

Premier University
Department of Computer Science & Engineering



Final Year Project Report On
Krishiseba: A Web based Marketplace for Rural Farmers

Submitted By

Raihan Uddin

Id: 1502910200983

Emtiyaz Uddin

Id: 1502910200985

Syed Md Shorfuddin

Id: 1502910200999

In partial fulfillment of the degree of
Bachelor of Science in Computer Science & Engineering

Under the Supervision of

KHALEQUE MD. AASHIQ KAMAL

Assistant Professor

Department of Computer Science & Engineering

Premier University

CERTIFICATE OF APPROVAL

The project entitled as "**Krishiseba: A Web based Marketplace for Rural Farmers**" submitted by Raihan Uddin, bearing ID No: 1502910200983, Emtiyaz Uddin, bearing ID No: 1502910200985 and Syed Md Shorfuddin, bearing ID No: 1502910200999 of the Department of Computer Science and Engineering (CSE) of Premier University has been accepted as satisfactory for the partial fulfillment of the requirements for the Degree of Bachelor in Computer Science and Engineering.

Prof. Dr. Taufique Sayeed

Professor and Chairman,
Department of Computer Science and Engineering
Premier University, Chittagong

(Signature & Date)

(Supervisor)

Khaleque Md. Aashiq Kamal
Assistant Professor
Department of Computer Science and Engineering
Premier University, Chittagong

(Signature & Date)

DECLARATION

We hereby declare that the project work entitled "**Krishiseba: A Web based Marketplace for Rural Farmers**" submitted to the Premier University, is a record of an original work done by us under the guidance of **Khaleque Md. Aashiq Kamal**, Assistant professor, Department of Computer Science & Engineering and this work is submitted for fulfillment of the degree of Bachelor Science in Computer Science & Engineering. We can assure that the result of this project has not been submitted to any other university.

Raihan Uddin

Emtiyaz Uddin

Syed Md Shorfuddin

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ABSTRACT

In our country, farmers are very hard-working people and their success in crop production is enviable but they do not get fair prices in the market because of an improper marketing system. In maximum cases, the big trader's owner and broker are collecting agricultural products from farmers by giving nominal amounts of money and sell those to wholesale markets by a big margin of profit. Farmers are the losers in this situation. Our target is to develop an e-platform where farmers can easily upload their products which they want to sell and also, they can set a fair price according to the type of their products. The buyers can see the products according to the category, sub-category, variety, also price range. On our website transportation services are also included by which buyers can choose their desired vehicle for transportation. We have used bKash (demo) as a payment system on our website and we have used Twilio technology for verifying mobile numbers via OTP.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

Agriculture is one of the driving forces of Bangladesh's economy and it contributes 13.6 percent of GDP [1]. About 50 percent of Bangladesh's population is primarily engaged in agriculture, with more than 70 percent of the land devoted to growing crops. Major crops include rice, jute, wheat, tea, pulses, oilseeds, vegetables, and fruits. Despite the contribution of agriculture to such a large percentage of the overall economy of our country and the contribution of our farmers in keeping the nation free from hunger and malnutrition is rarely discussed [2]. Moreover, in our country farmers are selling their crops in a village local market and in town wholesale or retail market and farmers need to spend lots of money to maintain their crops and carry their crops to the market and customers has to visit physically a marketplace to buy their desire agricultural product it is really time consuming and they have to travel a lot to purchase their desire products. Nowadays, modern world technology is developing rapidly and the E-platform makes people's lives so easier and people buy their products using many E-platform such as Agrimp, Chaldal, Khaasfood and so on. We are developing a system where farmers can sell their crops such as rice, summer vegetables, winter vegetables and so on to the suppliers and customers by using our platform and we believe that the Krishiseba website will minimize the distance between farmers and consumers.

1.2 Motivation

- Bangladesh has 16.5 million farmer families but they don't get their proper rights [3].
- In maximum cases, the big trader's owner and broker are collecting agricultural products from farmers by giving nominal amounts of money and sell those to wholesale markets by a big margin of profit. In that case farmers and consumers both are at a loss in this situation.
- According to a study by (BIGD) only 1 percent of Boro farmers have been able to sell their produce at the government-set purchase price of Tk 1,040 per maund and on average, farmers have received just Tk 765 per maund last year [4].
- Our website will contain direct transactions between buyers and sellers to hold transparency. We hope our platform will be an epoch-making invention of our agricultural journey.

1.3 Objective

- To analyze the existing system of agricultural products supply chain management in the rural areas of Bangladesh.
- To develop an e-platform marketplace for rural farmers.

1.4 Report Structure

The remainder of the report is sorted out as pursues:

- Chapter 2: We have discussed the features and limitations of some related works. Also, we discussed our features.
- Chapter 3: Describes methodology of the work where we discussed the model of the system. Moreover, we are going to describe the processes of the implementation.
- Chapter 4: About system analysis. Where we discussed our system architecture and development process and also described project diagrams.
- Chapter 5: We have described a list of technologies that have been used to complete the project goal.
- Chapter 6: Gives an overview of the design and implementation of the website developed.
- Chapter 7: Describes website testing and login, registration validation.
- Chapter 8: Evaluate the achievements of this project and identify some future works.

CHAPTER 2

RELATED WORKS

In this chapter, we are going to describe some related work of our project. Also, we are going to discuss their features and limitations. We are also going to discuss about the limitations of the websites that we have implemented in our project.

2.1 Agrimp

Agrimp is a digital B2B market solution that brings together sellers and industrial buyers. Agri marketplace's mission is to become the global reference for digital agricultural food crop transactions through a complete platform solution.

Agrimp		
Ref.	Features	Limitation
[5]	<ul style="list-style-type: none"> ➤ Online payments between buyer and seller, product quality check options, and end-to-end logistic services. ➤ Integrated and secure platform payment processes. ➤ Digital cloud-based trading platform. 	<ul style="list-style-type: none"> ➤ Login system based on email. ➤ Product order systems are quite complex. ➤ Not farmer friendly. ➤ Transportation system is not easy.

2.2 Khaasfood

Khaasfood is an e-commerce platform coupled with a chain of brick-and-mortar stores for safe and pure foods in Bangladesh.

Khaasfood		
Ref.	Features	Limitation
[6]	<ul style="list-style-type: none"> ➤ Easily find the nearest area outlet location. ➤ All the product categories are shown in the product home page in the top which are helpful for finding products. ➤ Very quickest delivery systems. 	<ul style="list-style-type: none"> ➤ Maximum products and delivery systems are based on Dhaka city. ➤ Product order systems are quite complex. ➤ Not farmer friendly.

2.3 Agribazaar

Agribazaar is an e-commerce website which is developed for Indian's farmer. By using this website farmers easily sell their agricultural products.

Agribazaar		
Ref.	Features	Limitation
[7]	<ul style="list-style-type: none"> ➤ Their login system is very simple. ➤ Payment systems are well organized. ➤ User friendly and organized interface 	<ul style="list-style-type: none"> ➤ The security system is not so strong. ➤ No option to register as a Transport Owner or other types of users. ➤ No way to ensure that the farmer is getting a proper evaluation of his product.

In the beginning of this chapter, we discussed some related work like Agrimp and Khaasfood. These websites had some great features and some limitations as well. We have tried to overcome these limitations in our system as they have only the option to register via email in their system but there is no option to register via a mobile number and they have no delivery system in their system and also, they developed the whole website in the English language.

2.4 Features Of Krishiseba Website

- ❖ **Language:** We have developed our system in Bengali so that farmers can use it very easily.
- ❖ **Payment Gateway:** We use bKash (Demo) as a payment system in our system.
- ❖ **Security:** We use twilio for mobile numbers verification with OTP.
- ❖ **Transportation Service:** Buyers can select vehicles to ensure the delivery of their goods.
- ❖ **Reliability:** Buyers and farmers costs are reduced without losing reliability.
- ❖ **Desktop Application:** Users can download the website as a desktop application.

CHAPTER: 3

METHODOLOGY

In this chapter, we are going to describe the single page application, model view controller, Laravel Fortify integration, authentication guard, authorization guard, server-side validation, client-side validation, virtual DOM vs. real DOM, process model, requirement specification. Moreover, we are going to describe the processes of the implementation.

3.1 Single-Page Application (SPA)

The single page application is a web application or website that interacts with the user by dynamically rewriting the current page, rather than loading entire new pages from the server. This approach voids interruption of the user experience between successive pages, making the application behave more like a desktop application. On most websites there is a lot of repeating content. Some of it stays the same no matter where the user goes (headers, footers, navigation bar, etc), some of it is constant in just a certain section (filter bars, banners), and there are many repeating layouts and templates (blogs, self-service, the google mail setup mentioned above) [8].

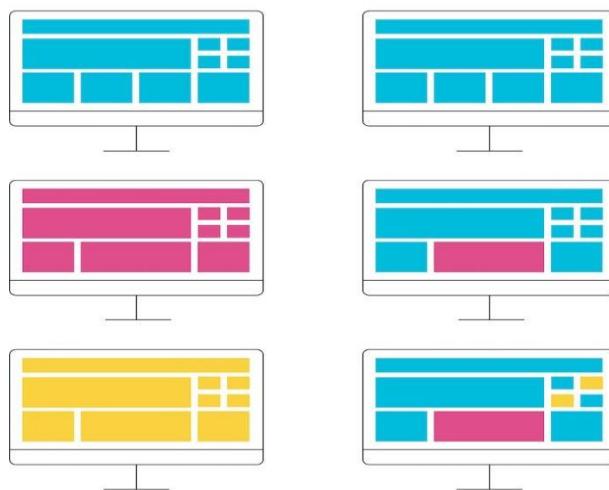


Figure 3.1: Comparison Between Traditional and (SPA)

3.2 Model-View-Controller (MVC) Frameworks

MVC is a software architecture that separates domain/application/business logic from the rest of the user interface. It does this by separating the application into three parts:

Model - The model is the central component of the pattern. It is the application's dynamic data structure, independent of the user interface. It directly manages the data, logic, and rules of the application.

View - The view effectively provides the user interface element of the application. It'll render data from the model into a form that is suitable for the user interface.

Controller - The controller receives user input and makes calls to model objects and the view to perform appropriate actions.

These three components work together to create the three basic components of MVC [9].

Architecture of Laravel MVC

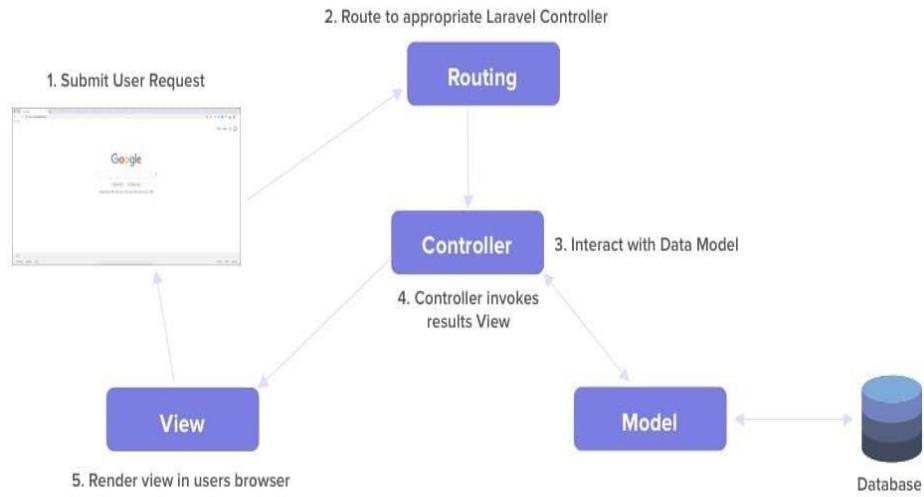


Figure 3.2: Laravel Model-View-Controller Architecture

3.3 Using Laravel Fortify Laravel 8 Authentication Guard:

Laravel Fortify is a frontend agnostic authentication backend implementation for Laravel. Fortify registers the routes and controllers needed to implement all of Laravel's authentication features, including login, registration, password reset, email verification, and more [10].

3.3.1 Laravel Fortify

After installing Fortify, you may run the route: list Artisan command to see the routes that Fortify has registered. Since fortify does not provide its own user interface, it is meant to be paired with your own user interface which makes requests to the routes it registers. We will discuss exactly how to make requests to these routes in the remainder of this documentation.

3.3.2 Laravel Fortify Integration

Laravel Fortify essentially takes the routes and controllers of Laravel Breeze and offers them as a package that does not include a user interface. This allows you to still quickly scaffold the backend implementation of your application's authentication layer without being tied to any particular frontend opinions.

1. Install Laravel 8 project using the command ‘composer create-project --prefer-dist laravel/laravel Krishiseba’.
2. ConFigure database in .env file.
3. Install Fortify using the command ‘composer require laravel/fortify’.
4. Publish Fortify’s resources using the command ‘php artisan vendor:publish --provider="Laravel\Fortify\FortifyServiceProvider"’.
5. Add Service Provider in the conFigure/app.php file.
6. Run the command ‘php artisan migrate:fresh’.
7. Run the command ‘php artisan serve’.
8. Run the command ‘npm run watch’.

3.3.3 Authentication Guard

To get started, we need to instruct Fortify how to return our "login" view. Remember, fortify is a headless authentication library. If you would like a frontend implementation of Laravel's authentication features that are already completed for you, you should use an application starter kit. All of the authentication view's rendering logic may be customized using the appropriate methods available via the Laravel\Fortify\Fortify class. Typically, you should call this method from the boot method of your application's App\Providers\FortifyServiceProvider class. Fortify will take care of defining the /login route that returns this view.

3.3.3 Authorization Guard

Let's say you are logged in as an admin. So, you have access to those pages which should be accessed. You are not allowed to access the page of another user. Authorization guard is set to protect user accessing components that are not allowed to access. If you are logged in as admin, you cannot access the pages that are accessible for a farmer, this is logical. But if you still can access those pages that are not allowed to access then authorization guard comes.

Considering our case, we have six types of users: super admin, admin, farmer, normal seller, buyer, transport owner. So, we set roles as sadmin, admin, farmer, seller, buyer, transport owner for each type of user: sadmin, admin, farmer, seller, buyer, transport owner respectively (we did it in passport configuration. We did it once. But you can use it for each type of user while logging in to set their role for further use of authorization [11].

3.4 Server-Side Validation

In figure 3.3, we have shown our server-side validation of Krishiseba website. Laravel provides several different approaches to validate our application's incoming data. By default, Laravel's base controller class uses a Validates Requests trait which provides a convenient method to validate incoming HTTP requests with a powerful validation rule.

```
public function newuser(Request $request)
{
    $input= $request->all();
    if($input['role'] == 'farmer'){

        $this->validate($request, [
            'fid_front_img' => ['required', 'image', 'max:2048'],
            'farmer_id_no' => ['required', 'string', 'min:11', 'max:11', 'unique:users'],
            'name' => ['required', 'string'],
            'address' => ['required', 'string'],
            'password' => ['required', 'string', 'new_password', 'confirmed'],
            'role' => ['required', 'string', 'max:10'],
            'mobile' => ['required', 'string', 'min:11', 'max:11', 'unique:users'],
            'nid' => ['required', 'string', 'min:10', 'max:17', 'unique:users'],
            'profile_img' => ['image', 'max:2048'],
            'nid_front_img' => ['required', 'image', 'max:2048'],
        ]);
    }
}
```

Figure 3.3: Server-Side Validation

3.5 Client-Side Validation

In figure 3.4, we have shown our client-side validation of Krishiseba website. Validation is a method to authenticate the user. JavaScript provides the facility to validate the form on the client-side so data processing will be faster than server-side validation. It is preferred by most web developers. Through JavaScript, we can validate name, password, email, date, mobile numbers and more fields.

```
<!-- JavaScript for disabling form submissions if there are invalid fields -->
<script>
    // Self-executing function
    (function() {
        'use strict';
        window.addEventListener('load', function() {
            // Fetch all the forms we want to apply custom Bootstrap validation
            var forms = document.getElementsByClassName('needs-validation');
            // Loop over them and prevent submission
            var validation = Array.prototype.filter.call(forms, function(form) {
                form.addEventListener('submit', function(event) {
                    if (form.checkValidity() === false) {
                        event.preventDefault();
                        event.stopPropagation();
                    }
                    form.classList.add('was-validated');
                }, false);
            });
        }, false);
    })();
</script>
```

Figure 3.4: Client-Side Validation

3.6 User Authentication

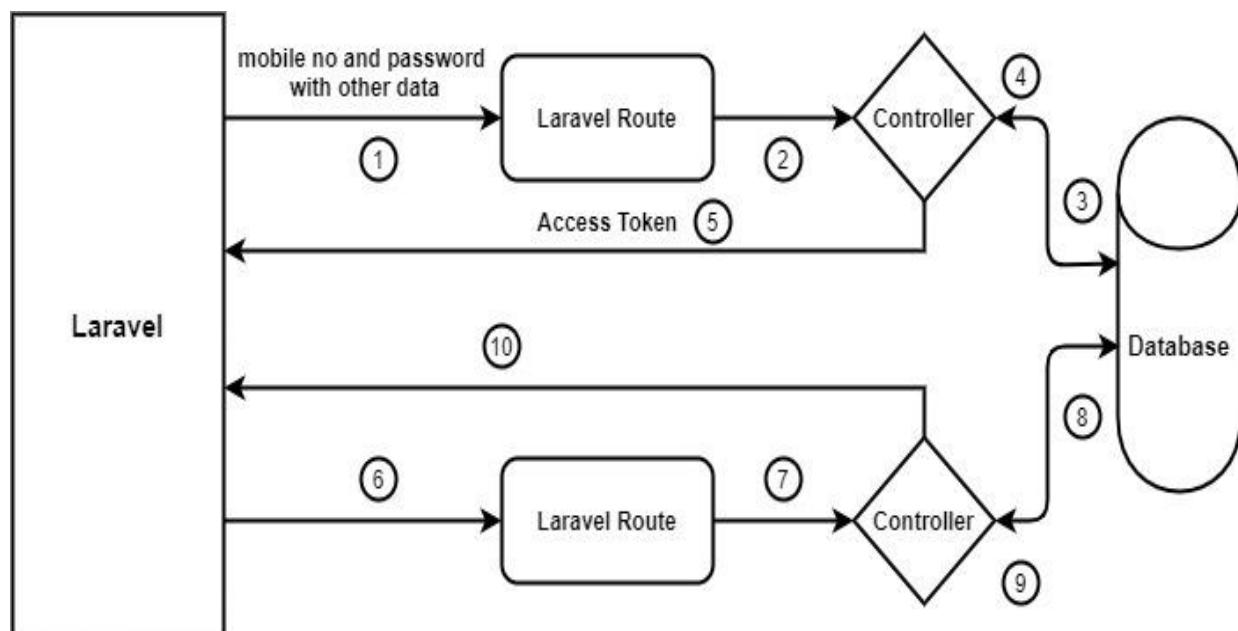


Figure 3.5: Flow-Diagram User Authentication

In figure 3.5, we have shown our flow-diagram for user authentication of Krishiseba website. When a user enters mobile number and password, the frontend sends the mobile number, password, user type, user id, user secret, scope to the backend respectively. The backend then generates an access token if the user exists by using the info received from the frontend and returns the access token to it, or else user credentials are invalid. After the credentials are validated, the frontend sends an object of a header containing accept type and bearer token to the backend. The backend then processes the header and returns the requested user information by a redirect to the respective dashboard.

