

E-FARMING

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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 farmers, 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. The site will guide the farmers in all the aspects, the current market rate of different products, the total sale and the earned profit for the sold products, access to the new farming techniques through e-learning and centralized approach to view different government's agriculture schemes including the compensation schemes for farming. 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, marketrate, bill, e-learning, SMS facility

1. 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.

2. OBJECTIVES

The main objective of this project is building a website which will help farmers from Indian villages to sell their products to different city markets. It is a computerized approach for better and clear marketing.

Farmers will get unique interface where they can avail everything right from learning to the market information they can perform marketing, get the current rates of market, get in touch with SMS through the cell phones, can gather the knowledge of different schemes and apply as well as check status of application.

This website will act as unique and secure way to perform agro-marketing.

3. 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 cut 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 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.

4. E-FARMING

E-farming will provide unique ID to each user that can be used to perform agro-marketing and can apply for scheme.

4.1 Design and Architecture

We describe the Algorithm, which is used to explain how the system is going to work, i.e. the process logic behind it, the flowchart, which represents the pictorial representation of the process logic and finally the Data Flow Diagram of the E-Farming.

4.1.1 Algorithm

There is no need of login for normal user who has the curiosity to know about the market information and different schemes. Farmers who want to perform marketing and apply for schemes must have the login username and password. Along with farmers, the agent which will perform the selling of farmer's product must be authorized through the market committee for their license of marketing and after authorization, they will be given authorized agent ID and password. During authorization, Farmer need to provide his bank account

number, names of product he farms, his personal details, etc. This information can be used for various purposes of marketing.

Once availed with the username and a password for the website the users can perform different operations like marketing, viewing the account information, checking the fund transfer after a sale.

4.1.2 Flow Chart

The diagram (fig.2) has shown below gives some basic description regarding the flow of the system. It will give an overview of the operations performed and where it goes after the operation has been performed. It shows the different conditions like (“if else”) if one condition is not true then where the flow will return and from where will it start again or where will the flow terminate after some operation has been performed.

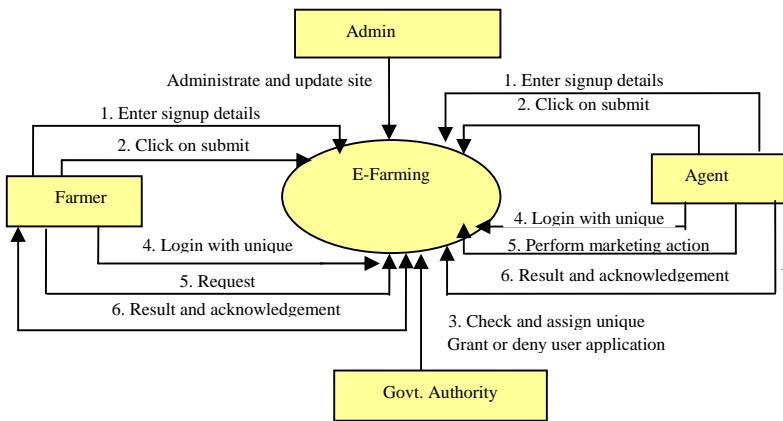


Figure 1: Data Flow Diagram

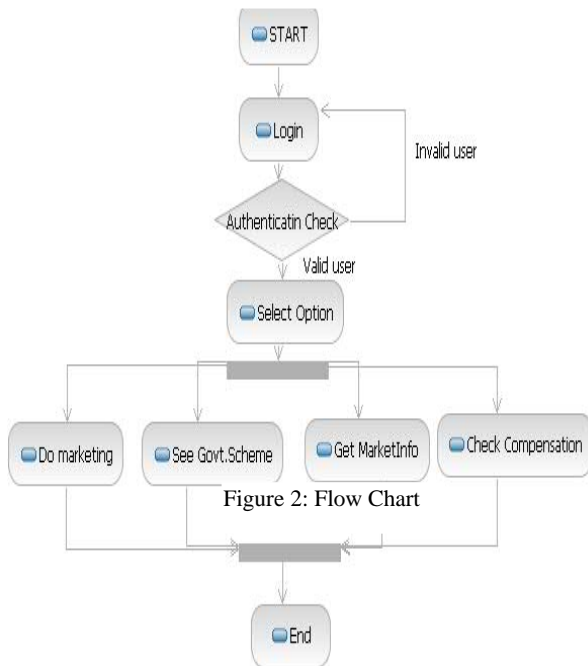


Figure 2: Flow Chart

4.2 Applications

- Provides user friendly site for the marketing purpose.
- Has real time application in ‘krushi utpann bajar samitte’ where actual marketing takes place.
- One touch access to descent and accurate market information.
- Reduces the chances of corruption, inconvenience and uneasiness in viewing the market.
- Information on mobile by just sending specified keyword through SMS.
- Easy and hassle free access as well as apply to the schemes and compensation provided by government.
- Agriculture education through E-learning.

4.3 Risks in implementation

- Lack of equality to access the internet in rural areas.
- Reliability of information on the web.
- Technophobia of new users.

