Homegrowns: An E-Commerce platform for farmers.

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Abstract: Agricultural marketing in rural India is deteriorating. Traditionally, farmers rely on local traders and retailers to sell their farm produce at an optimal price. For example, 75% of wheat and 65% of oilseeds in Uttar Pradesh; 80% of Jute and 60% of oilseeds in West Bengal and 45% of cotton in Punjab are sold directly to local traders and retailers. So the farmer is forced to sell his produce at any given price to meet his debts and responsibilities. The Rural Credit Survey Report noted that farmers often sell their farm produce in the wrong place at the wrong time and often get bad results. Private traders and middle-class retailers are at the forefront of agricultural product marketing without a formal marketing framework. According to numerous market studies, traders take up about 48% of rice, 52% of nuts, and 60% of the price of potatoes offered to consumers. Agricultural marketing is a significant problem in rural India. So to remove these middlemen from agricultural marketing, we are proposing the use of a web application that provides farmers with regulated markets, thereby ensuring that farmers are not exploited and can get reasonable prices for their produce. This easy-to-use website takes care of all marketing of agricultural products. In this web application, farmers can upload their agricultural products through operators. The operator foresees the addition and removal of goods. This web application, in turn, will be viewed by buyers who will buy the goods providing a market to farmers.

Index Terms – **Agricultural Marketing, E-Commerce, Middlemen removal.**

I. INTRODUCTION

Advanced day-to-day techniques and flexible machinery are leading the world to higher ground. Still, it is slowing down due to the lack of knowledge of improved resources regarding agriculture, thus pushing the people involved in farming towards poverty. Farming is a significant occupation in India. However, after all the farmer's hardship to produce the crop, while selling the crop, mediators deceive him. Agricultural marketing can automate everything, making it easy to work and the best solution to all the farmer's issues. With the use of an e-commerce website, we can achieve agricultural marketing.

Farmers will be able to sell their products across the country from their homes by just uploading their products to the website through operators. Farmers will be guided in every way by the agents. The E-commerce website will assist farmers in developing successful agro-marketing strategies that would improve the farmer's quality of life. In addition, farmers will be able to see their obtained amount through sales and related information in their accounts thanks to the Marketing Centre. Farmers will be able to sell their products through e-commerce only with an authorized agency. Through an assessment of business activity, the Central Market Committee will have authority over the Agents. The SMS centre will offer the necessary market information in rural places where the internet is unavailable. Farmers will also have access to government programs.

II. OBJECTIVE

Homegrowns aims to bring all local farmers together. By providing convenient communication channels, product planning, and assistance between producer-consumer interactions and producers, we hope to help each individual become stronger as a collective by creating an online farmer market which provides consistent

communication between all producers and consumers. The primary purpose of this program is to eliminate mediators.

III. EXISTING SYSTEM

Currently, the farmer visits the nearest market and presents his product to a specified agent, who instructs the farmer to return to the market after a given amount of time to collect cash to acquire the commodity sold. At the expense of that market, an agent sells a product to another agency. Every agent is attempting to save money by doing so. The farmer will not know the actual sale price of his goods.

Apart from that, farmers cannot know the prices of goods in various markets where they can sell their stuff for the highest profit. Farmers are frequently unaware of government-sponsored programs and remuneration. Despite all of the chances that the departments are creating, farmers cannot make use of them. The existing system lacks an e-Learning system for farmers to provide information on new farming techniques and e-commerce platforms for agricultural marketing. As a result, the farmer is not making much money with the current method.

IV. PROPOSED SYSTEM

Homegrowns is an online marketplace where customers can purchase farm produce directly from farmers. Various types of goods sold by household farmers can be bought for a reasonable price by the customer. Homegrowns focuses on ease of communication and encourages users to buy the product immediately, making our website a trustworthy platform between the producer and the consumer. There is a registration area where the farmer can register, and any information entered on the registration table is exceptionally secure, with no one having access to it. When creating a website, security is a top priority. The operator will block any user who is unauthorized or involved in any illegal activity on the website. Unless the operator approves, the user will not be able to activate his account on the site.