3.7 User Authorization

To authorize an action using gates, you should use the allows or denies methods. Note that you are not required to pass the currently authenticated user to these methods. Laravel will automatically take care of passing the user into the gate Closure. Laravel includes a middleware that can authorize actions before the incoming request even reaches your routes or controllers. By default, the Illuminate\Auth\Middleware\Authorize middleware is assigned the can key in your App\Http\Kernel class. Let's explore an example of using the can middleware to authorize that a user can update a blog post: Laravel Fortify ensured user authorization. If a user registered as a farmer, he or she is not allowed to access the super admin, admin, seller, buyer, or transport owner portion.

3.8 Virtual DOM vs Real DOM

In React every UI piece is a component, and each component has a state. React follows the observable pattern and listens for state changes. When the state of a component changes, react updates the virtual DOM tree. Once the virtual DOM has been updated, react then compares the current version of the virtual DOM with the previous version of the virtual DOM. This process is called “diffing”. Once React knows which virtual DOM objects have changed, then React updates only those objects, in the real DOM. This makes the performance far better when compared to manipulating the real DOM directly. This makes React standout as a high-performance JavaScript library [12].

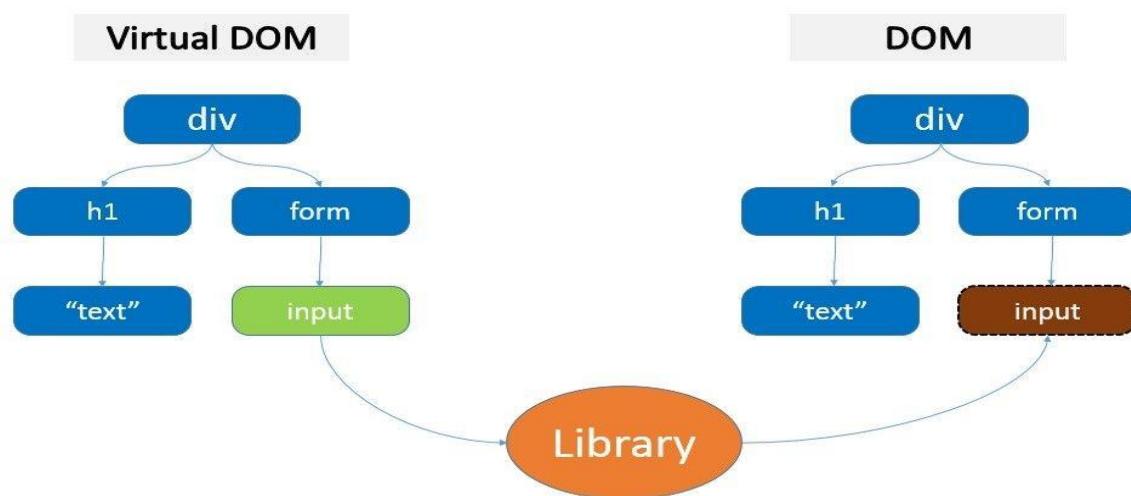


Figure 3.6: Virtual DOM Vs Real DOM

3.9 Process Model:

The proposed method for our project is completely a web-based task. Our target was to develop and include as much as features with flexibility in use and make our project as much as friendly for website visitors. Our “Krishiseba Website” project is based on PHP, Laravel, CSS, Bootstrap, HTML, JavaScript and MySQL. A series of actions or steps taken in order to achieve a particular end is called process. Graphical representation of an object is called model. The process model shows the graphical representation of web-based project activities. For a web-based project, a process is more important than a product to build the structure smoothly. That is the reason why a well-planned process is necessary.

3.9.1 Recent Trends for E-Commerce Web Project Model:

- ✓ Business-to-Business (B2B)
- ✓ Business-to-Consumer (B2C)
- ✓ Consumer-to-Consumer (C2C)
- ✓ Consumer-to-Business (C2B)
- ✓ Business-to-Administration (B2A)
- ✓ Consumer-to-Administration (C2A)

3.9.2 A particular Process model for “Krishiseba Website”:

We followed “Consumer-to-Consumer (C2C)” e-commerce model to build our “Krishiseba website” project.

Consumer-to-Consumer (C2C): Consumer-to-Consumer type E-Commerce encompasses all electronic transactions of goods or services conducted between consumers. Generally, these transactions are conducted through a third party, which provides the online platform where the transactions are actually carried out.

C2C e-commerce is a type of trade relations where both sellers and buyers are consumers, not businesses. It presupposes interaction between parties through a third one, mostly an online market, auction or trade website. Due to this phenomenon, selling and buying via the Internet has never been so easy. Various internet resources help sellers and buyers to find each other by charging a small fee or commission.

The C2C model involves transactions between consumers. Here a consumer sells directly to another consumer. eBay and www.bazee.com are common examples of online auction websites that provide a consumer to advertise and sell their product online to another consumer. However, it is important that both the seller and the buyer register with the auction site. While the seller needs to pay a fixed fee to the online auction house to sell their products, the buyer can bid without paying any fee. The site brings the buyer and seller together to conduct deals.

Outstanding examples of C2C e-commerce sites are eBay, Amazon, Daraz, Flipkart etc. They are the most popular platform that enables consumers to sell to other consumers.

Business builds and manages the online
marketplace connecting Farmer, Seller, Buyer and transport owner

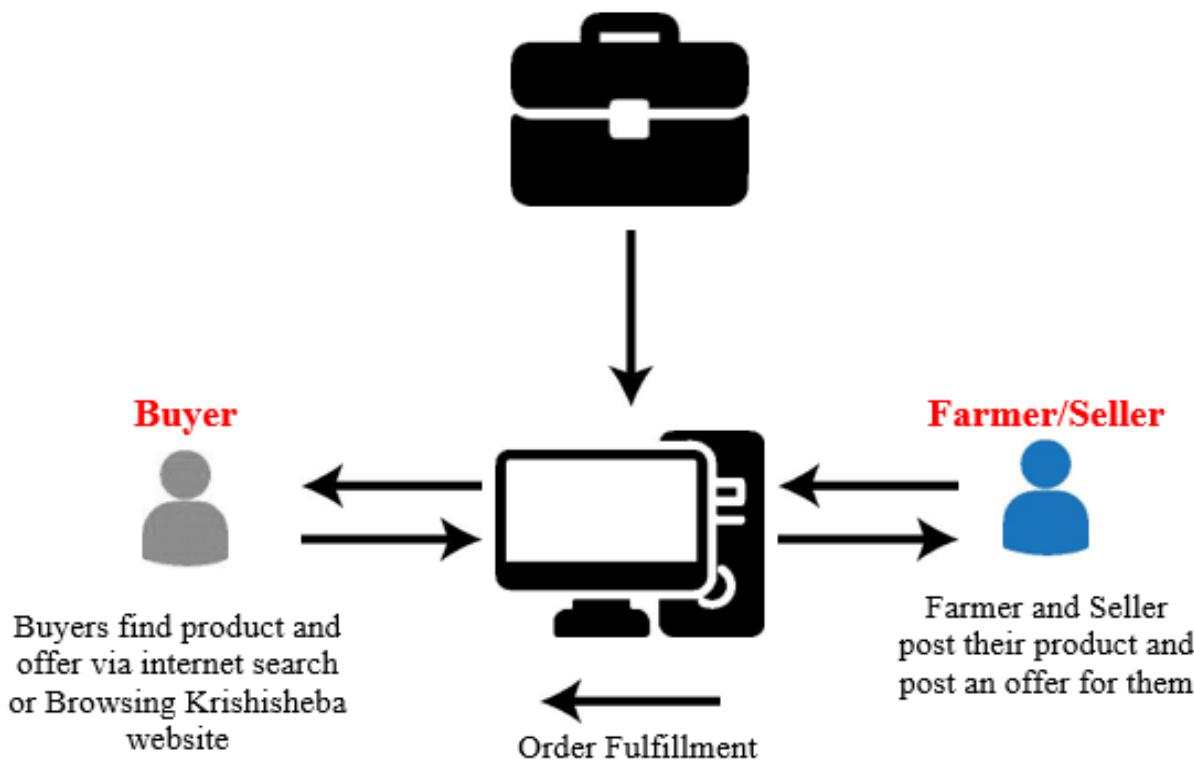


Figure 3.7: Consumer-to-Consumer (C2C) Model

3.9.3 Why We Use Consumer -To-Consumer (C2C) Model:

- ✓ The C2C model is getting popular among the entrepreneur's day by day.
- ✓ Demand and interest are getting higher day by day for C2C model e-commerce websites.
- ✓ A good way to learn and practice the behind scenery of trending C2C model-based e-commerce platform.
- ✓ The C2C model is effective for implementing a platform to build a marketplace between local consumers and sellers.
- ✓ C2C model demand is increasing and can be implemented for local business development of an area.

3.10 Requirement Specification:

A technical requirement specification document for a website or other software product defines its purpose, functionalities, and behavior. In other words, it defines what the website is for, what it should do, and how. There may be variations in how the requirement document should look, but it should perform its main goal of making sure both the Product Owner and the web development team have clearly agreed on the future website details. A good specification leads to precise project estimation and implementation. A specification can be viewed as a contract between users and system developers, which defines the desired (functional/service) of the system artifacts [and other properties] of its performance, reliability, etc. (non-functional) without showing how much functionality is going to be achieved [13].

3.10.1 Why Requirement Specification Is Needed?

Requirement Specifications needed because: -

1. It precisely describes the functionality of the software.
2. It describes how the software will interact with hardware and other software.
3. It describes the performance level such as response rate, recovery rate etc.
4. It describes non-functional factors such as security, safety, probability etc.
5. It describes the limitations of any operating system which may affect design of the software.

3.11 Requirement Definition

The needs of users are generally called requirements. The requirements prioritize details and accurate needs with description. Here feasibility and early system description are used as input. Through the output we get the system user, statement of requirement and system scope.

3.11.1 User list of Krishiseba

There are 6 types of users in Krishiseba. They are-

- Super admin
- Admin
- Farmer
- Normal Seller
- Buyer
- Transport Owner

Super Admin:

Super admin manages all types of user accounts. New admin accounts must be approved by super Admin. Super admin can approve all types of accounts. Super admin will check the submitted documents of the new user and verify them. So, the new user can start selling and purchasing on our platform. Super admin controls all the payment processing. Super admin can send SMS to individual users. Super admin can see the revenue of the marketplace made for each sell completed by a farmer and normal seller. Super admin cuts the fixed percentage on the product and then delivers the rest amount to the farmer and normal seller. Super admin can control all the front-end development sections. Basically, the super admin has all the powers to control the total platform and Super admin can manage all the users. Super admin also can change his account password and email address or other information.

Admin:

Admin controls all the farmer, normal seller, buyer, and transport owner accounts. Admin controls all the payment processing. Admin can change the role of a user account. Admin can approve all types of accounts. Admin will check the submitted documents of the new user and verify them. So, the new user can start selling and purchasing on our platform. Admin can send SMS to individual users. Admin can see the revenue of the marketplace made for each sale completed by a farmer and normal seller. Admin cuts the fixed percentage on the product

and then delivers the rest amount to the Farmer and normal seller. Admin can control all the front-end development sections. Basically, the admin can manage all the users. Admin also can change his account password and email address or other information.

Farmer:

Farmers can upload their products in Krishiseba and manage all the products from their dashboard. Farmers have full control over the product pricing and listing. Farmers can set the price of their listed products and can change it anytime. Farmers have a control panel to control the orders and manage the products. Farmers can see the revenue of the selling product. Farmers can see how much the fee has been cut by the admin from each sale. Farmers can remove any product any time. Even if the Farmers want to change the product details and pricing, Farmers can change that instantly within a short time. Farmers have all the controls to control their products and customize the product. Farmers have an extra facility that farmers can upload their product with unlimited weight and unit. Also, a farmer can update her profile and he can change her password any time.

Normal Seller:

Sellers can upload the products in Krishiseba and manage all the products from their dashboard. Sellers have full control over the product pricing and listing. Sellers can set the price of their listed products and can change it anytime. Sellers have a control panel to control the orders and manage the products. Sellers can see the revenue of the selling products. Sellers can see how much the fee has been cut by the admin from each sale. Sellers can remove any product any time. Even if the Seller wants to change the product details and pricing, Seller can change that instantly within a short time. Sellers have all the controls to control their products and customize the product information. Sellers have a limitation that Seller cannot upload their product with unlimited weight and unit. Also, Seller can update her profile and he can change her password any time.

Buyer:

Buyer can buy any products uploaded by farmers and normal sellers of our Krishiseba website. Buyer can track the purchase product. Buyer has a “Dashboard” where he/she can see the purchase product details and other info. Buyer can print the ordered product details and get other info about the orders. Buyer also can change his account password and email address. Our website offers a great facility for the buyer so that the buyer can take our transportation service if he wants after purchasing the product. When he pays for the product, a transportation service will be launched for him. through Google Maps he can see the transport around the seller location. He will be able to contact the transport owners to ensure the delivery of his goods as well as pay for the transport through our payment system if he wants and he will be able to see this information stored in his dashboard at any time.

Transport Owner:

The Transport Owner can update his profile. He can change his account password anytime. The transport owner will be able to see from his dashboard who has been selected him to transport the goods, as well he can see if his payment has been confirmed, transport owner able to know that if his payment has not been paid by admin also, he can see how much money is deposited in his account and how much service fee cut by admin.

CHAPTER: 4

SYSTEM ANALYSIS

Our project “Krishiseba Website” is a responsive web-based system which can provide service on any smart device. Here during our development process, we tried to build a well interface for the users that can easily understand anyone and is flexible to use. We tried our best to ensure a good-looking user interface (UI) and a quality user experience (UX).

4.1 Proposed System Architecture

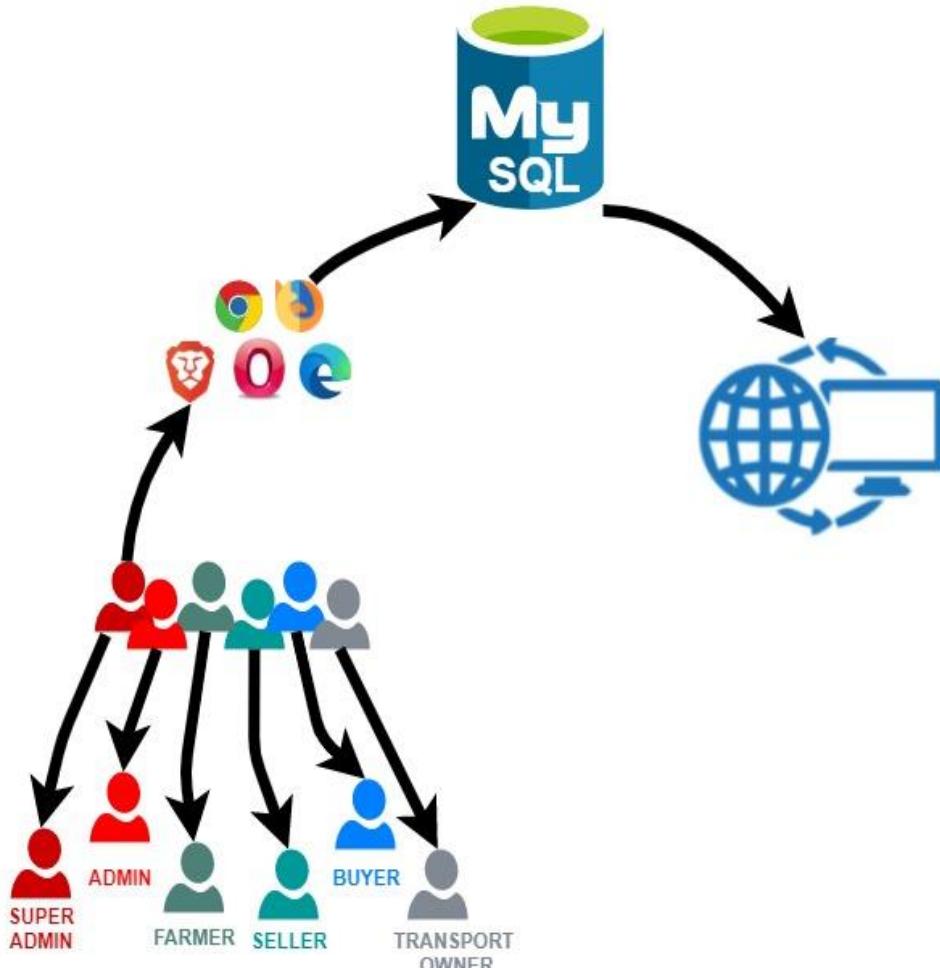


Figure 4.1: Krishiseba Website Architecture

Implementation: In our project the system interface acts as an intermediary between user and system. Our project interface UI and UX is user friendly. A user can access it easily without any complication. At first, the user could register here through the register section as a farmer, seller, buyer and transport owner. Then a user can sell or buy products through our platform.

