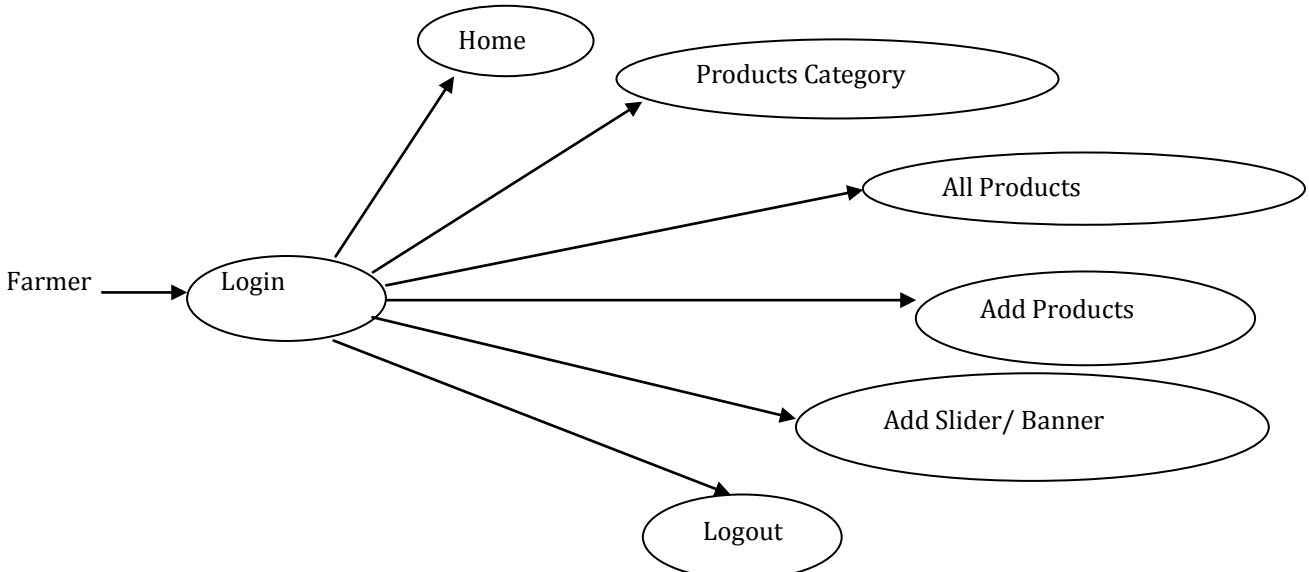

Fig. 1.Admin Login

When we login as farmer, by default home page will be appear. Products are displayed according to categories. There are 4 more tabs. When we move curser on Product Category tab, it will show all categories of products. When we click on All Products, it will show All products separated by their category. If we click on Add Products, from that we can add a new product with specifications. In Add Slider/Banner tab, we can add slider/banner which will be shown at the top of a page. At last we can logout, when logout thank you page will be appeared.