4.1 Operator

The system's primary user is the operator. The operator manages the website and oversees everything done, from adding a product to consumer product marketing. The following are the operator functions.

- While registering the farmer and reviewing his product details, the operator can change the mode to active, wait, or block.
- The operator can only access a website if their status is active to make the website more secure.
- Operators foresee verifying documents, data testing, crop additions, adding a transport company, transactions, and product and farmer registration.
- The operator adjusts the appropriate amounts of farm produce in a proper manner.
- Operator foresees the reach of Government programs to farmers.
- The operator maintains information about consumers and farmers for future use.

4.2 Customer

The consumer or the customer market helps provide the call to the farmers. This E-commerce store helps manage existing relationships and discover new ones, including farm skills and investment strategies. The consumer has the following accessibilities to the website.

- Customers can access the available lists with price levels and updated assets.
- They can use net banking to make payments.
- They can use an account to place orders and access invoices and order history.
- Production of receipts and invoices is made automatically to ease ordering a product.

4.3 Farmer

On the profile page, farmers are provided with order management, customer management, farm marketing, and delivery management tools. In addition, farmers have the following advantages with an e-commerce platform.

- Farmers can take orders online and keep track of previous sales.
- They can collaborate with both existing and potential customers.
- They can send invoices and receipts to buyers automatically.
- Farmers can enlarge their online reach, and as the seasons change, farmers can turn their product availability on and off.
- Farmers can establish a net banking system.
- They can maintain a record of previous customer payments and receipts.

V. IMPLEMENTATION

We can access this e-commerce platform (Homegrowns) in two ways. First, by being a customer, using the website's front-end to buy the products listed in the index. The second one is by being an operator, using the website's back-end to add and remove the products on the website. The following are the steps to access and use the website.

5.1 Customer access to the platform

5.1.1 Home Page

The home page is the welcoming page of this website. The user can navigate to all other pages through links in the menu bar. The home page also contains the details of different varieties of farm products produced in the village.

Figure 1 Home Page

5.1.2 About Page

About page highlights the details of the village/villages from which the agricultural produce is uploaded into the e-commerce platform.

Figure 2 About Page

5.1.3 Contact Page

The contact page contains information about the village/villages from which products are uploaded. In addition, a query form is provided here, where users can send us a mail for any website-related issues.
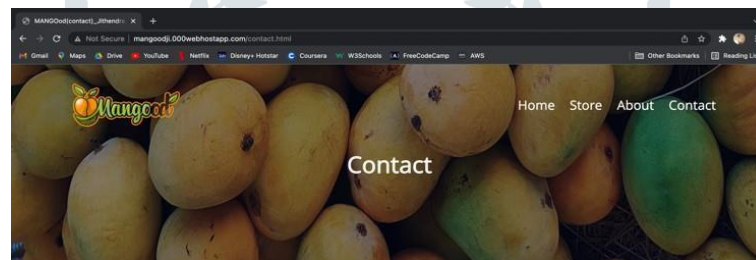

Figure 3 Contact Page

5.1.4 Store Page

The store page is the e-commerce platform where the customer can buy the products listed on the site.

5.1.4.1 Customer registration and Login Page

The customer can register on the e-commerce platform to create an account to place orders and access invoices. Then, customers can log in back to view their cart and other details related to their accounts.