Methodology:

- ✓ At first the users have to visit our Krishiseba website.
- ✓ Then the user has to register on our website through the register section as a buyer, farmer, normal seller or a transport owner.
- ✓ During registration a new user has to submit verified documents to verify him.

- ✓ During registration a new farmer has to submit his farmer id card and farmer id number must be submitted along with other documents to verify him
- ✓ During registration a new seller has to submit his trade license number must be submitted along with other documents to verify him
- ✓ During registration a new transport owner has to submit his vehicle number must be submitted along with other documents to verify him
- ✓ The admin will review the new users submitted documents and verify them. This will give him access control and allow him to upload product information and sell products and earn revenue by selling products.
- ✓ The buyer can purchase any product from any farmer or seller of our website.
- ✓ buyer can track the product order.
- ✓ Super admin can manage the entire Krishiseba website platform. Can add product name, category, sub-category, and view the percentage revenue the website will get from the seller each sells.

4.2 Data Flow of Krishiseba Website:

The data flow refers to the whole process where data will be sent to the server. According to the time of data, our Laravel project will make a request to our local server and the Laravel project will receive the result from the local server. The result will save into My SQL database. Thus, the data flow process will occur due to any valid request.

4.3 Data View

In our project we tried to represent all of the data in an efficient way. For our “Krishiseba Website”, we use Laravel framework and this framework handling all the data viewing, data storing and data managing task smoothly from our local server (XAMPP) MySQL database. We have multiple access control and we process the data after validating the user access and what they can view and insert.

4.4 Security

Our “Krishiseba Website” creates a secure communication with the web servers and other platforms. HTTP session management is the core of web security. All mitigations should be adopted to make sure sessions are secured. We encrypt the password of a user using hashing method and then stored them in database. In our project we have six different types of roles in our project login system. For different types of roles, we build different access control for different users. They are super admin, admin, farmer, normal seller, buyer and transport owner login system. There is a login system to prevent unauthorized access. Admin can't access super admin, farmer, normal seller, buyer and transport owner section. Farmer, normal seller, buyer and transport owner can't access super admin and admin section. Farmer can't access normal seller, buyer and transport owner, super admin and admin section. Seller can't access super admin, admin, farmer, buyer and transport owner section. Buyer can't access farmer, normal seller, transport owner, super admin and admin section. Transport owner can't access super admin, admin, farmer, buyer section Also, we use Laravel Framework which has its own security system that can secure our project data and information.

4.5 Support

Our “Krishiseba Website” is a cross-platform based responsive website. It is developed maintaining all the necessary elements so that it works properly with any web browser and can be a responsive website. Even in Smartphone our project will work properly and accurately.

4.6 System design

System design is the process of designing the elements of a system such as the architecture, modules and components, the different interfaces of those components and the data that goes through that system. The purpose of the system design process is to provide sufficient detailed data and information about the system and its system elements to enable the implementation consistent with architectural entities as defined in models and views of the system architecture.

Objective: Transformation of the system specification into an operational system design.

Input: Project goals, user requirement priorities, specification.

Process: Transformation often with several alternatives whose costs and benefits must be qualified and compared.

Output: Logical system design, production schedule, software and hardware requirements.

4.7 Use Case Diagram

A use case diagram is a way to summarize details of a system and the users within that system. It is generally shown as a graphic depiction of interactions among different elements in a system. Use case diagrams will specify the events in a system and how those events flow, however, use case diagrams do not describe how those events are implemented. A use case is a methodology used in system analysis to identify, clarify, and organize system requirements. In this context, the term "system" refers to something being developed or operated, such as a mail-order product sales and service Website. Use case diagrams are employed in UML (Unified Modeling Language), a standard notation for the modeling of real-world objects and systems. The reasons why we are interested in use case diagrams include,

- ✓ Represent the goals of systems and users.
- ✓ Provide a model for the flow of events when it comes to user interactions.
- ✓ Specify the context a system should be viewed in.
- ✓ Specify system requirements.
- ✓ Provide an outside view of a system.
- ✓ Show's external and internal influences on a system.

4.7.1 Use Case Diagram for Super Admin and Admin

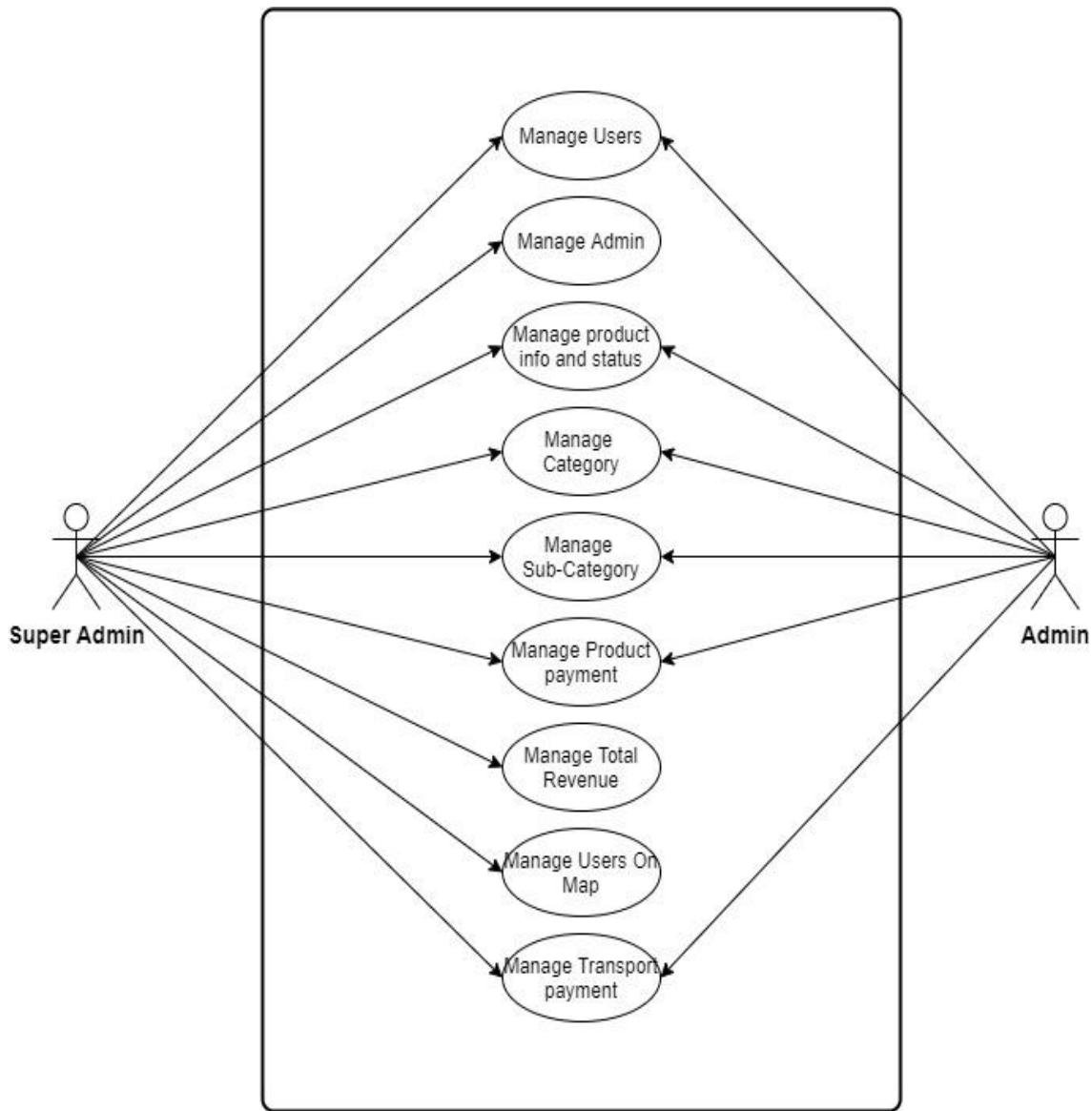


Figure 4.2: Use Case Diagram for Super admin and admin

In figure 4.2, we have shown our “Super Admin” and “Admin” case diagram of the Krishiseba system. Here,

- ✓ Super admin controls all the user accounts along with the admin.
- ✓ Admin controls all the user accounts except super admin.
- ✓ Super admin and admin will check the submitted documents of the user and verify them.
- ✓ Super admin manages the total revenue of the sales.
- ✓ Super admin controls the structure of the Krishiseba website.
- ✓ Super admin and admin can update category, sub-category and product name.
- ✓ Super admin can add new admin and manage their profile.
- ✓ Super admin can see all users in google maps.
- ✓ Super admin and admin can send SMS to individual users.
- ✓ Super admin and admin cut the fixed percentage on the product and then deliver the rest amount to the farmer and normal seller.

4.7.2 Case Diagram for Farmer and Seller

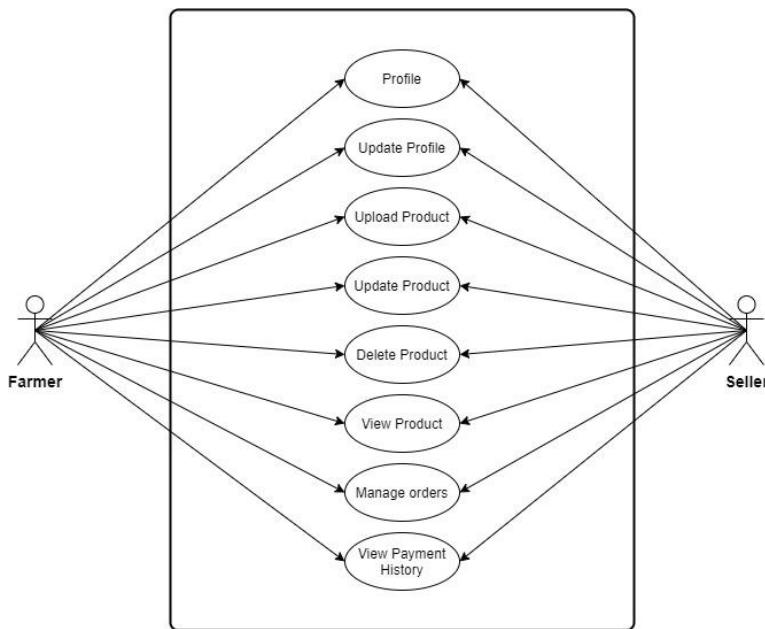


Figure 4.3: Use Case Diagram for Farmer and Seller

In figure 4.3, we have shown our “Farmer” and “Seller” case diagram of the Krishiseba system. Here,

- ✓ Farmers and sellers can view their own profile and update it.
- ✓ Farmers and sellers can upload their agricultural products in Krishiseba website.
- ✓ Farmers and sellers can view, update and also delete those products from their dashboard.
- ✓ Farmers and sellers can upload their product in different weights and units.
- ✓ Farmers and sellers have a control panel to control the orders.
- ✓ Farmers and sellers can see the payment history.

4.7.3 Case Diagram for Buyer

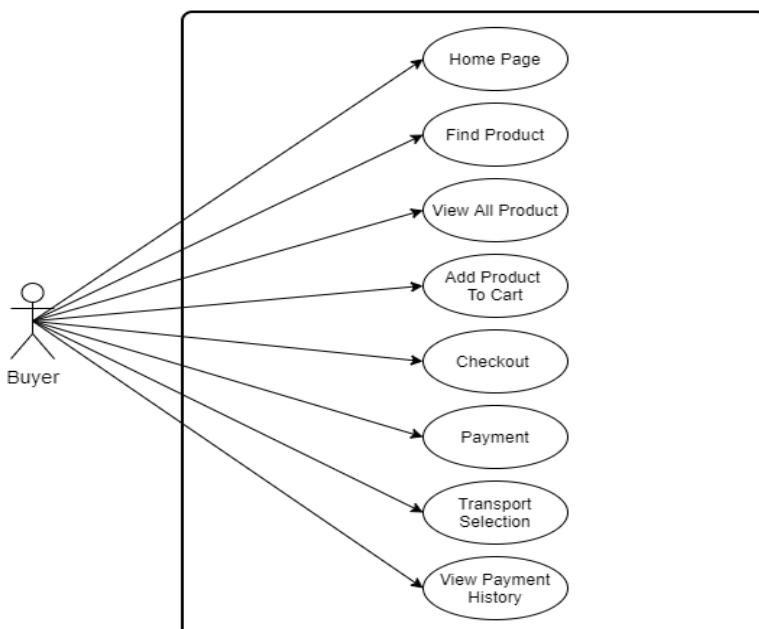


Figure 4.4: Use Case Diagram for Buyer

In figure 4.4, we have shown our “Buyer” case diagram of Krishiseba system. Here,

- ✓ Buyers can find and view all products.
- ✓ Buyers can filter category wise products.
- ✓ Buyers can add products to their cart.
- ✓ Buyers can pay for their desired product.
- ✓ Buyers can see the transport around the seller location and he will be able to contact the transport owners.
- ✓ Buyers can see the payment history.

4.7.4 Case Diagram for Transport Owner

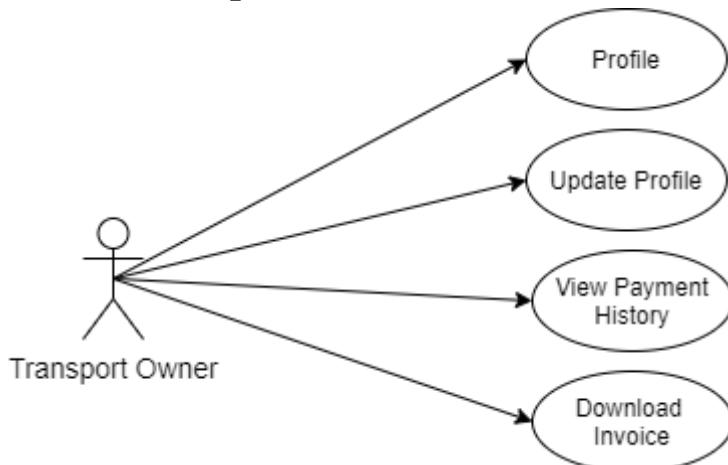


Figure 4.5: Use Case Diagram for Transport Owner

In figure 4.5, we have shown our “Transport Owner” case diagram of Krishiseba system. Here,

- ✓ Transport owners can manage their own profile and update it.
- ✓ Transport owners can change their passwords anytime.
- ✓ Transport owners can see how much money is deposited in his account.
- ✓ Transport owners can download invoices.

4.8 Activity Diagram

Activity diagram is another important diagram in UML to describe the dynamic aspects of the system. Activity diagram is basically a flowchart to represent the flow from one activity to another activity. The activity can be described as an operation of the system. The control flow is drawn from one operation to another. This flow can be sequential, branched, or concurrent. Activity diagrams deal with all types of flow control by using different elements such as fork, join, etc. It captures the dynamic behavior of the system. Other four diagrams are used to show the message flow from one object to another but the activity diagram is used to show message flow from one activity to another. Activity is a particular operation of the system. Activity diagrams are not only used for visualizing the dynamic nature of a system, but they are also used to construct the executable system by using forward and reverse engineering techniques. The only missing thing in the activity diagram is the message part. It does not show any message flow from one activity to another. Activity diagram is sometimes considered as the flowchart. Although the diagrams look like a flowchart, they are not.

4.8.1 Activity Diagram of Super Admin

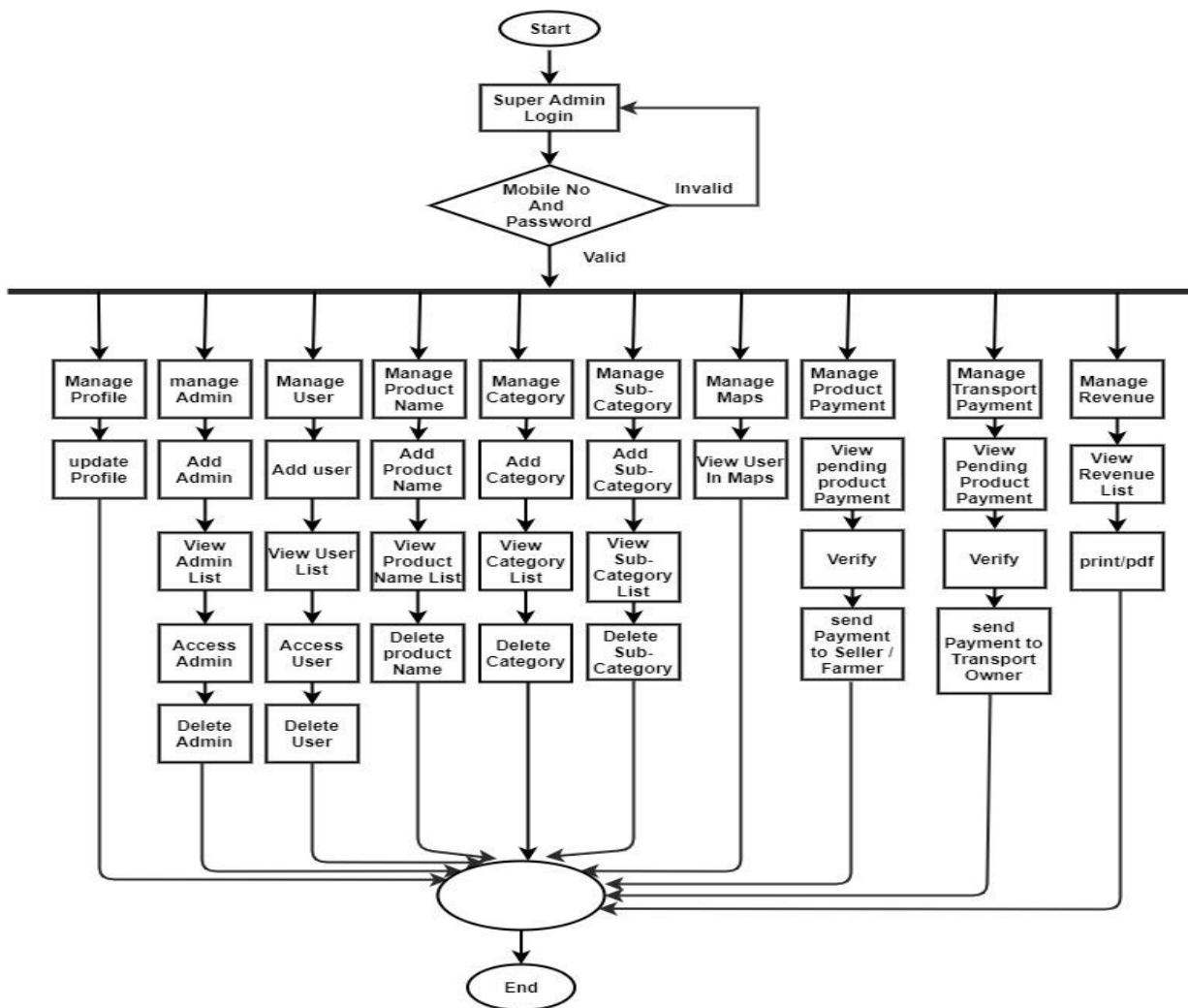


Figure 4.6: Activity Diagram for Super Admin

In figure 4.6, we have shown our “Super Admin” activity diagram of the Krishiseba system. Here,

- ✓ At first Super admin login to her account then they can manage the users.
- ✓ Super admin can add Admin and manage their profile.
- ✓ Super admin can add, update and delete product name, category, and sub-category.
- ✓ Super admin can verify all the documents submitted by the user's and if all the documents are accurate then users will get access to buy and sell products from their account.
- ✓ Super admin manages the total revenue of the sales.
- ✓ Super admin can manage the service fees of each sale and transportation.
- ✓ Super admin can print the revenue.
- ✓ Super admin can manage and update his own profile.
- ✓ Super admin can see all users in google maps
- ✓ Super admin can send SMS to individual users
- ✓ Super Admin cuts the fixed percentage on the product and then delivers the rest amount to the farmer and normal seller.
- ✓ Super admin can check the users list and can delete any users if needed.