Fig.2.Farmer Login

When we login as supplier, by default home page will be appear. Products are displayed according to categories. There are 4 more tabs. When we move curser on Product Category tab, it will show all categories of products. When we click on Products, it will show All products separated by their category. If we click on Add Products, from that we can add a new product with specifications. In Add Slider/Banner tab, we can add slider/banner which will be shown at the top of a page. At last we can logout, when logout thank you page will be appeared.
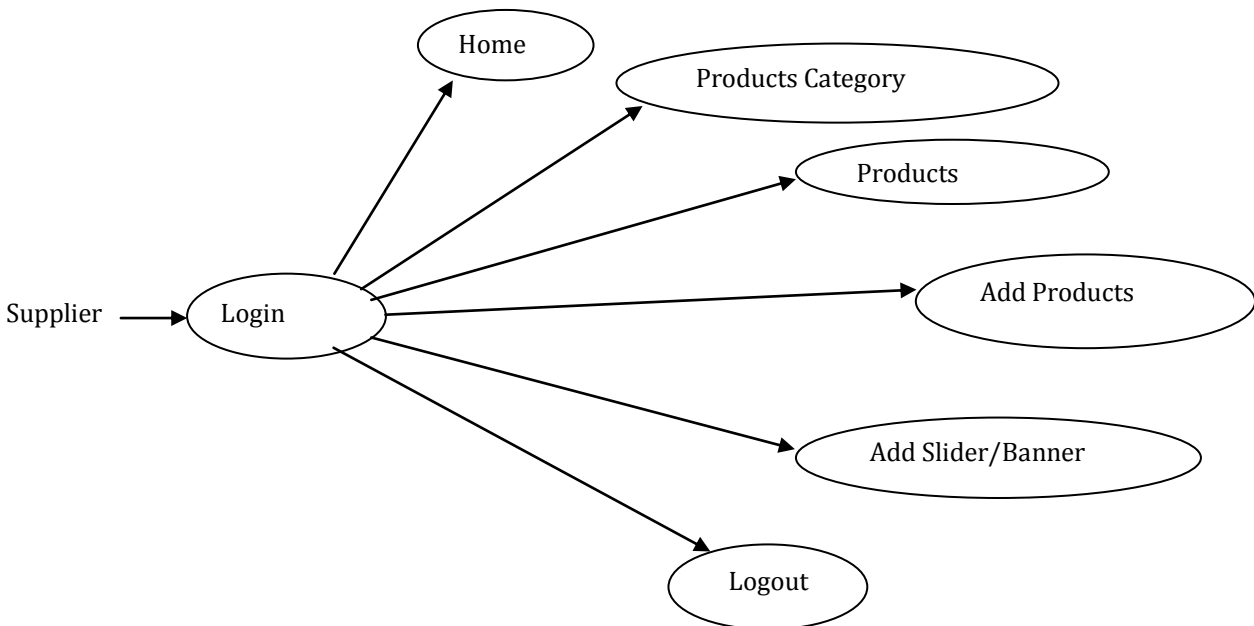
Fig.3. Supplier Login

5. LITERATURE REVIEW

Agriculture decision support system using data mining [2017]the propose of this system is to help the users to decide which crop can be grown.The membership-based system is used and it customizes thedata of each user registration. The system have a module which keeps up the data of the crops grown in past from different sources and the crops which can be grown. The artificial neural network (ANN) is used for this system. The feedback system helps users to request for changes required in the system and to complaint about error.[1]

E-farming helps farmers to sell their products in overall country. Farmers should have some basic knowledge about how to use this website. This site guides the farmers, the booming market rate of products, the total sale of the farmer and the earned profit by the sold products, learning the new farming techniques by e-learning also to know about different governments' agricultural schemes. To know information about to the markets andproducts is made possible through the SMS facility. [2]

E-Agriculture Information Management System [2014] Especially, it engages the design, improvement, estimation and application of inventive ways to use developing information and communication technologies. "E-Agriculture" is an developing field in the connection of agricultural information services, improvement and capitalism which is focusing on farming facilities, technology distribution and information developed through the Internet. [3]