Figure 4 Customer Login Page

5.1.4.2 Customer Home Page

The customer's page is the main page that contains the information & details of the items the store sells.
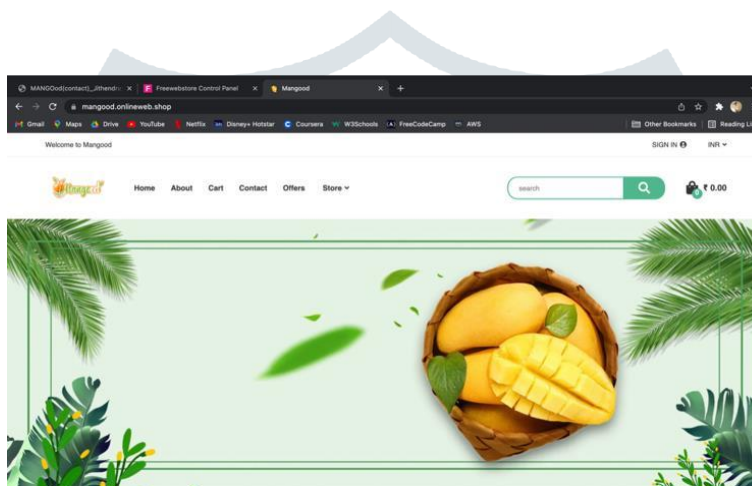

Figure 5 Customer Home Page

5.1.4.3 Product Details Page

On this page, the buyer can view details of the products he wants to purchase. Then he can add his desired product to the Wishlist.
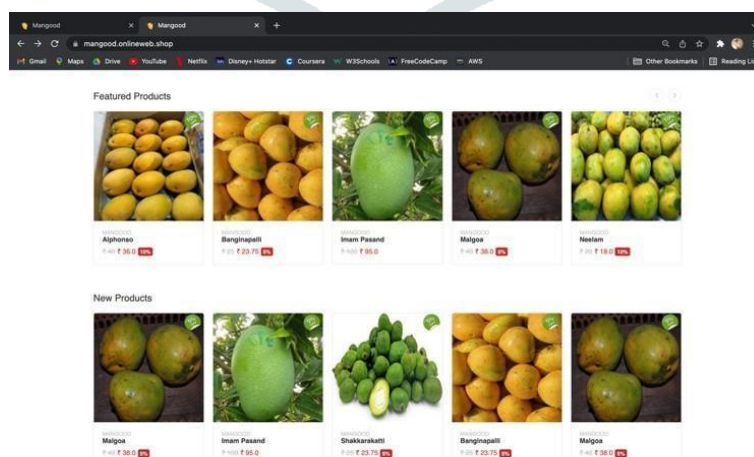

Figure 6 Product Details Page

5.1.4.4 Wishlist Page

On this page, the buyer can view products that he has kept on his Wishlist. From here buyer can purchase the add the Wishlist items to his cart to buy them.

Figure 7 Wishlist Page

5.1.4.5 Order Checkout Page

Here the customer has to confirm the contents of his cart so that he can order them, and he can then move further to payment of the money for the things in his order.
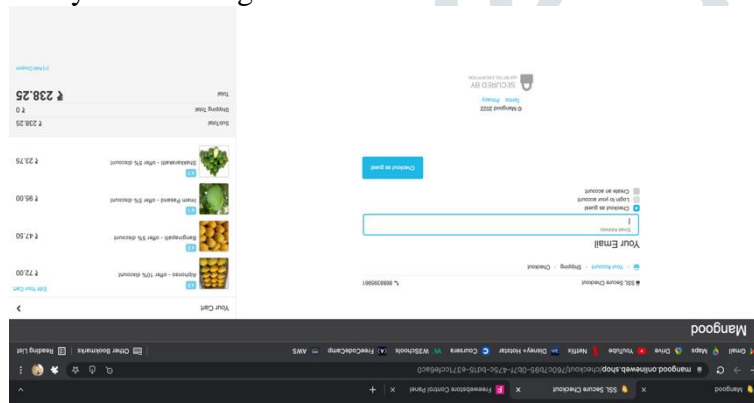