4.8.2 Activity Diagram of Admin

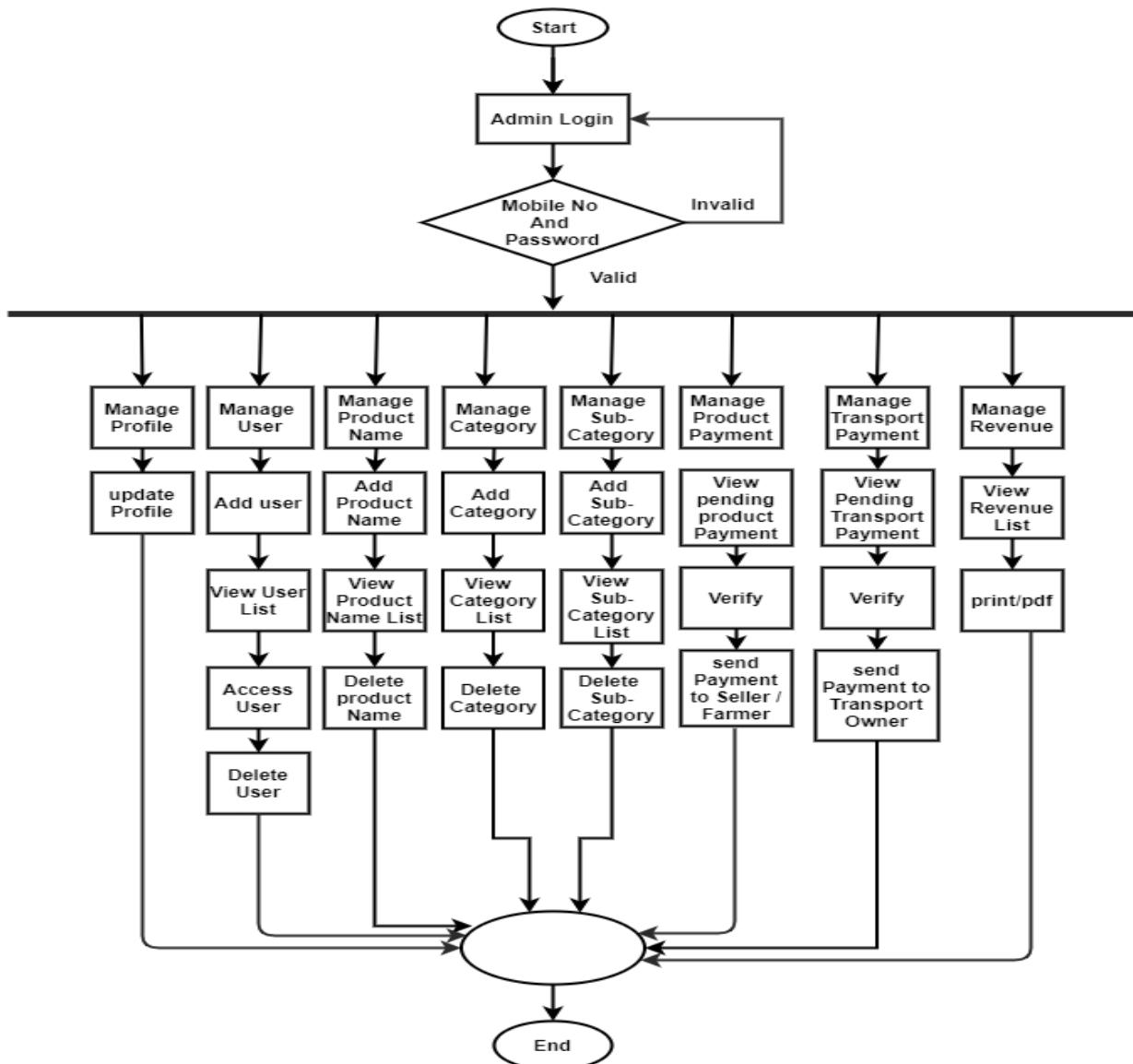


Figure 4.7: Activity Diagram for Admin

In figure 4.7, we have shown our “Admin” activity diagram of the Krishiseba system. Here,

- ✓ At first admin login to her account then they can manage the users.
- ✓ Admin can add, update and delete product name, category, and sub-category.
- ✓ Admin can verify all the documents submitted by the user's and if all the documents are accurate then users will get access to buy and sell products from their account.
- ✓ Admin manages the total revenue of the sales.
- ✓ Admin can manage the service fees of each product sale and transportation.
- ✓ Admin can print the revenue.
- ✓ Admin can manage and update his own profile.
- ✓ Admin can send SMS to individual users.
- ✓ Admin cuts the fixed percentage on the product and then sends the rest amount to the farmer.
- ✓ An admin will be able to see the list of payments he has accepted.
- ✓ Admin can check the users list and can delete any users if needed.

4.8.3 Activity Diagram of Farmer and seller

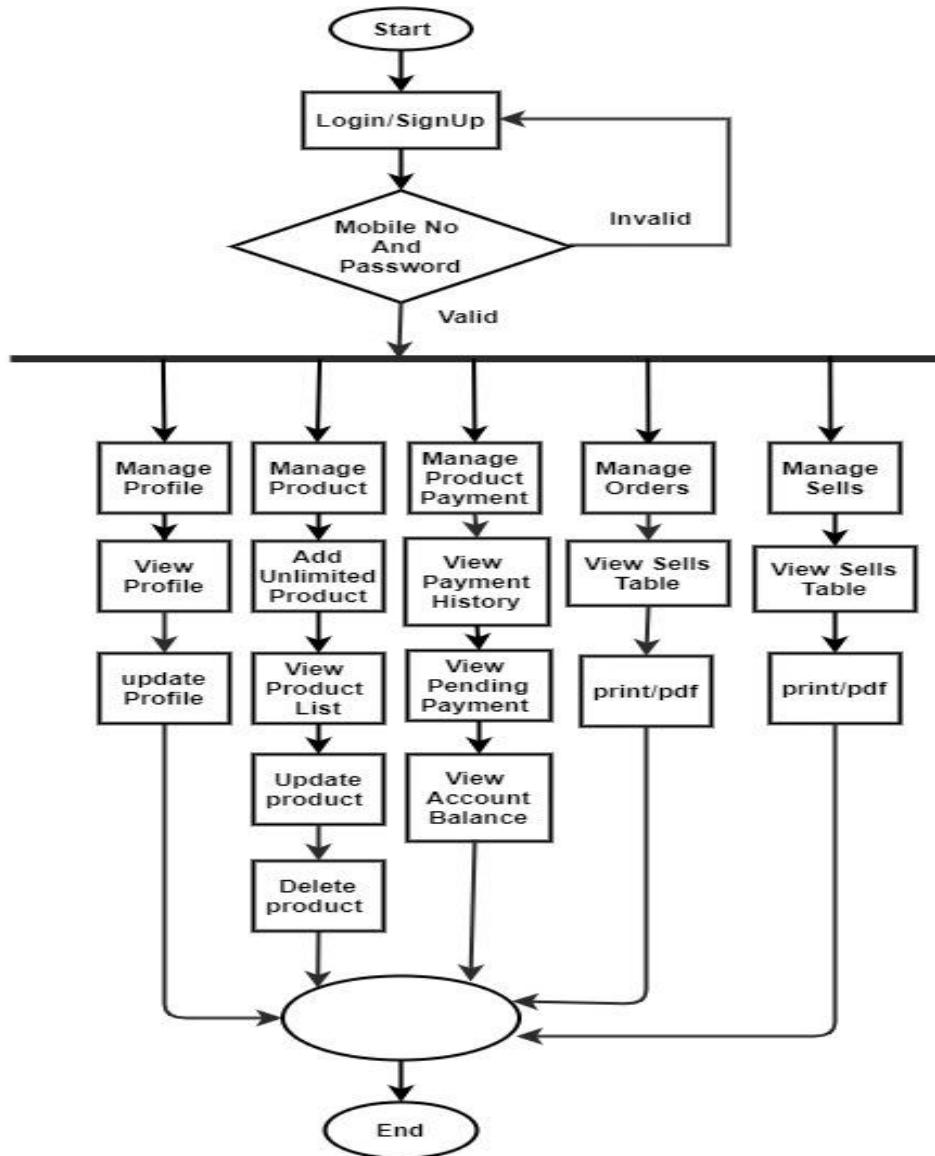


Figure 4.8: Activity Diagram for Farmer and Seller

In figure 4.8, we have shown our “Farmer” and “Seller” activity diagram of Krishiseba system. The activities of the features for farmer and seller are similarly designed. Here,

- ✓ At first the farmers had to login to our Krishiseba website.
- ✓ Farmers can manage their uploaded agricultural products and can update them.
- ✓ Farmers can add, update and delete products on our Krishiseba website.
- ✓ Farmers can upload their product with unlimited weight and unit.
- ✓ Farmers can set the price of their uploaded products and can change it anytime.
- ✓ Farmers can see how much the fee has been cut by the admin from each sale.
- ✓ Farmers can see the weight of the remaining product in his product section.
- ✓ Farmers can manage and update their own profile.
- ✓ Farmers can see the ordered product details along with the buyer info.
- ✓ Farmers can view the revenue they made from each sale and can print the results.
- ✓ Farmers can see the payment history and their account balance also.

4.8.4 Activity Diagram of Buyer

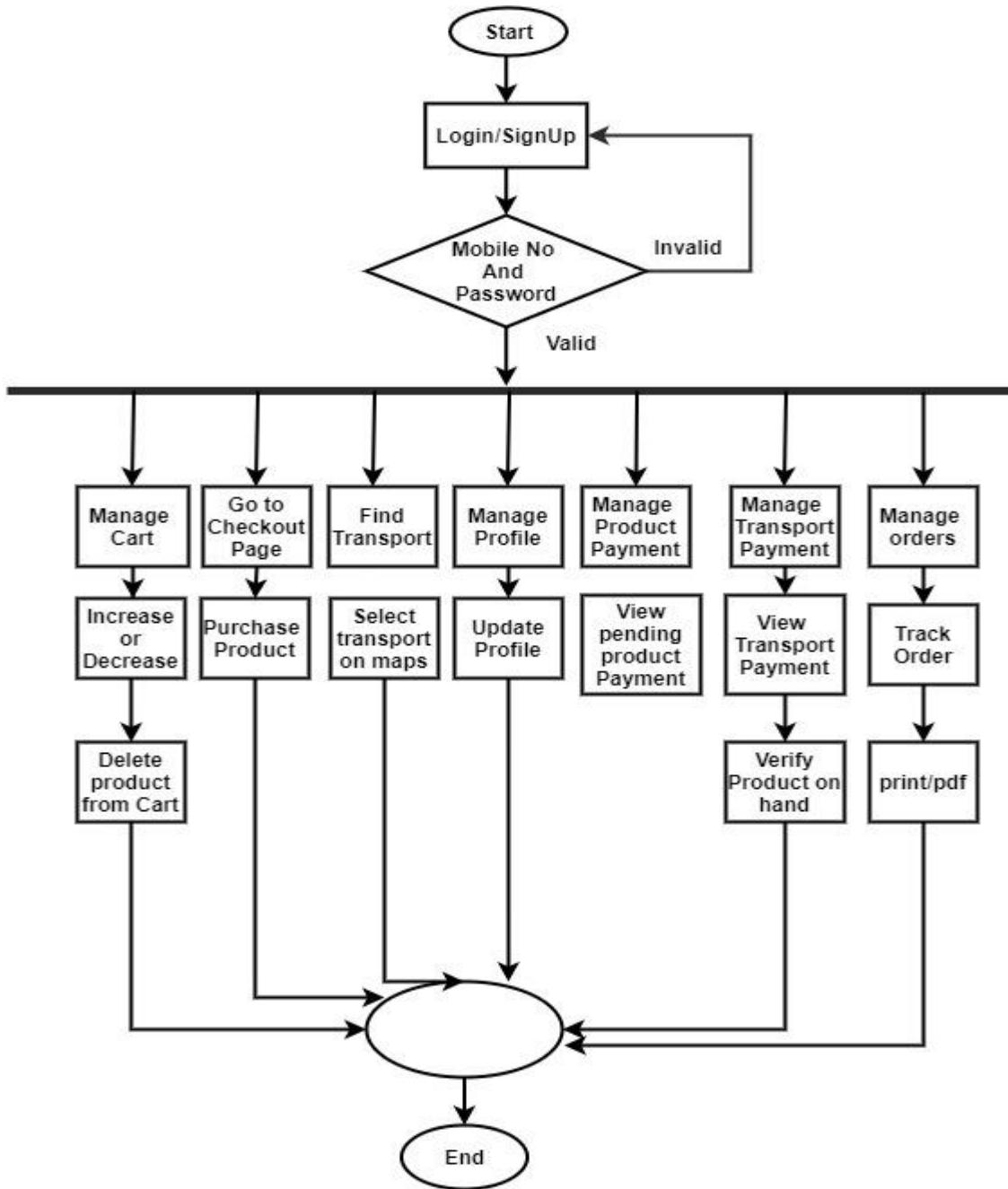


Figure 4.9: Activity Diagram for Buyer

In figure 4.9, we have shown our “Buyer” activity diagram of Krishiseba system. Here,

- ✓ At first the buyer’s login to their account.
- ✓ Buyers can manage and update their own profile.
- ✓ Buyers can change their password anytime.
- ✓ Buyer can see the ordered product details along with the seller info.
- ✓ Buyer tracks ordered products and can view ordered product details.
- ✓ Buyers can take transportation services if they want. buyers see the transport around the seller location and he will be able to contact the transport owners.
- ✓ When buyers receive her product properly, they are able to confirm it.

4.8.5 Activity Diagram of Transport Owner

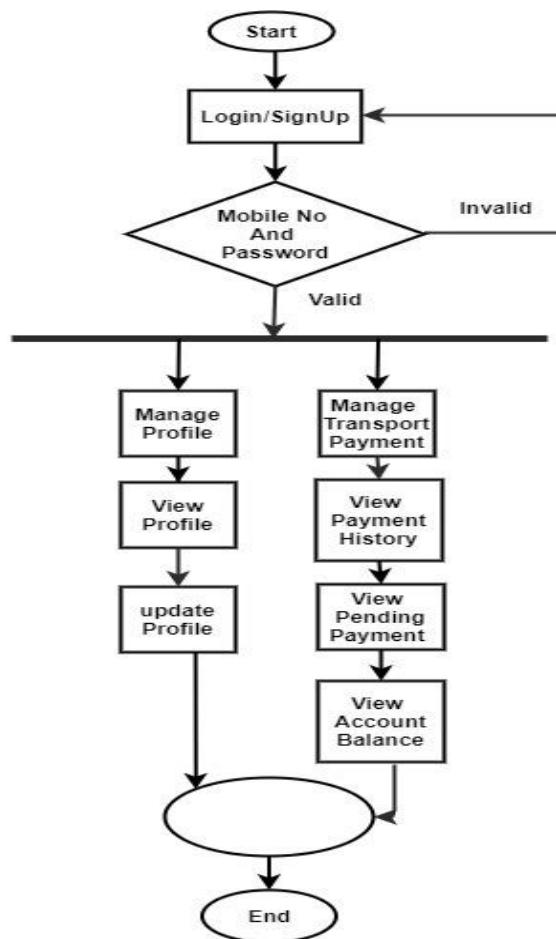


Figure 4.10: Activity Diagram for Transport Owner

In figure 4.10, we have shown our “Transport Owner” activity diagram of Krishiseba system. Here,

- ✓ At first the transport owner has to login to our Krishiseba website.
- ✓ Transport owners can manage their own profile and update it.
- ✓ Transport owners can change their password anytime.
- ✓ Transport owners can see the payment status.
- ✓ Transport owners can see how much money is deposited in their account.