Supply chain security: An overview and research agenda [2008]this project initializes from the abstraction of the providing chain of the farming products. The nature of farming products and its supply bond are discussed in the project. Agricultural supply bond management and improvement of the rural areas, and improve the profitability of the farmers. [4]
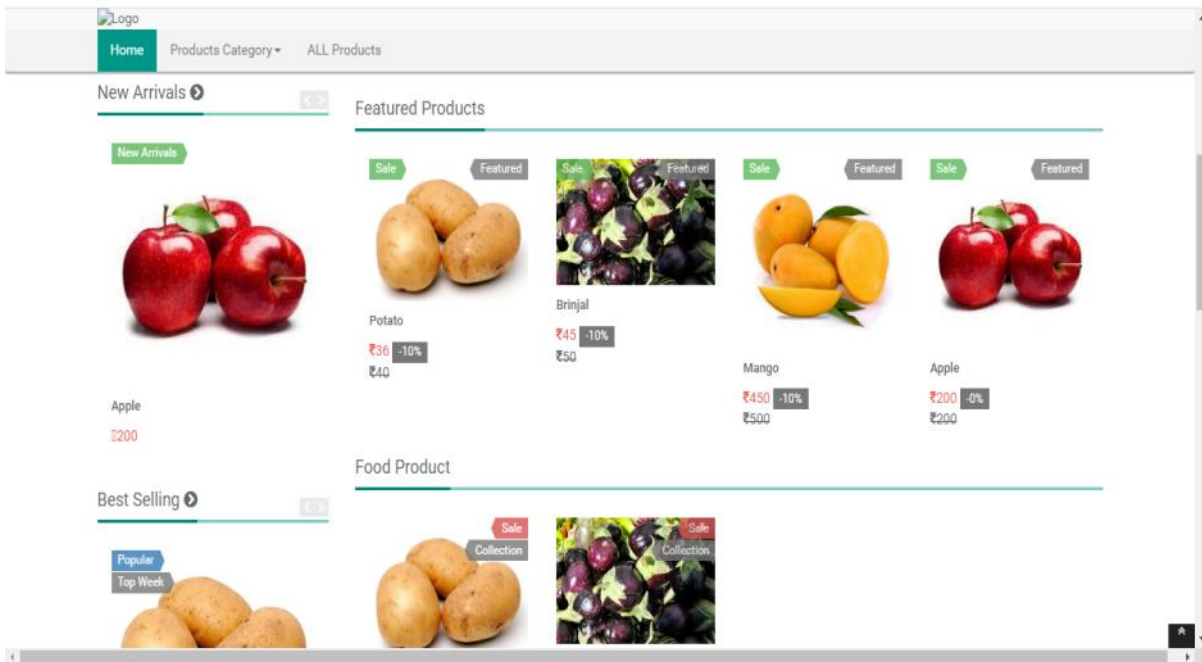