Figure 8 Order Checkout Page

5.1.4.6 Delivery Address Page

Here transportation details, i.e., where the customer wants to receive their product, are entered into a database to be notified about the product availability and delivery.
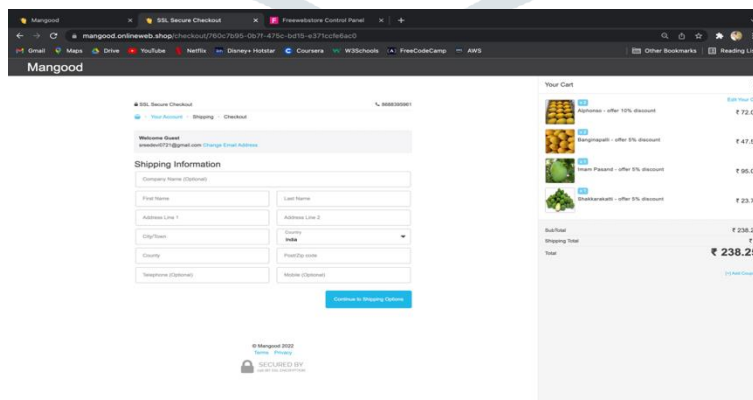

Figure 9 Delivery Address Page

5.1.4.7 Payment Page

Payment through net banking can be made through this page for placing the order. We used **PayPal** for payment integration with this website.
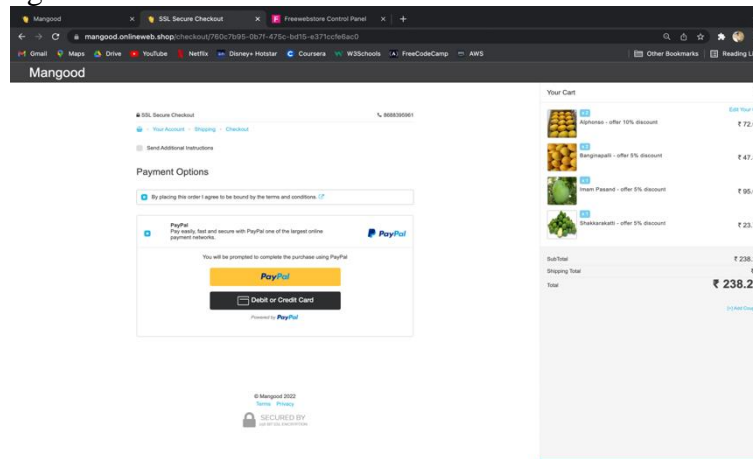

Figure 10 Payment Page

5.2   Operator Access to the platform

5.2.1 Operator Login Page

This is the secure pathway to access the contents of the e-commerce platform by the operator. After logging into the site, he can perform his chores.
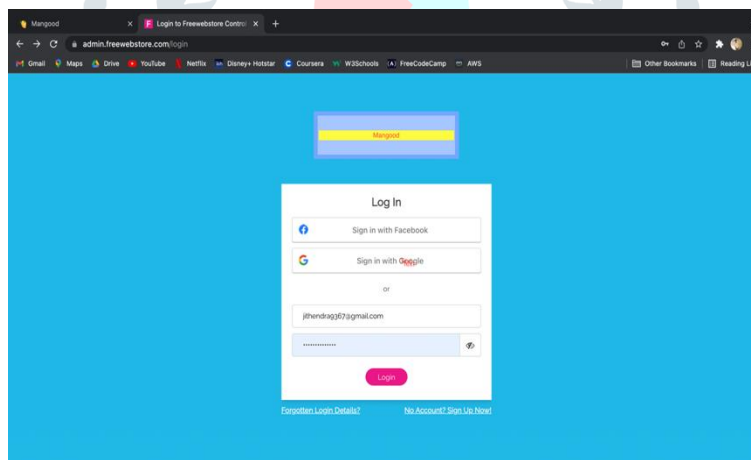