4.9 ER Diagram

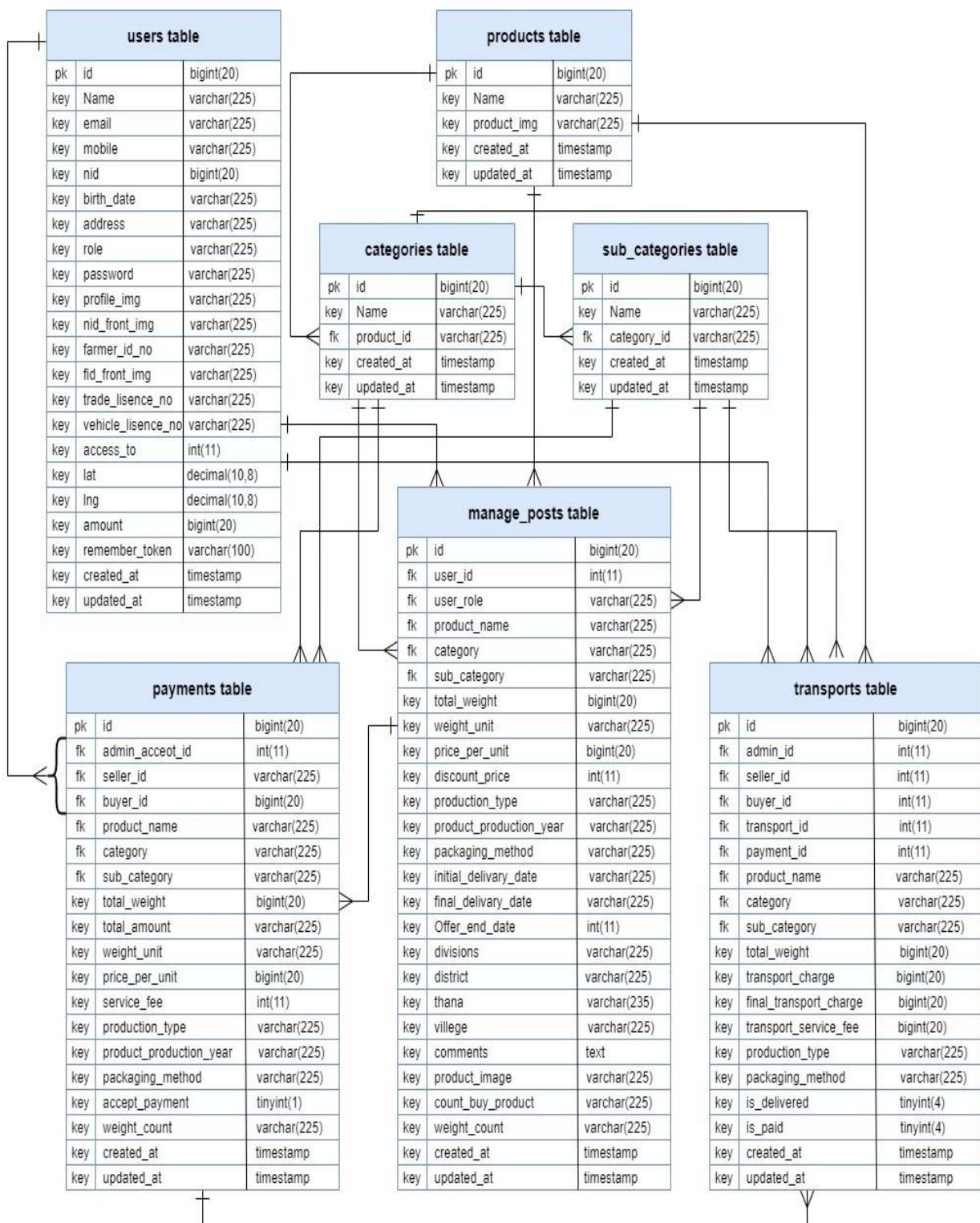


Figure 4.11: ER Diagram

In figure 4.11, we have shown our Entity Relationship diagram for Krishiseba system, which is presented by tables. The tables are made to meet the required specification of the system and provide much more specific details of each entity within the system. The purpose of this ER Diagram is to fully understand the Krishiseba Website as well as the relationships of tables in the project database design.

CHAPTER: 5

TECHNOLOGIES

In this chapter, we are going to describe the list of technologies that are used to complete the project goal. We have discussed briefly about the technologies we used in front-end, backend, and third party Api.

5.1 Front-End

- ✓ **HTML 5:** HTML (Hyper Text Markup Language) is the code that is used to structure a web page and its content. For example, content could be structured within a set of paragraphs, a list of bulleted points, or using images and data tables. As the title suggests, this article will give you a basic understanding of HTML and its functions.
- ✓ **CSS 3:** CSS is the language for describing the presentation of Web pages, including colors, layout, and fonts. It allows one to adapt the presentation to different types of devices, such as large screens, small screens, or printers. CSS is independent of HTML and can be used with any XML-based markup language.
- ✓ **Bootstrap 4.5:** Bootstrap open-source front end development framework for the creation of websites and web apps. The Bootstrap framework is built on HTML, CSS, and JavaScript.
- ✓ **jQuery:** jQuery is a fast, small, and feature-rich JavaScript library. It makes things like HTML document traversal and manipulation, event handling, animation, and Ajax much simpler with an easy-to-use API that works across a multitude of browsers.
- ✓ **JavaScript:** JavaScript is a high level, interpreted, programming language used to make web pages more interactive.

5.2 Back-End

- ✓ **PHP 8.0.3:** PHP is a general-purpose scripting language especially suited to web development. It was originally created by Danish-Canadian programmer Rasmus Leadoff in 1994. The PHP reference implementation is now produced by The PHP Group.
- ✓ **Laravel 8:** Laravel is an open-source PHP framework, which is robust and easy to understand. It follows a model-view-controller design pattern. Laravel reuses the existing components of different frameworks which helps in creating a web application. The web application thus designed is more structured and pragmatic. Laravel offers a rich set of functionalities which incorporates the basic features of PHP frameworks like CodeIgniter, Yii and other programming languages like Ruby on Rails. Laravel has a very rich set of features which will boost the speed of web development.
- ✓ **React:** React. Js is an open-source JavaScript library that is used for building user interfaces specifically for single-page applications. It's used for handling the view layer for web and mobile apps. React also allows us to create reusable UI components.

5.3 Database

- ✓ **MySQL:** MySQL is a database management system. A database is a structured collection of data. It may be anything from a simple shopping list to a picture gallery or the vast amounts of information in a corporate network. To add, access, and process data stored in a computer database, you need a database management system such as MySQL Server. MySQL is a relational database management system. A relational database stores data in separate tables rather than putting all the data in one big storeroom.

5.4 Third-Party Api

- ✓ **Twilio Verify:** We will look at how to verify phone numbers using Twilio Verify by building a simple authentication system in Laravel. Twilio Verify makes it easier and safer than custom verification systems to verify a user's phone number. It ensures that the phone number is valid by sending a short code via SMS to the number during registration. This can help reduce the number of fake accounts created and failure rates when sending SMS notifications to users [14].
- ✓ **Google-Map-React:** Google-Map-React is a component written over a small set of the Google Maps API. It allows you to render any React component on the Google Map. It is fully isomorphic and can render on a server. Additionally, it can render map components in the browser even if the Google Maps API is not loaded.

CHAPTER: 6

DESIGN AND IMPLEMENTATION

In this chapter we have provided the experimental result analysis of our developed Krishiseba website. Here we attached all the screenshots of every section that will be managed by the “super admin”, “admin”, “farmer”, “seller”, “buyer” and “transport owner”. All the roles play different tasks and sometimes similar tasks. All of them will be represented here in this chapter.

6.1 Graphical Representation

The proposed of graphical representations is to exhibit relationships between ideas, data, information and concepts in a visual map or diagram. Graphical representations are easy to understand. They can also be edited and shared. Here we will show all the sections graphically as well as describe which section will perform what type of tasks and which role can control that section. Here we showed all the pages created for our Krishiseba website project. All of them are shown here with necessary details and information that will help to understand what's going through our entire project and how all the sections work.

6.3 Front-End

6.3.1 Home Page

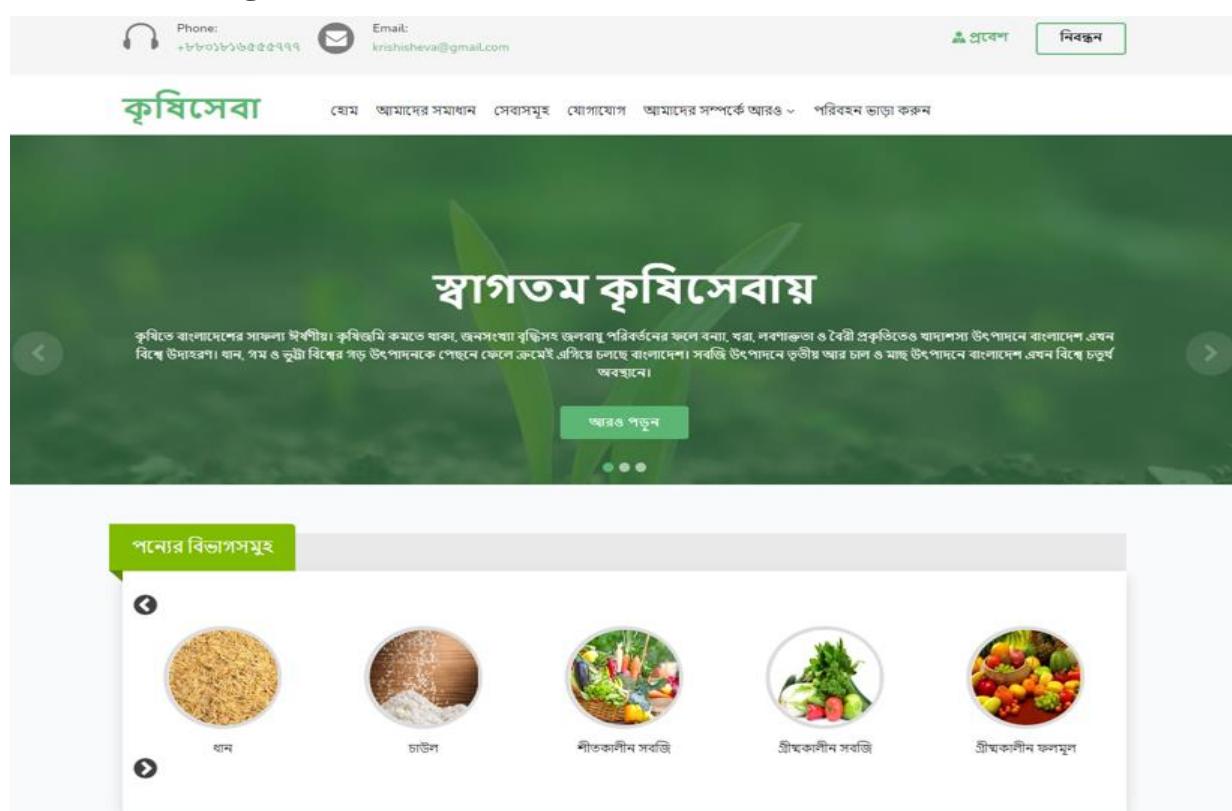


Figure 6.1: Home Page Section

In figure 6.1, we have shown the homepage of the Krishiseba website. In this section of our project the user can view all the product categories, new arrival products, discount products, top selling products, Farmer's products and other sections in this page.

6.3.2 New Arrival Product

Figure 6.2: New Arrival Product Section

In figure 6.2, we have shown the new arrival page of the Krishiseba website. In this section of our project the user can view the new arrival products. If they like any product, they can add the products to their cart or view the product separately from this page or visit another page.

6.3.3 Discount Product

Figure 6.3: Discount Product Section

In figure 6.3, we have shown the discount product page of the Krishiseba website. In this section of our project users can see the products in which the discount offer is running to our website as well as see how many discounts on the products are given. If they like any product, they can add the products to their cart or view the product separately from this page or visit another page.

6.3.4 Top Selling Product

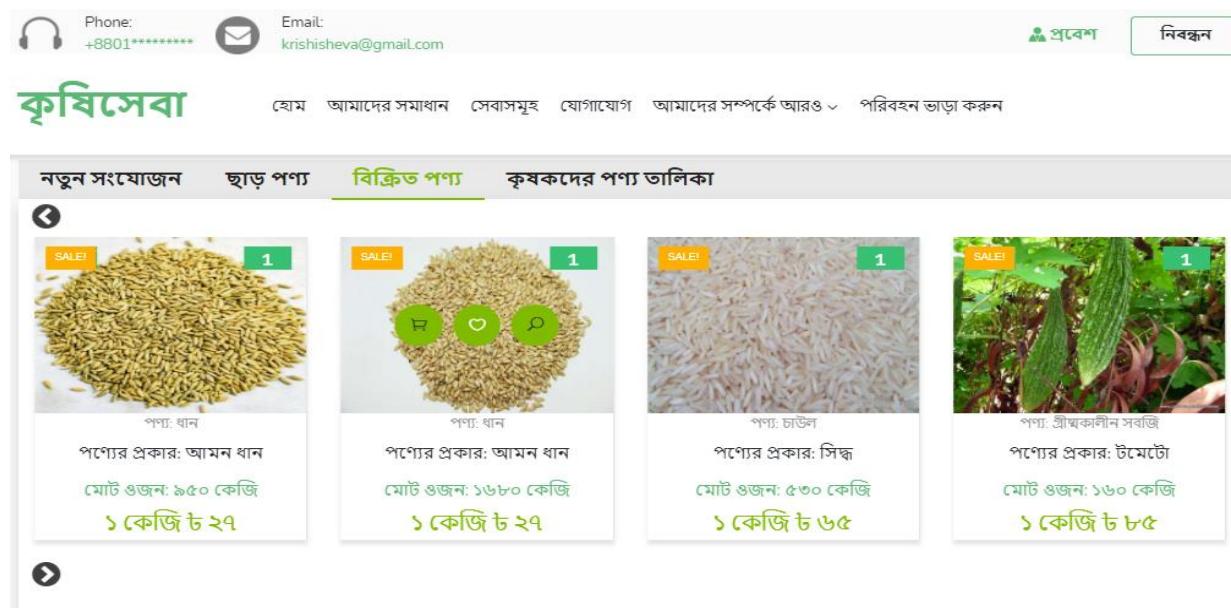


Figure 6.4: Top Selling Product Section

In figure 6.4, we have shown the selling products page of the Krishiseba website. In this section of our project users can see the most selling products on our website as well as see how many times a product has been sold. If they like any product, they can add the products to their cart or view the product separately from this page or visit another page.

6.3.5 Farmer Product Page

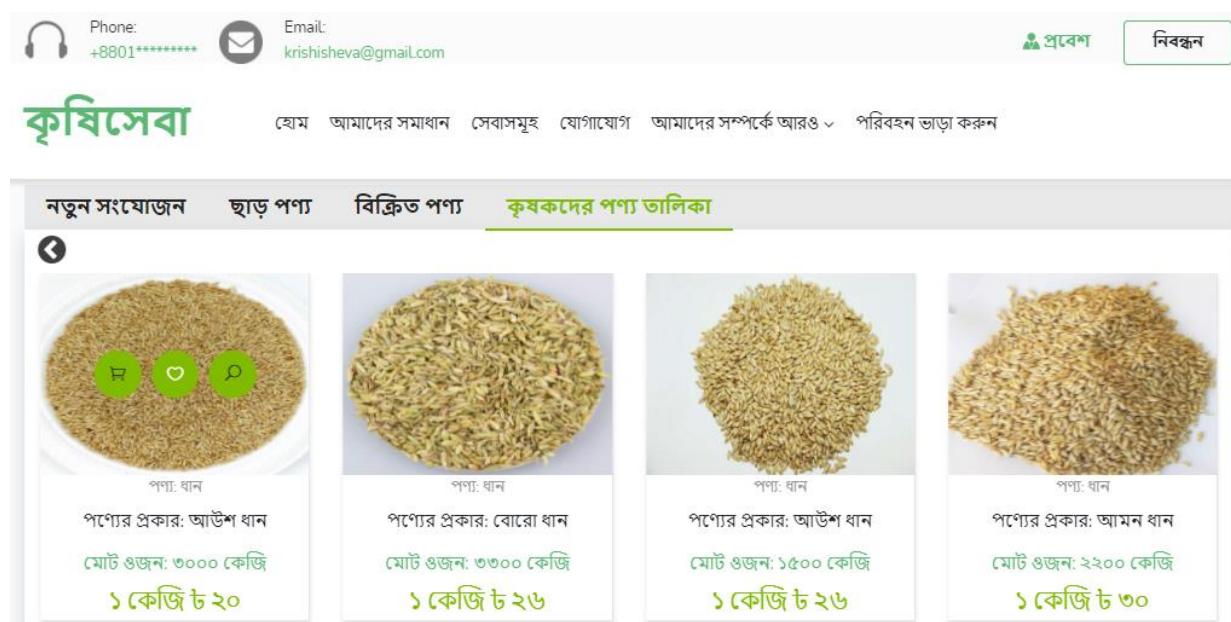


Figure 6.5: Farmer Product Page Section

In figure 6.5, we have shown the farmers products section of the Krishiseba website. In this section of our project users can see the products given by the farmers. If they like any product, they can add the products to their cart or view the product separately from this page or visit another page.