5. METHODOLOGY

Following are the basic modules involve in project:

- **Account Generation:** It includes the creation of account, in which basic information of user, type of user, whether he is farmer, agent or Gov. Officer is submitted. Through this module, user gets the Unique ID which serves as the identity of user.
- **Marketing:** It includes Pricing, Billing and the Fund Transfer. Pricing will show the farmer at what price his commodity has been sold. Billing will create the bill after getting request from farmer for bill creation. Created bill will be displayed on the page. Bill will consist of unit price rate, total bill amount, commission of agent, vehicle fare, other expenditure, etc. Farmer can download or print the bill for future reference. Using fund transfer, Agent can transfer the invoice amount to farmers account and farmer can check whether amount has been transferred or not. One should be log in for using this facility.
- **Market Information:** Farmer can see the market information of nearby market. This will consist of selling rates of different product, today’s turnover, product-wise details like quantity, grading, selling cost, etc. It will give commodity-wise, market-wise daily report, commodity wise price during last week, community transaction below MSP(maximum sale price), date wise prices for specified community. Farmer can also search for specific product in particular duration of specific market.

- **SMS:** Serves as an Alternate to get the market information to the farmers through mobile. User can get message related to specific commodity by sending the keyword to the service number.
- **Compensation:** It lists the packages provided by government to the victim farmers of various natural calamities like heavy rain, drought etc. They can apply for the same and can check the status of their application. Farmer can apply only after log in.
- **Government Schemes:** It lists all government schemes related to particular product and area and can apply in the same way as for compensation.
- **E-Learning:** Includes Documentation, Videos and Audios working as a helpdesk. It will educate farmers about new trends and techniques for farming as well as notice for different workshops that will be conducted. User can view as well as download the content.

6. 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/Agent/Administrator/Gov. Officer.

6.1 Scenario of Project

Scenario 1: Farmer

- Farmers can create new account, log-in to their existing accounts which will give them the authority to use the services provided by the system.
- Authenticated farmers can sell their product, claim the compensation from government and can view his fund.
- If user select as farmer then there is option to select whether he wants to take lesson or if he is already familiar with online buying and selling then he can directly go to sell his products.
- The Farmer can check their account on fund transfer.

Scenario 2: Authorized Agent

- Agent sells the product to other agent or wholesaler.
- Agent transfers the fund to farmer's account as per the product sale.

Scenario 3: Government Officer

- Central authorities can log-in to their accounts as created by administrator.
- Authorities can access all the details of the market in all the different tehsil, district.
- They can view turnover of the market daily, weekly or monthly.

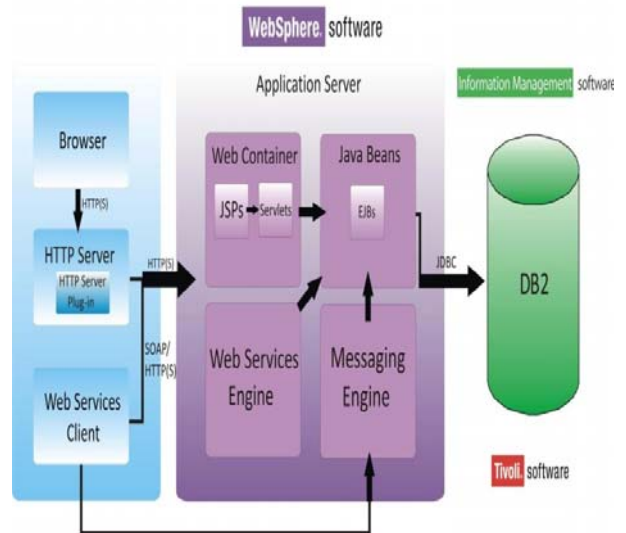
- Validate farmer's eligibility for compensation and schemes.
- Provide the valid reason why the application for schemes if has not been granted.
- Invoke proper activity in response to valid complaints about agents.

Scenario 4: Administrator

- Create and monitor accounts of users.
- Maintain the website.
- Provide the username and authorities as per user.
- Update the website.

6.2 Software implementation

Proposed application is web application build using jsp, servlet and db2 database. Software implementation is as shown in below diagram.



✓ Software Interface:

- Client on Internet: Web Browser, Operating System (any)
- Client on Intranet: Web Browser, Operating System (any)
- Web Server: WASCE, Operating System (any)
- Data Base Server: DB2, Operating System (any)

✓ Communication Interface:

- Client (customer) on Internet will be using HTTP/HTTPS protocol.
- Client (system user) on Internet will be using HTTP/HTTPS protocol

6.3 Hardware implementation

Weighting machine will be attached to the agent machine that will automatically upload the weight of the product in farmer's invoice. Weighing instrument is attached to the microcontroller which will monitor the activities of machine and provide the relevant data to the agent's computer.

CONCLUSION

This project will be helpful for farmers to know more about market information; will act as unique interface of schemes and compensation. Through this they will be always in touch of new technique and trends of farming. But some extends, new user may feel some kind of stress about its use. Overall this system is faster, secure and comfortable.

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