Europol report[2016] The main aim of the project is to give a bond of communication between the farmers and buyers in the overall country so they can come together and do business that is profitable for both farmers and buyers. [5]
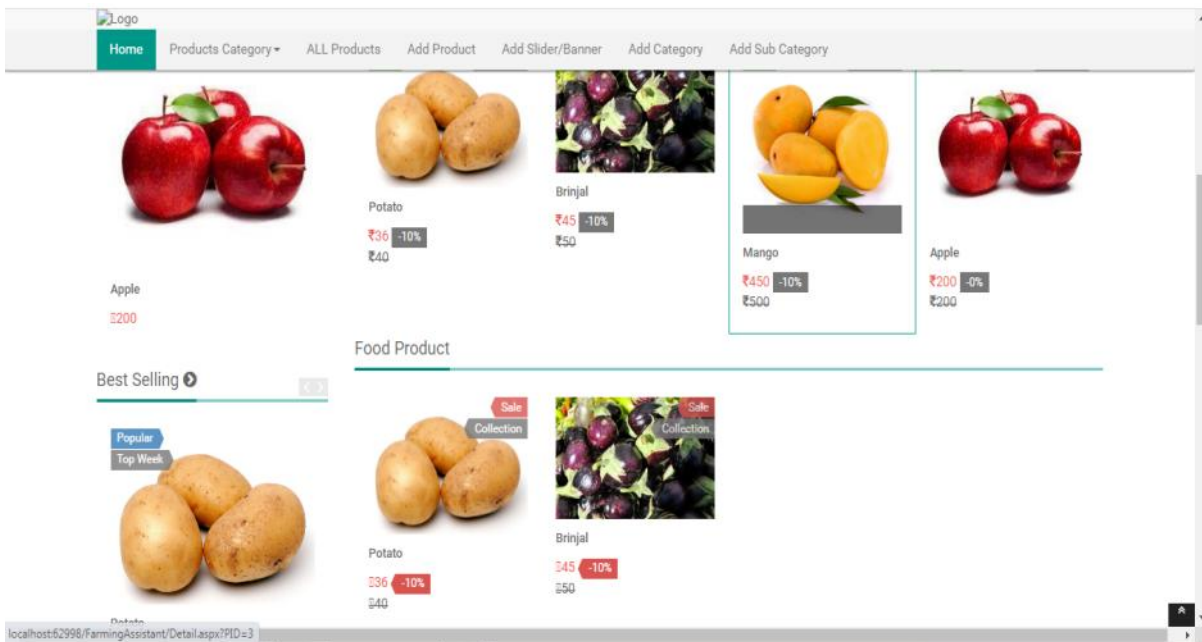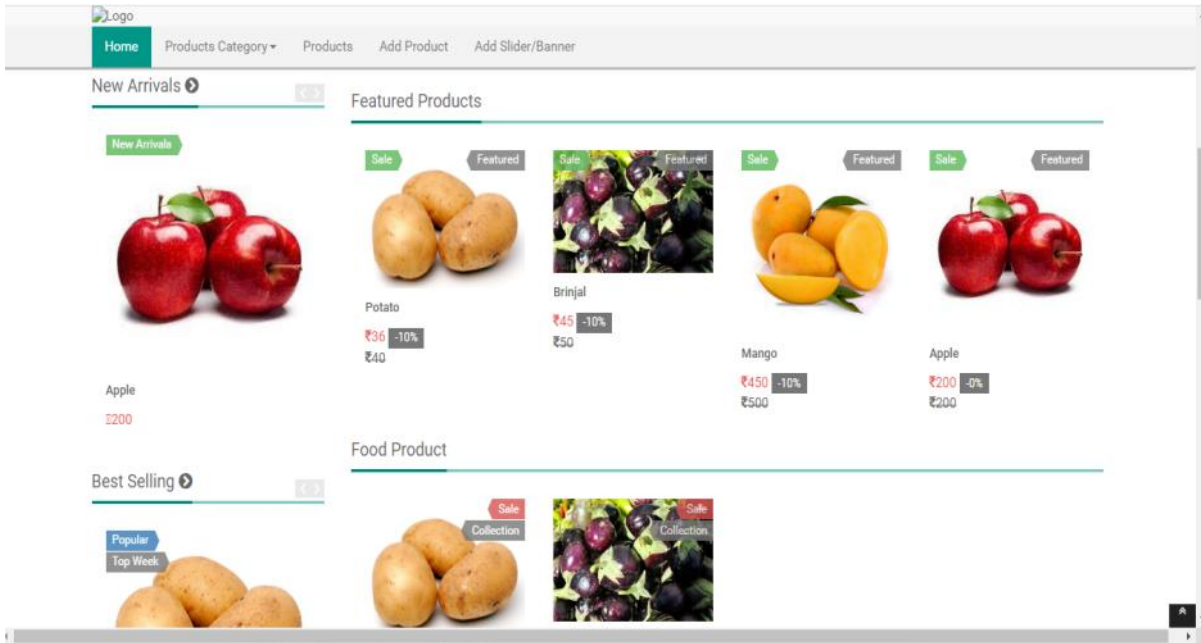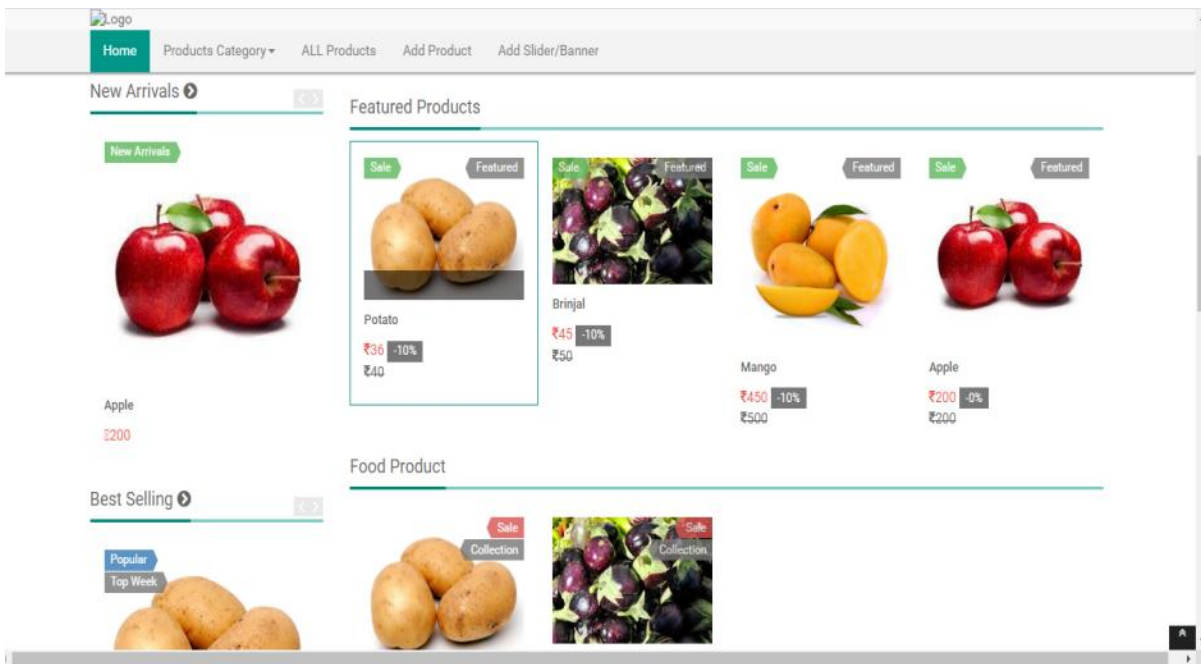
6. RESULTS