6.3.6 Product Categories

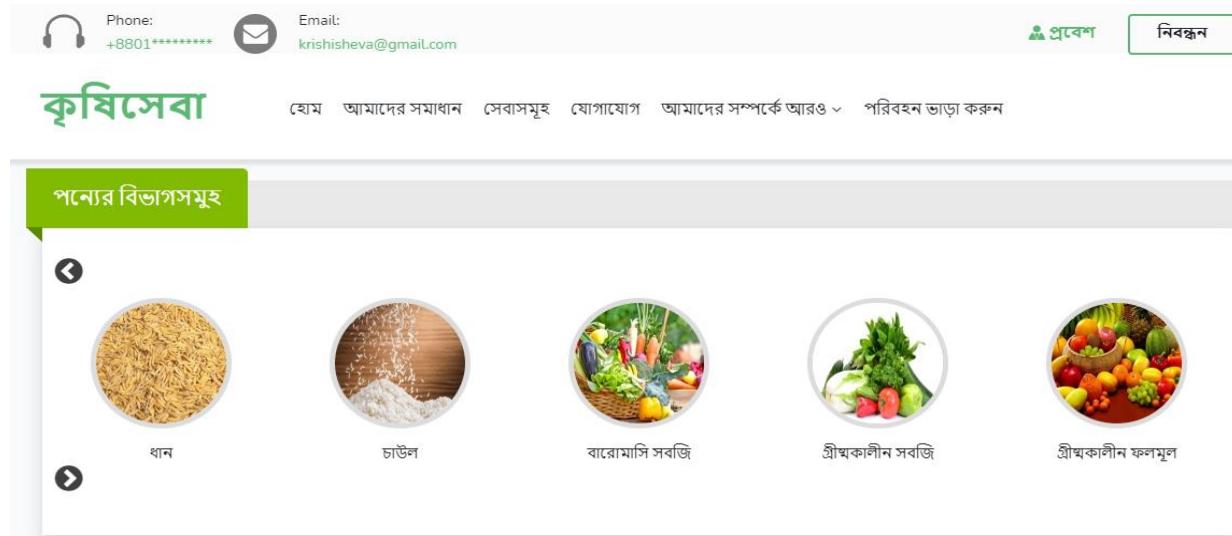


Figure 6.6: Product Categories Section

In figure 6.6, we have shown the product categories section of the Krishiseba website. In this section if the users choose a specific category, they can see all the products under that category. users can view all the similar category products of our website together. They can add the products to the cart or view the product separately from this page or visit another page.

6.3.7 All Product Under the Category page

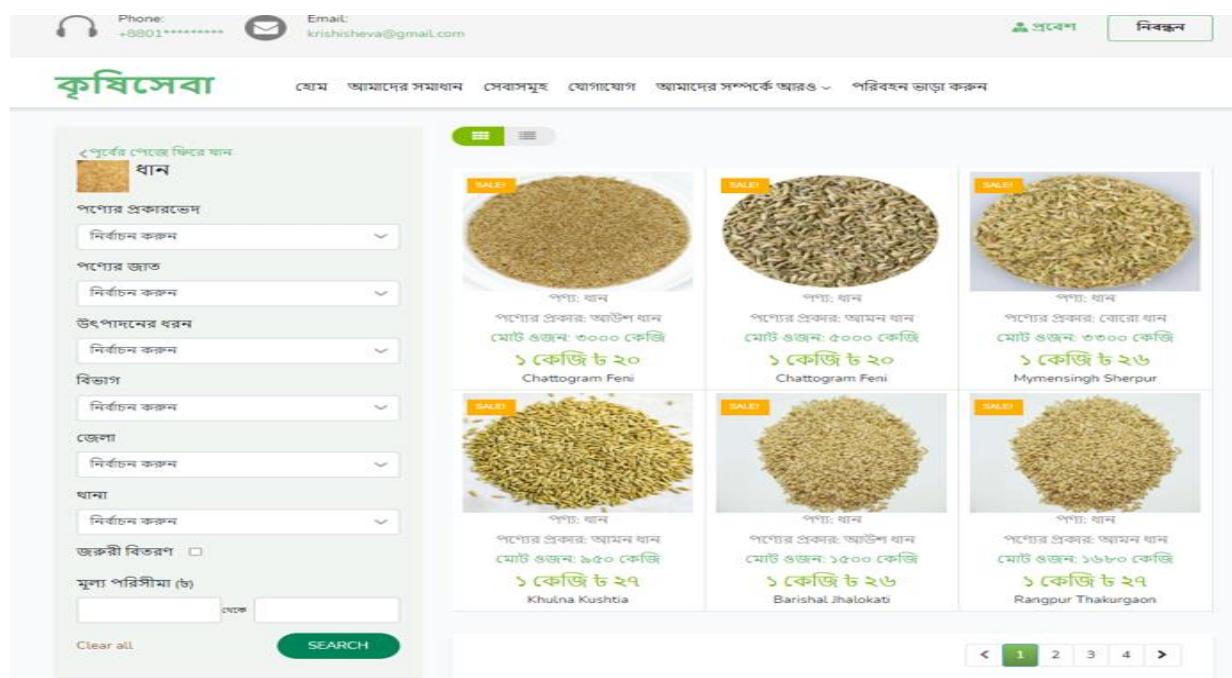


Figure 6.7: All Product Page

In figure 6.7, we have shown the all-product page of the Krishiseba website. In this section the user can view all products under any category. If the users choose a specific category, they can see all the products under that category. They can add the products to the cart or view the product separately from this page or visit another page.

6.3.8 Product Types

The screenshot shows the Krishiseba website's product types page. At the top, there are contact details: Phone: +8801***** and Email: krishiseba@gmail.com. Navigation links include 'প্রবেশ' (Entry) and 'নিরবন্ধন' (Registration). Below the header, the page title 'কৃষিসেবা' (Krishiseba) is displayed, along with a navigation menu: হোম আমাদের সমাধান সেবাসমূহ যোগাযোগ আমাদের সম্পর্কে আরও পরিবহন ভাড়া করুন.

The main content area features a search bar with placeholder text 'পূর্বের পেজে ফিরে যান' (Return to previous page) and a dropdown menu for 'ধান' (Rice). It also includes a dropdown for 'নির্বাচন করুন' (Select) and a 'বিভাগ' (Category) dropdown.

Three product cards are shown, each labeled 'SALE!':

- পণ্য: ধান**
পণ্যের প্রকারভেদ: আটুশ ধান
মোট ওজন: ৩০০০ কেজি
১ কেজি ট ২০
Chattogram Feni
- পণ্য: ধান**
পণ্যের প্রকার: আটুশ ধান
মোট ওজন: ১৫০০ কেজি
১ কেজি ট ২৬
Barishal Jhalokati
- পণ্য: ধান**
পণ্যের প্রকার: আটুশ ধান
মোট ওজন: ২০০০ কেজি
১ কেজি ট ২৬
Mymensingh Netrokona

Figure 6.8: Product Types Page

In figure 6.8, we have shown the product category type of the Krishiseba website. In this section of our project users can choose a specific category type and they can see all the products under that category type. Users can view all the category types under any category of our website together. They can add the products to cart or view the product separately from this page or visit another page.

6.3.9 Product Variety

The screenshot shows the Krishiseba website's product variety page. At the top, there are contact details: Phone: +8801***** and Email: krishiseba@gmail.com. Navigation links include 'প্রবেশ' (Entry) and 'নিরবন্ধন' (Registration). Below the header, the page title 'কৃষিসেবা' (Krishiseba) is displayed, along with a navigation menu: হোম আমাদের সমাধান সেবাসমূহ যোগাযোগ আমাদের সম্পর্কে আরও পরিবহন ভাড়া করুন.

The main content area features a search bar with placeholder text 'পূর্বের পেজে ফিরে যান' (Return to previous page) and a dropdown menu for 'ধান' (Rice). It also includes a dropdown for 'নির্বাচন করুন' (Select) and a 'বিভাগ' (Category) dropdown.

Two product cards are shown, each labeled 'SALE!':

- পণ্য: ধান**
পণ্যের প্রকারভেদ: আটুশ ধান
মোট ওজন: ৩০০০ কেজি
১ কেজি ট ২০
Chattogram Feni
- পণ্য: ধান**
পণ্যের প্রকার: আটুশ ধান
মোট ওজন: ১৫০০ টন
১ টন ট ২৬০০০
Chattogram Brahmanbaria

Figure 6.9: Product Variety Page

In figure 6.9, we have shown the product variety of the Krishiseba website. In this section of our project the user can view the product variety. For this first a user has to select the product category and then the product type and then the product variety. If the users choose a specific category and a specific category type after a user can see the product variety, they can see all the products under that variety. They can add the products to cart or view the product separately from this page or visit another page.

6.3.10 Product Details

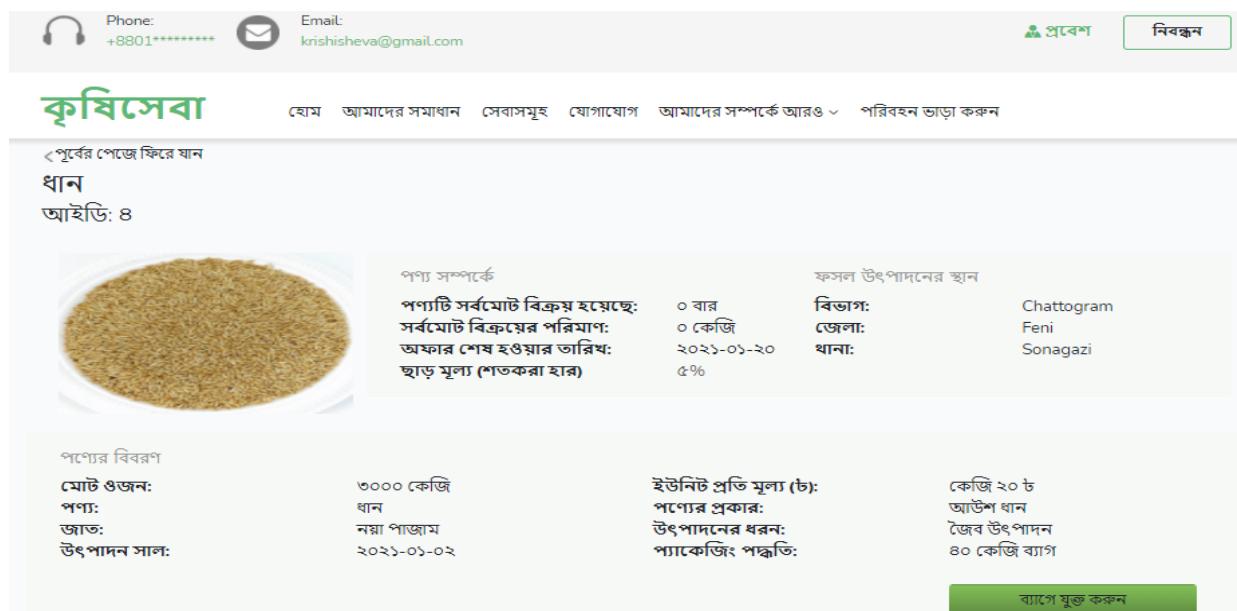


Figure 6.10: Product Details Page

In figure 6.10, we have shown the product category type of the Krishiseba website. In this section of our project the user can view a specific product detail. Users can view the photo of a product and how many times a product has been sold and also see how much the product has sold. He can understand the product details and then can add that product to cart.

6.3.11 Filter

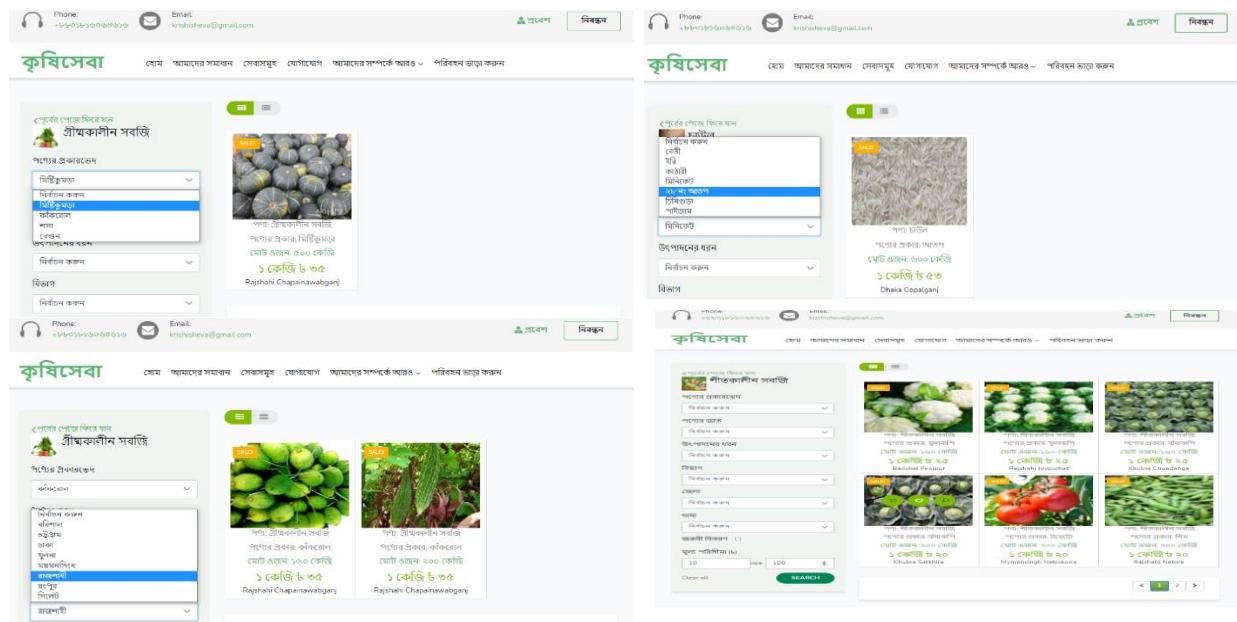


Figure 6.11: Product Filter Functionality Section

In figure 6.11, we have shown the products according to filtering of the Krishiseba website. In this section of our project the user can view the products according to his filtered results. The user can view her desired product by filtering with the product type, product variety, division, district, police station, lowest price, and highest price. This will work as a quick sort of product for the users and thus help the users to find the specific products quickly.

6.3.12 Contact Us

Figure 6.12: Contact Us Page Section

In figure 6.12, we have shown the contact us page of the Krishiseba website. In this section of our project the user can directly contact the admin and they can ask any questions or if they have any issue with any products or seller or farmer, they can inform the admin about that. They also can take help if needed.

6.3.13 Shopping Bag

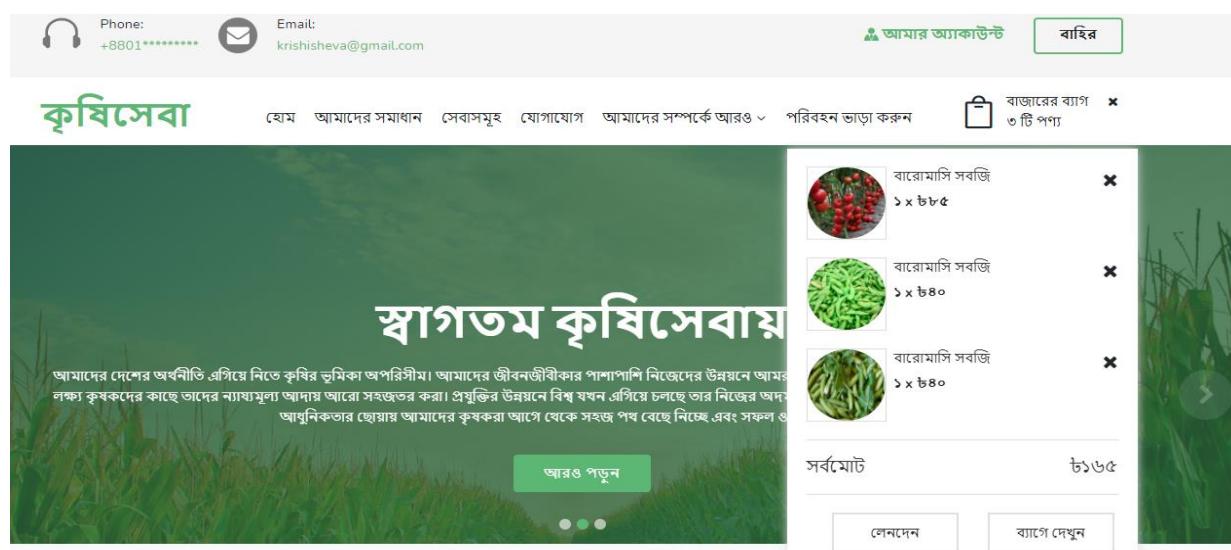


Figure 6.13: Shopping Bag

In figure 6.13, we have shown the shopping bag of the Krishiseba website. In this section of our project the user can view the products in the shopping bag that was added by him. The user can view all the added products prices, quantity, and total price.

6.3.14 Product Added in Cart

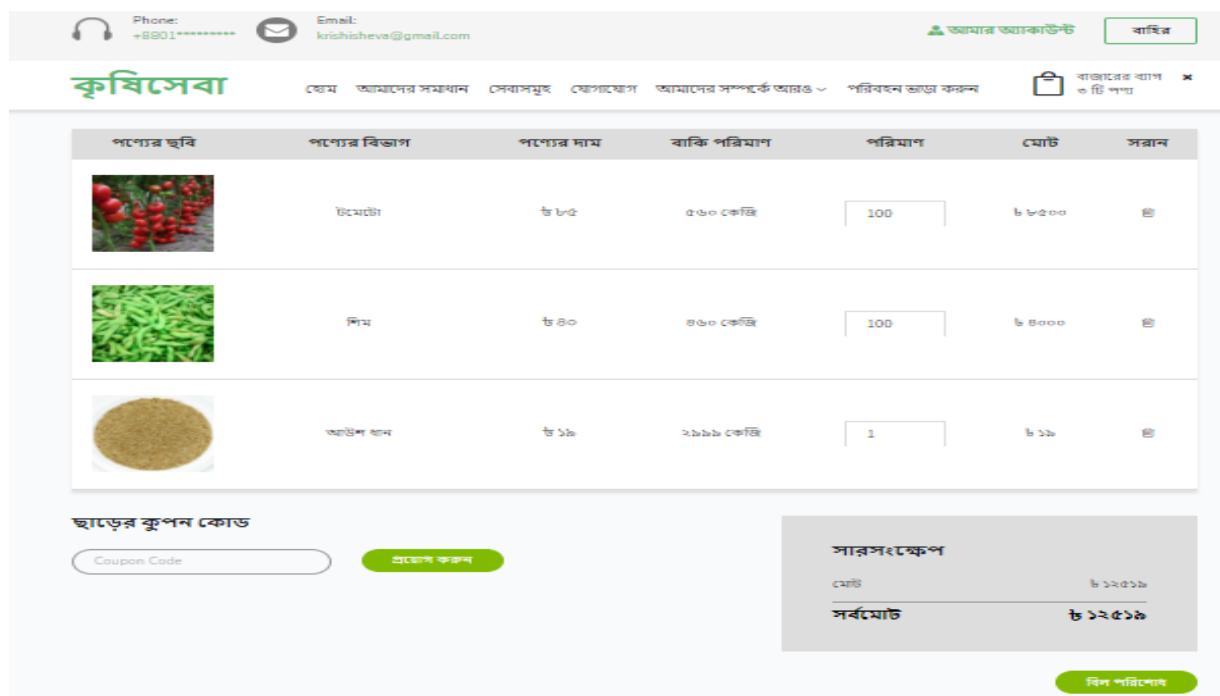


Figure 6.14: Product Added in Cart Page

In figure 6.14, we have shown the cart page of the Krishiseba website. In this section of our project the users can view the products in the cart that were added by him. They can increase or decrease the quantity of a product or remove the products. Also, can view the individual and total prices.