Figure 11 Operator Login Page

5.2.2 Operator Home Page

The operator has the following accessibilities to the e-commerce platform. First, he can manage the products, page content, and product shipping.
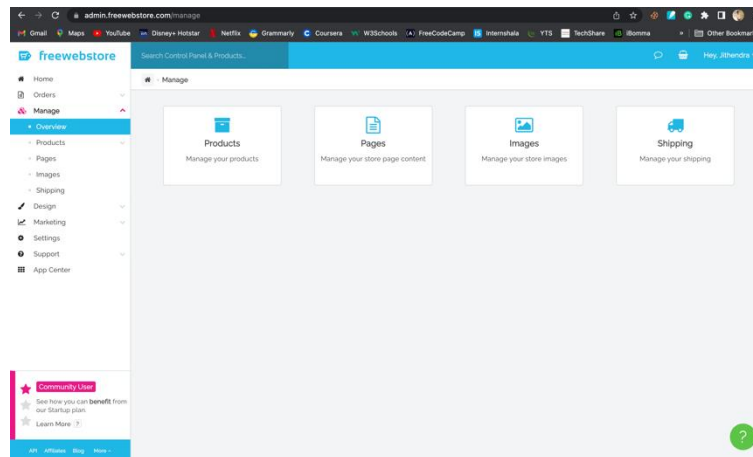

Figure 12 Operator Home Page

5.2.3 Product Management

The following are the main chores of an operator behind the e-commerce platform.

5.2.3.1 Adding a Product

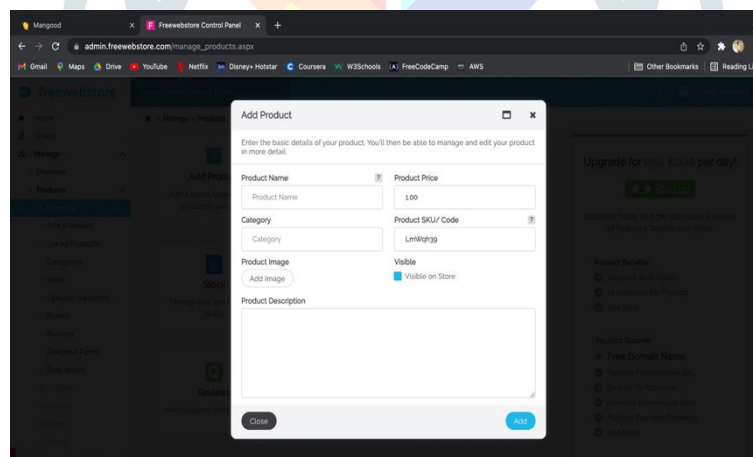Here the operator can add a crop available to customers for purchase.

Figure 13 Adding a Product

5.2.3.2 List of all products

Here is a list of all products uploaded and updated by the operator. Can be viewed
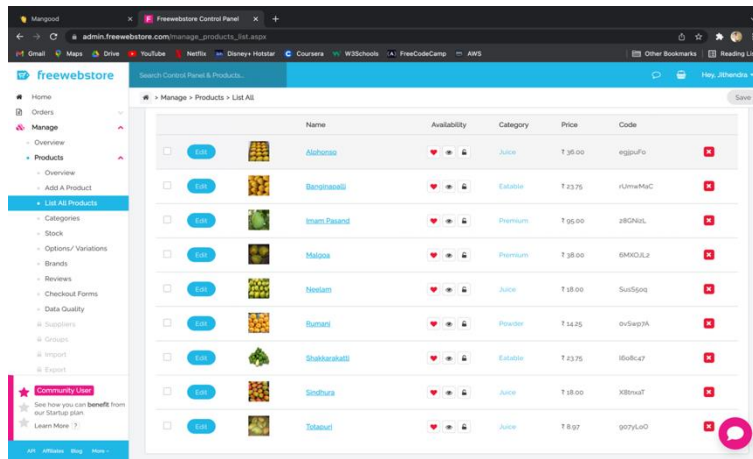

Figure 14 List of all products

5.2.3.3 Stock Updating.

Here the operator can update the farmer's stock into the previously uploaded products based on the availability of the product.
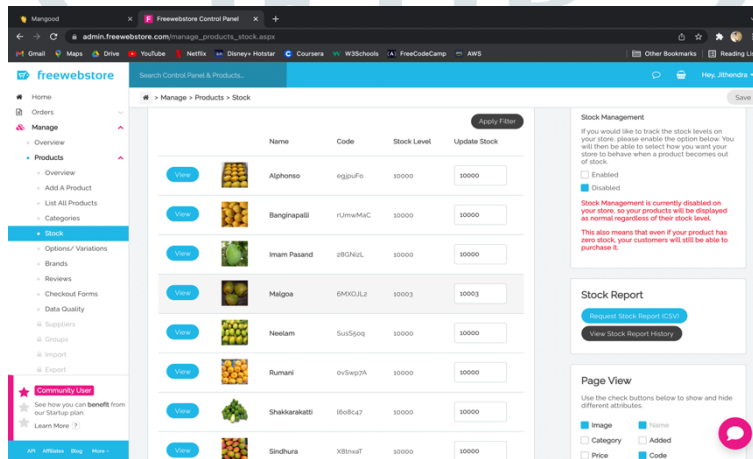