Home page:
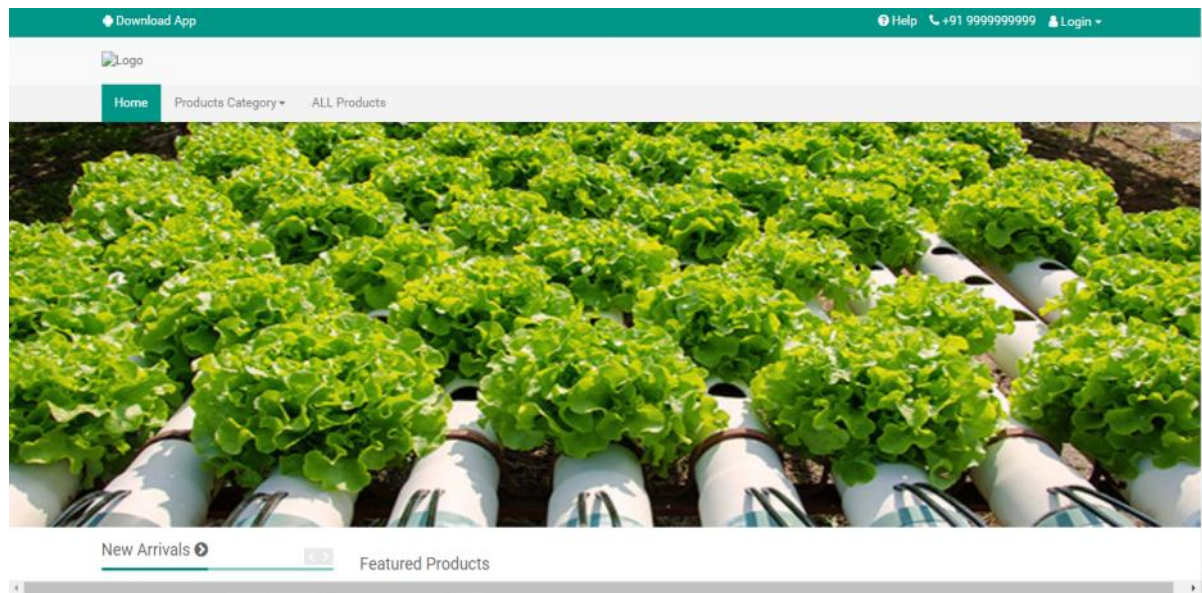
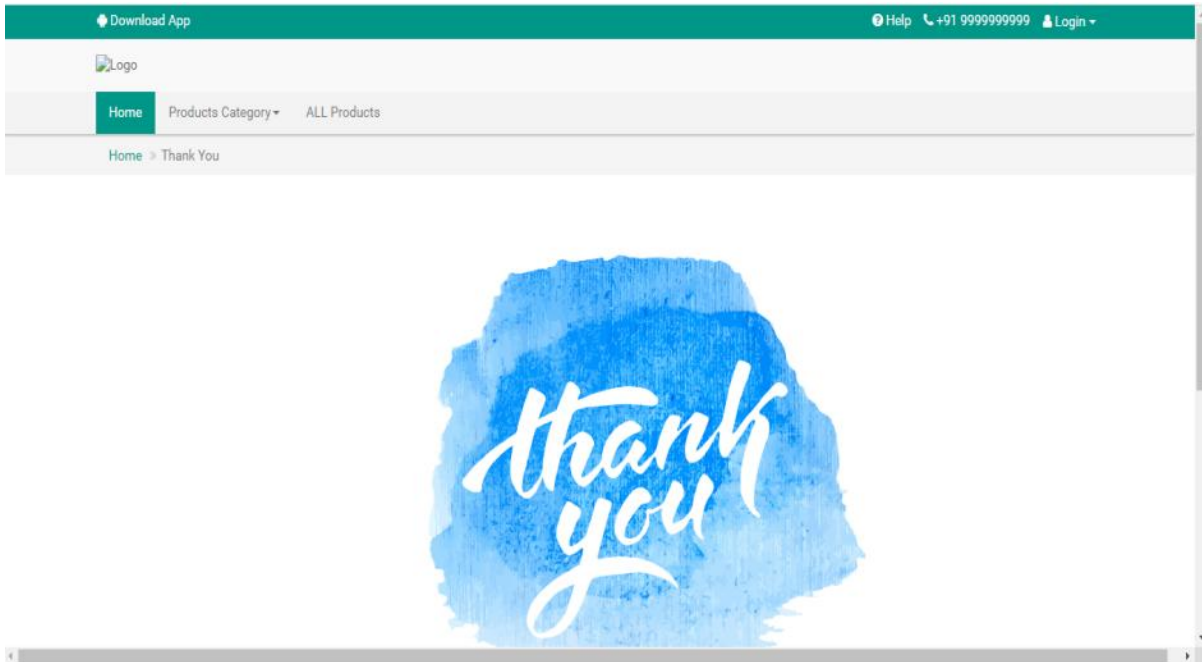**When scroll:**