6.3.15 Checkout

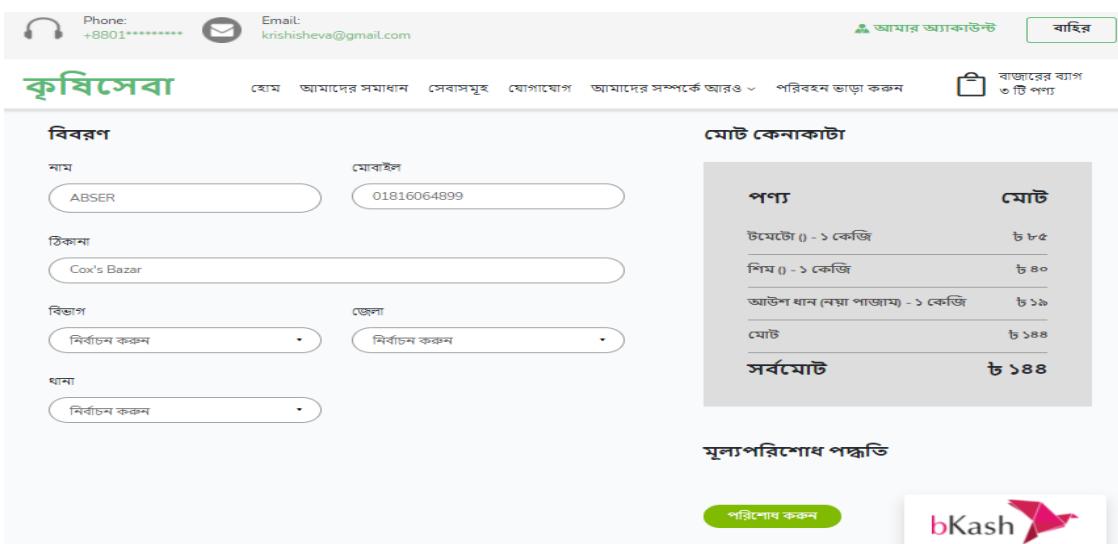


Figure 6.15: Checkout Page

In figure 6.15, we have shown the checkout page of the Krishiseba website. In this section of our project the users can complete the checkout process to purchase the product. This is the last stage to complete the payment and confirm purchase order. Users have to complete the payment process to complete the checkout process.

6.3.16 Product Payment Gateway

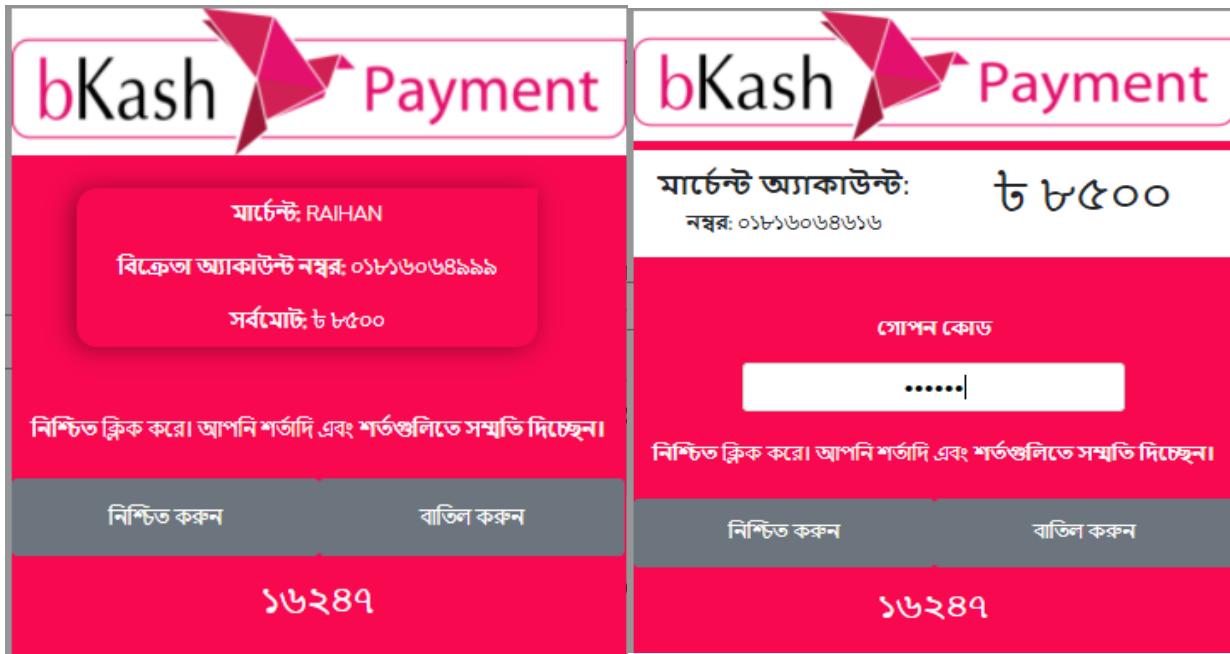


Figure 6.16: Product Payment Gateway Page

In figure 6.16, we have shown the product payment gateway of the Krishiseba website. In this section of our project the buyers can pay the seller through bKash for the products they have purchased. Buyers also can view the purchase confirmation after completing the checkout process and deducting the money from bKash.

6.3.17 Transport Selection

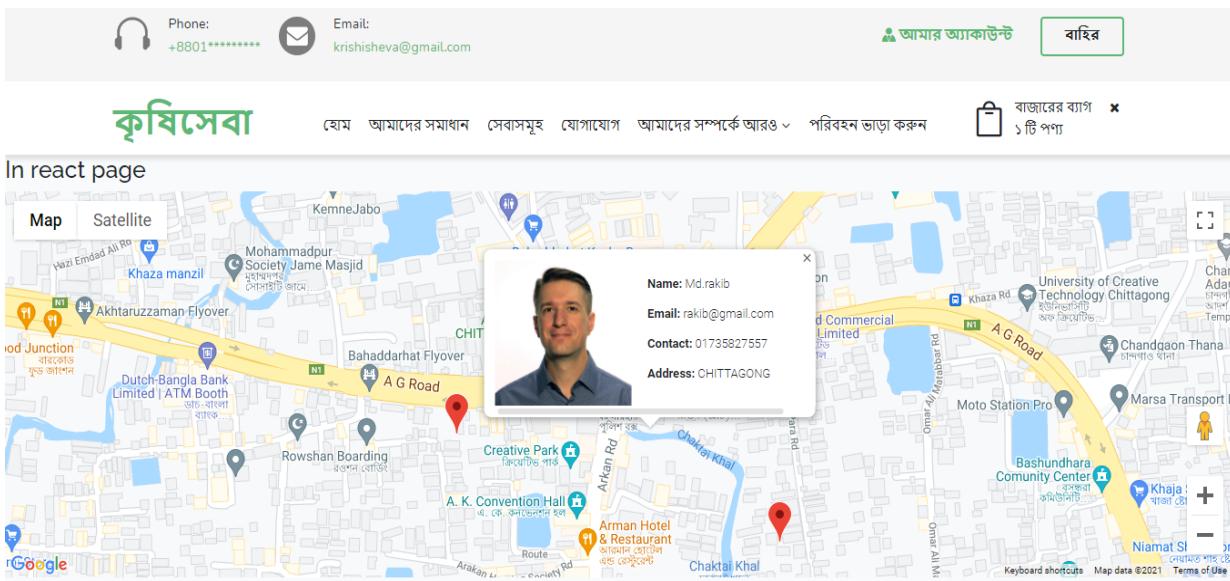


Figure 6.17: Transport Selection Page

In figure 6.17, we have shown the transport selection page of the Krishiseba website. In this section of our project the buyers can take transportation service if they want. Buyers see the transport around the seller location and he will be able to contact the transport owners.

6.3.18 Transport Form

Phone: +8801***** Email: krishiseba@gmail.com

আমার অ্যাকাউন্ট বাহির

কৃষিসেবা

যোগী আমাদের সমাজান সেবাসমূহ যোগাযোগ আমাদের সম্পর্কে আতঙ্গ এ পরিবহন ভাড়া কমজুর

বাজারের ক্ষেপণ * ১ টি পণ্য

পরিবহন ফর্ম

গাড়ির চালক এর নাম
Md.rakib

গাড়ির চালকের ঠিকানা
CHITTAGONG

সম্পূর্ণ ওজন
১০০০ কেজি

পণ্যের নাম
আউশ ধান

পণ্যের জাত
নয়া পাজাম

প্যাকেজিং পদ্ধতি
৪০ কেজি ব্যাগ

পরিবহন ভাড়া
5000

পরিবহন ভাড়া
৫০০০ টাকা

উৎপাদনের ধরন
জৈব উৎপাদন

Confirm Close

Figure 6.18: Transport Form

In figure 6.18, we have shown the transport form of the Krishiseba website. Buyers can see their ordered product information and transport owner name, address, and mobile number in transport form, and they can use the service of transportation payment after confirmation.

6.3.19 Transportation Payment Gateway

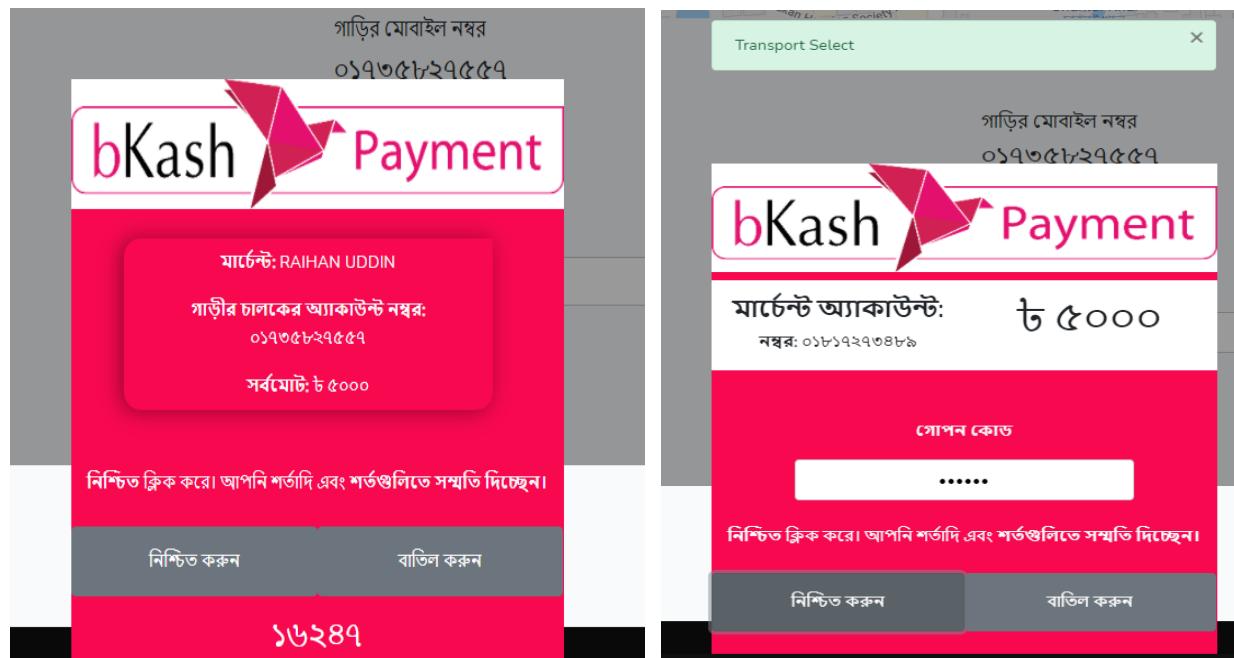


Figure 6.19: Transport Payment Gateway

In figure 6.19, we have shown the transport payment gateway of the Krishiseba website. In this section of our project the buyers can pay the transport owner through our bKash payment gateway to ensure the delivery of his goods.

6.3.20 Login

Figure 6.20: login Page Section

In figure 6.20, we have shown the login page of the Krishiseba website. In this section of our project the users can view the login page. If the visitor is a registered user, they can login after providing their mobile no and password. If they did not register on our Krishiseba website, they have to go to the registration page to complete registration.

6.3.21 Farmer Registration

Figure 6.21: Farmer Registration Page Section

In figure 6.21, we have shown the farmer registration page of the Krishiseba website. In this section of our project, the user can register as a farmer if they don't have a farmer account. They have to provide all the necessary information during the registration process as a farmer to our Krishiseba website.

6.3.22 Normal Seller Registration

Figure 6.22: Normal Seller Registration Page Section

In figure 6.22, we have shown the seller registration page of the Krishiseba website. In this section of our project the users can register as a seller if they don't have a seller account. They have to provide all the necessary information during the registration process as a seller to our Krishiseba website.

6.3.23 Buyer Registration

Figure 6.23: Buyer Registration Page Section

In figure 6.23, we have shown the buyer registration page of the Krishiseba website. In this section of our project the user can register as a buyer if they don't have a buyer account. They have to provide all the necessary information during the registration process as a buyer to our Krishiseba website.

6.3.24 Transport Owner Registration

নিবন্ধন করুন

আমি একজন*

কৃষক বিক্রেতা ফ্রেটা পরিবহনের মালিক

প্রোফাইল ছবি

Choose File images.jpg

নাম*

Sadik

জন্ম তারিখ*

03/01/1994

পাসওয়ার্ড*

এনআইডি ছবি

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার
Government of the People's Republic of Bangladesh
NATIONAL ID CARD / জাতীয় পরিচয় পত্র

Choose File nid demo.jpg

শুধুমাত্র পরিবহনের মালিকদের জন্য
গাড়ির লাইসেন্স নাম্বার

2221212121212353

মোবাইল*

01735835678

স্থায়ী ঠিকানা

Tekpara, Cox's Bazar, Cox's Bazar Sadar 4700

পাসওয়ার্ড নিশ্চিতকরণ *

এনআইডি নাম্বার*

5106894768

Register

Figure 6.24: Transport Owner Registration Page Section

In figure 6.24, we have shown the transport owner registration page of the Krishiseba website. In this section of our project the users can register as a transport owner if they don't have a transport owner account. They have to provide all the necessary information during the registration process as a transport owner to our Krishiseba website.

6.3.25 Verify Phone Number

+8801***** krishiseva@gmail.com

প্রবেশ নিবন্ধন

কৃষিসেবা

হোম আমাদের সমাধান সেবাসমূহ পণ্য যোগাযোগ আমাদের সম্পর্কে আরও ▾

Verify Your Phone Number

Please enter the OTP sent to your number: 01816064616

verification code

Verify Phone Number

Figure 6.25: Phone Number Verification Notify Page Section

In figure 6.25, we have shown the phone number verify page of the Krishiseba website. In this section of our project the user who just registered on our platform will be notified that the user has to verify the phone number that they provided during the registration process.

6.4 Database

Table	Action	Rows	Type	Collation	Size	Overhead
categories	Browse Structure Search Insert Empty Drop	40	InnoDB	utf8mb4_unicode_ci	16.0 Kib	-
failed_jobs	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_unicode_ci	32.0 Kib	-
front_tests	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_unicode_ci	16.0 Kib	-
google_maps	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_unicode_ci	16.0 Kib	-
manage_posts	Browse Structure Search Insert Empty Drop	50	InnoDB	utf8mb4_unicode_ci	16.0 Kib	-
migrations	Browse Structure Search Insert Empty Drop	14	InnoDB	utf8mb4_unicode_ci	16.0 Kib	-
password_resets	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_unicode_ci	32.0 Kib	-
payments	Browse Structure Search Insert Empty Drop	2	InnoDB	utf8mb4_unicode_ci	16.0 Kib	-
products	Browse Structure Search Insert Empty Drop	8	InnoDB	utf8mb4_unicode_ci	16.0 Kib	-
service_fees	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_unicode_ci	16.0 Kib	-
sub_categories	Browse Structure Search Insert Empty Drop	28	InnoDB	utf8mb4_unicode_ci	16.0 Kib	-
transactions	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_unicode_ci	16.0 Kib	-
transports	Browse Structure Search Insert Empty Drop	1	InnoDB	utf8mb4_unicode_ci	16.0 Kib	-
users	Browse Structure Search Insert Empty Drop	22	InnoDB	utf8mb4_unicode_ci	64.0 Kib	-
14 tables	Sum	165	InnoDB	utf8_unicode_ci	304.0 Kib	0 B

Figure 6.26: Database table

In figure 6.26 we are showing the database total view. We use MySQL database for our project. It contains a total of 14 tables. All of them are used for storing different type of data for different sections and we can add, update, view and delete data from this database easily.