Figure 15 Stock Updating

5.3   Farmer's Access to the platform

5.3.1 Order Viewing

Here the farmer can check the orders placed by the customer. Then he can take the necessary steps to deliver the orders at the right time.
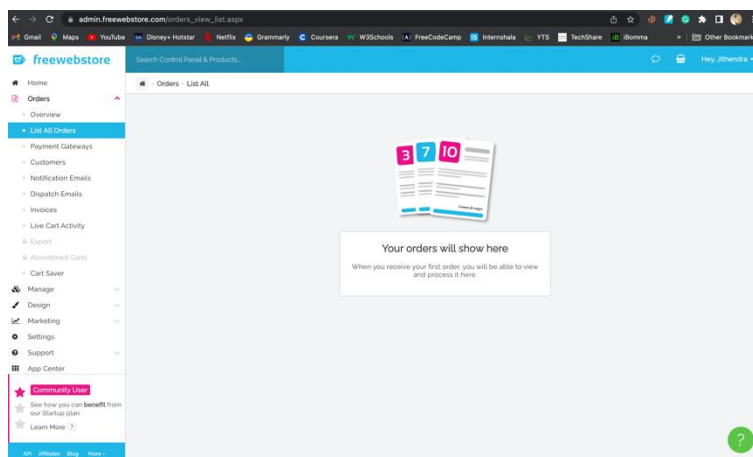

Figure 16 Order Viewing

5.3.2 Funds Viewing

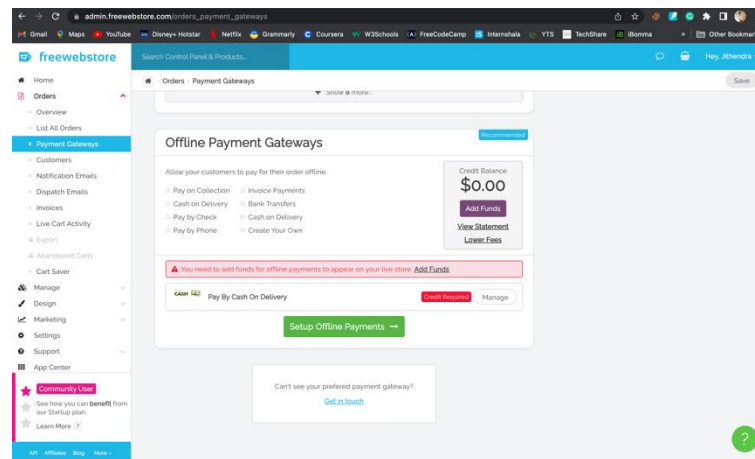Here the farmer can view his funds accumulated by selling his farm produce.

Figure 17 Funds Viewing

VI. CONCLUSION

Thus through Homegrowns, an e-commerce platform, we connected farmers with customers directly without the involvement of mediators and the agricultural marketing of the farmer's products was made in a more effective and eco-friendly way than that of mediators. Thus we saved the time and efforts of the farmer. Due to the increase in internet usage, e-commerce has become an important source of modern business. E-commerce gained a huge value from the customers who want to buy goods from their living room. So the time came for farmers to modernize by adopting e-commerce to promote their products. E-commerce also opens up new business opportunities for both customers and farmers and allows them to compare prices with the competitors. So with this e-commerce platform, we are hoping to make a difference in the lives of farmers and customers by providing them with a unique user experience with our e-commerce platform.

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