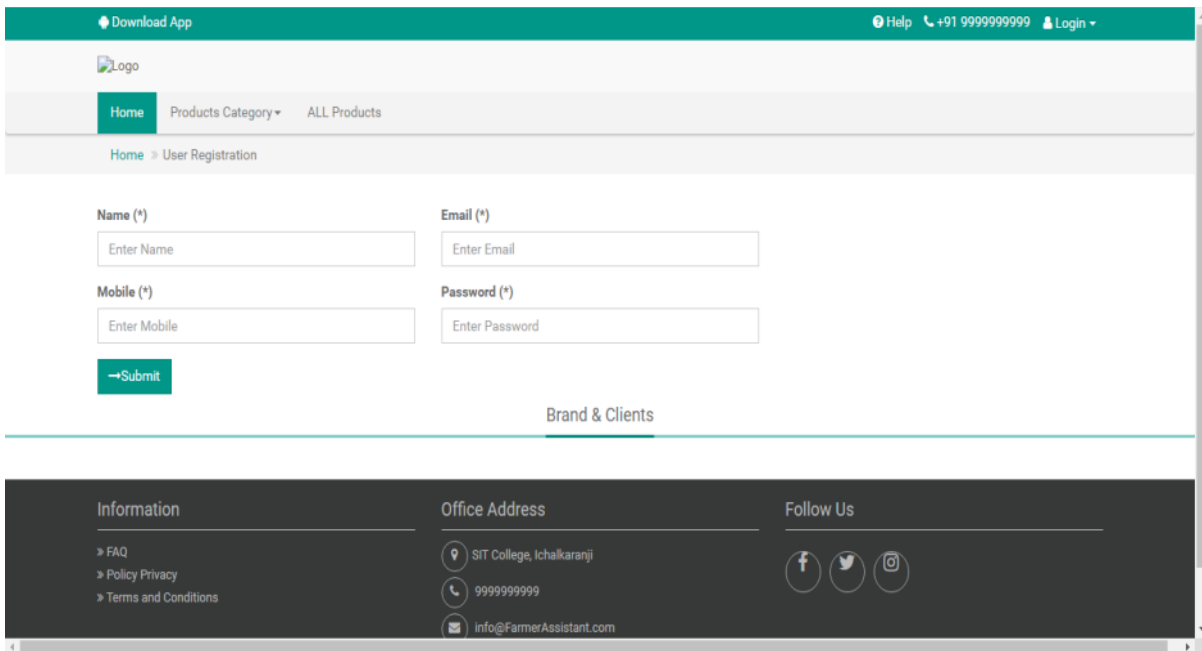**Admin Login:**

Supplier Login:

Farmer Login:

Logout page:

Registration page:

7. CONCLUSION

The agricultural web service will be designed and developed to overcome the drawbacks of old manual system and meet the requirements of modern age. This system will digitalize the agriculture industry and give more profit to farmers. It will bring transparency between farmer and supplier by removing intermediates. It will trace agricultural problems using complaint page for farmers and will solve as many as possible. Will also solve the problems in extension services for farmers in India.Will save energy and time of farmer and customer also. And this web service will be the link in agricultural industry.

Future Works:

The Verification of the users cannot be done online. In future we will work on that and can overcome this problem. Complaints of farmer can be solved by reviewing their problems with complaints page and by this we can improve features of this website.
We will improve the design of the website and make this website more user-friendly. In future we develop the mobile application of agricultural web service.

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