6.5 Backend

6.5.1 User Profile

আমার প্রোফাইল

প্রোফাইল ছবি

নাম:	ইমেইল:	মোবাইল নম্বর:
FAYSAL	faysal@gmail.com	01816064944
আমি একজন:	ঠিকানা:	জন্ম তারিখ:
buyer	Cox's Bazar	11-11-2010
এনআইডি নম্বর:	নিবন্ধনের সময়:	সর্বশেষ আপডেট:
345677544575656	4 days ago	4 days ago

প্রোফাইল আপডেট করুন

Figure 6.27: User Profile Page

In figure 6.27, we have shown the user profile page of the Krishiseba website. In this section of our project the users can view their profile and can check the information they provided and if needed can go to the update section directly.

6.5.2 Update User Profile

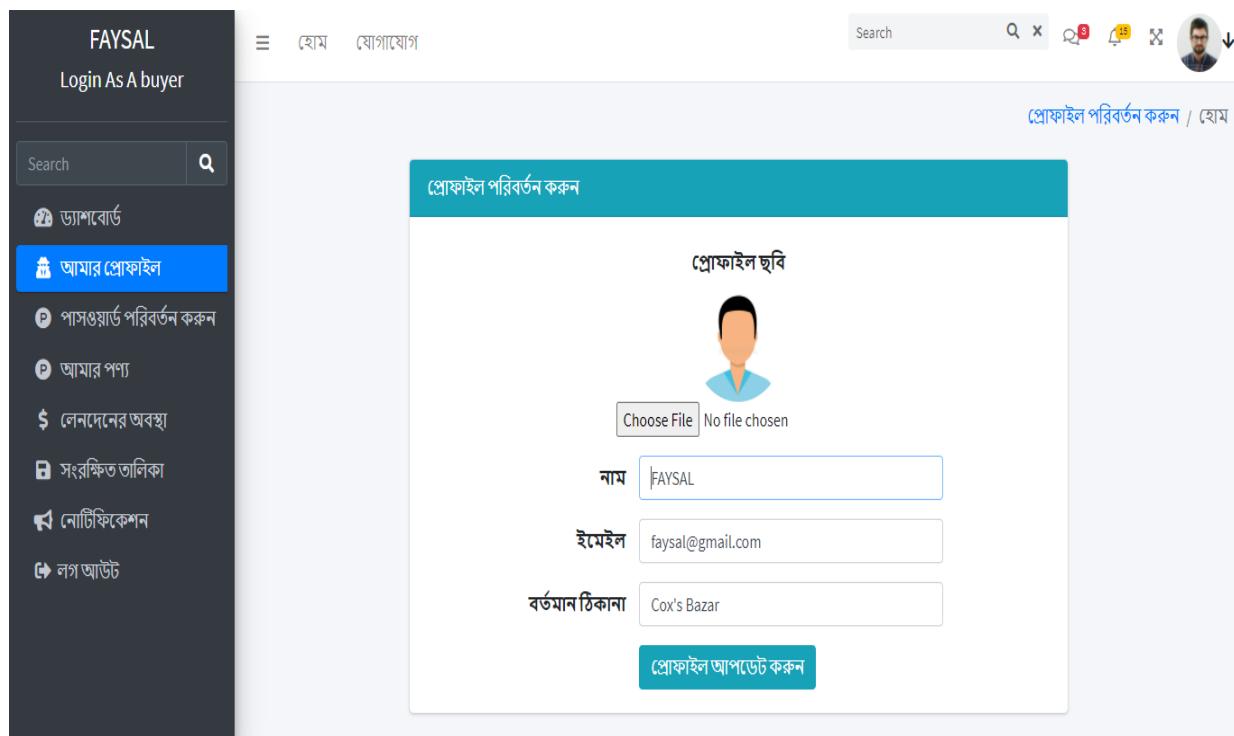


Figure 6.28: All User Update Profile Page

In figure 6.28, we have shown the user profile update page of the Krishiseba website. In this section of our project the user can update his profile and can add other necessary information.

6.5.3 Change Password

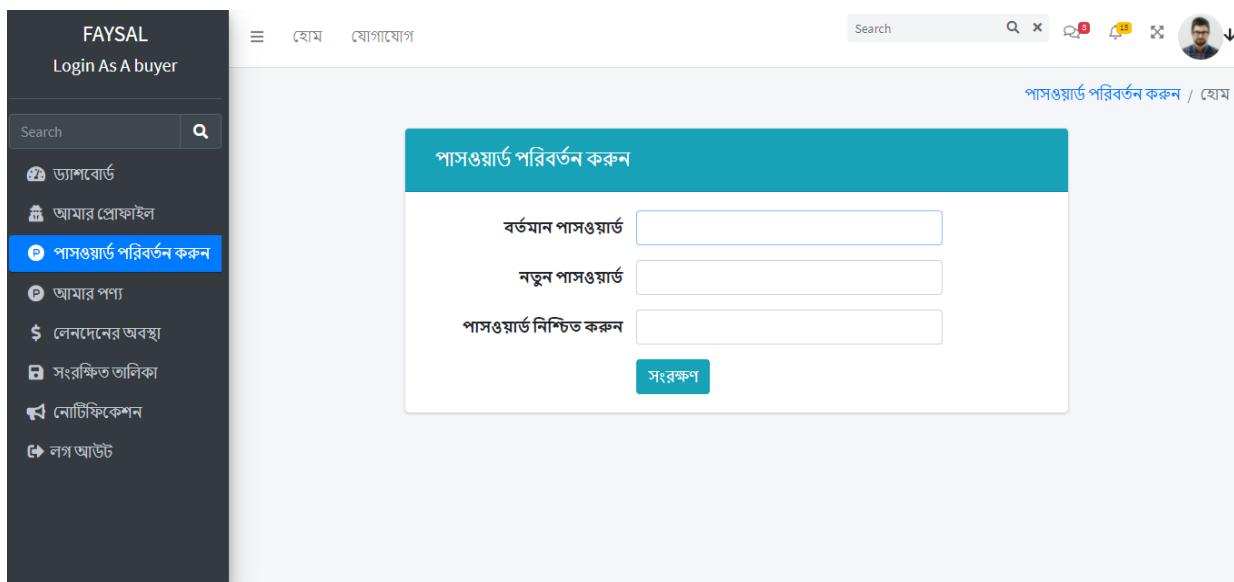


Figure 6.29: All User Change Password Page

In figure 6.29, we have shown the change password page of the Krishiseba website. In this section of our project the users can change their password and update it. They have to provide their current password to apply for a new password for security reasons.

6.6 Farmer And Seller

6.6.1 Add New Product

The screenshot shows the Krishiseba website's product addition interface. On the left, a sidebar menu for 'MD SHAHALAM Login As A Farmer' lists various options: ড্যাশবোর্ড, প্রোফাইল আপডেট করুন, পাসওয়ার্ড পরিবর্তন করুন, + পণ্য যুক্ত করুন (highlighted in blue), আমার পণ্য, বিক্রিত পণ্য সমূহ, লেনদেনের অবস্থা, and লগ আউট. The main content area is titled 'নতুন পণ্য যোগ করুন' (Add New Product). It contains several input fields: 'নির্বাচন করুন' dropdowns for 'মোট ওজন*' (Total Weight) and 'উজ্জিনিট প্রতি মূল্য (ট.)*' (Unit Price); a date input 'ফসল উৎপাদন সাল' (Crop Year mm/dd/yyyy); 'নির্বাচন করুন' dropdowns for 'পণ্যের জাত সমূহ*' (Crop Type), 'উৎপাদনের ধরন*' (Production Type), 'প্যাকেজিং পদ্ধতি*' (Packaging Method), and 'বিভাগ*' (Category); a date input 'আফার শেষ হওয়ার তারিখ' (Offer End Date mm/dd/yyyy); dropdowns for 'জেলা*' (District) and 'থানা*' (Upazila); a dropdown for 'গ্রাম/মহল্লা*' (Village/Hall); and a text input 'সংযোজিত মন্তব্য' (Review). Below these is a 'চিত্র আপলোড করুন:' (Upload Image) button with a 'Choose File' placeholder and a note 'পণ্য কেন্দ্র বেচার জন্য কৃষিসেবার শর্তবদীর সাথে একমত পোষণ করুন' (Products uploaded through the center must be in accordance with the terms and conditions of KRSB).

Figure 6.30: Add New Product

In figure 6.30, we have shown the add new product page of the Krishiseba website. In this section of our project the “Farmer” and “Normal Seller” can add new products. They can add product images to make the added products more attractive as well as dynamic. Farmers have an extra facility where farmers can upload their product with unlimited weight and unit but normal sellers have some condition for uploading their product in Krishiseba website.

6.6.2 View Product List

The screenshot shows the Krishiseba website's product list interface. The sidebar menu is identical to Figure 6.30. The main content area is titled 'আমার পণ্যের তালিকা' (My Product List). It features a table with the following data:

পণ্যের ছবি	পণ্যের নাম	পণ্যের প্রকার	অবশিষ্ট ওজন	বিক্রয়ের পরিমাণ	অ্যাকশন
	বারোমাসি সবজি	গাজর	1000 কেজি	0 কেজি	
	বারোমাসি সবজি	টমেটো	760 কেজি	0 কেজি	
	ধান	বোরো ধান	360 টন	0 টন	
	ধান	বোরো ধান	260 টন	0 টন	

Figure 6.31: View Product List

In figure 6.31, we have shown the product list page of the Krishiseba website. In this section of our project the “Farmer” and “Normal Seller” can view the added products list of their store and can go to the view, edit page as well as delete any product. This is the total overview of their added products.

6.6.3 View Product Details

The screenshot shows the product details page for a product named 'ধান' (Rice). The product image is a circular pile of rice grains. The product details table includes:

পণ্যের আইডি:	পণ্যের নাম:	পণ্যের প্রকার:
4	ধান	আটশ ধান
পণ্যের জাত:	উৎপাদনের ধরন:	পণ্যটি বিক্রয় হয়েছে:
নয়া পাজাম	জৈব উৎপাদন	0 বার
সর্বমোট বিক্রয়ের পরিমাণ:	অবশিষ্ট ওজন:	ইউনিট প্রতি মূল্য:
0 কেজি	3000 কোজি	20 taka
প্যাকেজিং পদ্ধতি:	আপলোড করা হয়েছে:	সর্বশেষ আপডেট:
40 কেজি ব্যাগ	3 months ago	5 seconds ago

Figure 6.32: View Product Details

In figure 6.32, we have shown the view product details page of the Krishiseba website. In this section of our project the “Farmer” can view a specific product detail and can get a clear detail of their added products. This will help them to get an idea about their added products clearly.

6.6.4 Update Product Details

The screenshot shows the update product details page for a product named 'ওজন ইউনিট'. The product image is a circular gold-colored seal. The update form fields include:

সম্পূর্ণ ওজন	ওজন ইউনিট
3000	কেজি
মূল্য	ছাড়
20	5
অফারের শেষ তারিখ	আপডেট করুন
01/20/2021	<input type="checkbox"/>

Figure 6.33: Update Product Details

In figure 6.33, we have shown the update specific product details page of the Krishiseba website. In this section of our project the “Farmer” and “Normal Seller” can update their added products. They can change all the info of a product. Even they can change the product price and of and all these things will happen instantly.

6.6.5 Order List

পণ্যের নাম	পণ্যের পরিমাণ	অর্ডার তারিখ	বিতরণ তারিখ	লেনদেনের অবস্থা	মূল্য	পরিসেবা চার্জ	মোট
আমন ধান	100 কেজি	28-August-2021	29-August-2021	Confirm	₹2700	₹270	₹2430
আমন ধান	120 কেজি	30-August-2021	30-August-2021	Pending	₹3240	₹324	₹2916
টমেটো	40 কেজি	30-August-2021	30-August-2021	Pending	₹3400	₹340	₹3060
সর্বমোট: 2430							
Showing 1 to 3 of 3 entries							
Previous 1 Next							

Figure 6.34: Order List

In figure 6.34, we have shown the order list of farmers of the Krishiseba website. In this section of our project, farmers and normal sellers can see a list of products that have been sold from their uploaded products and can print that list. This is an important page for a farmer and normal seller to calculate their earnings they made from each sale. In this page farmers and normal sellers can see how much the fee has been cut by the admin from each sale.

6.6.6 Payment History

অর্থ গ্রহনের ইতিহাস		আপনার একাউন্টে জমা হয়েছে:	২৪৩০ টাকা
অর্থ গ্রহণ: 3 days ago		অর্থ গ্রহণ সম্পূর্ণ হয়েছে	
ক্রেতার বিবরণ ক্রেতার নাম: FAYAL মোবাইল নাম্বর: 01816064944 ঠিকানা: Cox's Bazar		ধান বিপ্লব ₹৭ টাকা (প্রতি কেজি) ₹৭০ টাকা	
পণ্যের বিবরণ পণ্যের নাম: পণ্যের আকার: মূল্য: পরিসেবা চার্জ:		পণ্যের প্রকার: মোট ওজন: মোট টাকা: সর্বমোট টাকা:	
অর্থ গ্রহণ: 7 hours ago		অর্থ গ্রহণ সম্পূর্ণ হয়েছে	
ক্রেতার বিবরণ ক্রেতার নাম: FAYAL মোবাইল নাম্বর: 01816064944 ঠিকানা: Cox's Bazar		ধান বিশাইল ₹৭ টাকা (প্রতি কেজি) ₹৭০ টাকা	
পণ্যের বিবরণ পণ্যের নাম: পণ্যের আকার: মূল্য: পরিসেবা চার্জ:		পণ্যের প্রকার: মোট ওজন: মোট টাকা: সর্বমোট টাকা:	

Figure 6.35: Payment History

In figure 6.35, we have shown the farmers payment history page of the Krishiseba website. In this section of our project the “Farmer” and “Normal Seller” can view the payment history they get from the buyers. At the top of this page, they will see how much money is in their account. They can see on this page how many of their payments have been completed and how many payments are pending. Here the green color means the payment has been completed by the admin and the red color means the payment has not been completed yet.

6.7 Buyer

6.7.1 Order List

The screenshot shows the Krishiseba website's order list interface. At the top, there is a navigation bar with links for Home, যোগাযোগ (Contact), and a user profile. Below the navigation is a search bar and a language selection dropdown. The main content area is titled "আমার অর্ডার সমূহ" (My Orders). A table displays three purchase entries:

পণ্যের নাম	পণ্যের পরিমাণ	অর্ডার তারিখ	ঠিকানা	লেনদেনের অবস্থা	মোট
চাটুল-(সিদ্ধ)	170 কেজি	30-August-2021	982, Ramju Mia lane,Badurtola, Chattogram.	Pending	₹11050
ধান-(আমন ধান)	100 কেজি	27-August-2021	982, Ramju Mia lane,Badurtola, Chattogram.	Confirm	₹2700
বারোমাসি সবজি-(টমেটো)	100 কেজি	30-August-2021	982, Ramju Mia lane,Badurtola, Chattogram.	Pending	₹8500

At the bottom left, it says "Showing 1 to 3 of 3 entries". On the right, there are buttons for Previous, Next, and a search bar.

Figure 6.36: Order List

In figure 6.36, we have shown the buyer's order list of the Krishiseba website. In this section of our project buyers can see all the purchased products in their order list section. On this page they can see the current status of their ordered product and get a brief idea about how many products they have purchased from our website.

6.7.2 Product Payment History

The screenshot shows the Krishiseba website's product payment history interface. At the top, there is a navigation bar with links for Home, যোগাযোগ, and a user profile. Below the navigation is a search bar and a language selection dropdown. The main content area is titled "পণ্যের অর্থ প্রদান নিশ্চিত করুন" (Verify Product Payment). It displays two payment records:

অর্থ গ্রহণ: 4 days ago		অর্থ গ্রহণ সম্পূর্ণ হয়েছে	
বিক্রেতার বিবরণ		পণ্য	পরিবহন
বিক্রেতার নাম:	MD SHAHALAM		
বিক্রেতার মোবাইল নাম্বর:	01816064618		
বিক্রেতার ঠিকানা:	chattogram		
পণ্যের বিবরণ		অর্থ গ্রহণ সম্পূর্ণ হয়েছে	
পণ্যের নাম:	ধান	পণ্যের প্রকার:	আমন ধান
পণ্যের জাত:	বিল্ব	মোট ওজন:	১০০ কেজি
মূল:	২৫ টাকা (প্রতি কেজি)	মোট টাকা:	দুই হাজার সাত শত টাকা
অর্থ গ্রহণ: 1 day ago		অর্থ গ্রহণ সম্পূর্ণ হয়নি	
বিক্রেতার বিবরণ		পণ্যের প্রকার:	টমেটো
বিক্রেতার নাম:	SALMAN	মোট ওজন:	১০০ কেজি
বিক্রেতার মোবাইল নাম্বর:	01816064999	আর্ট রাজার পাঁচ শত টাকা	
বিক্রেতার ঠিকানা:	Cox's Bazar		
পণ্যের বিবরণ		অর্থ গ্রহণ সম্পূর্ণ হয়নি	
পণ্যের নাম:	বারোমাসি সবজি	পণ্যের প্রকার:	
পণ্যের জাত:		মোট ওজন:	
মূল:	৮৫ টাকা (প্রতি কেজি)	মোট টাকা:	

Figure 6.37: Product Payment History

In Figure 6.37, we have shown the product payment history of the buyers of Krishiseba website. In this section of our project, the “Buyer” can view the product payment history they paid to the seller at the time of purchase. Also, they can see on this page how many of their payments have been completed and how many payments are pending.

6.7.3 Transport Payment History

Payment : 1 day ago		Payment : 1 day ago	
বিক্রেতার বিবরণ	পরিবহন মালিকের বিবরণ	বিক্রেতার বিবরণ	পরিবহন মালিকের বিবরণ
বিক্রেতার নাম: বিক্রেতার মোবাইল নম্বর: বিক্রেতার ঠিকানা:	SALMAN 01816064999 Cox's Bazar	মালিকের নাম: মালিকের মোবাইল নম্বর: মালিকের ঠিকানা: সাড়ির নম্বর:	Md.korim 01816164544 Cox's Bazar
পণ্যের বিবরণ	পরিবহন ফি	পণ্যের বিবরণ	পরিবহন ফি
পণ্যের নাম: পণ্যের প্রকার: পণ্যের জাত: মোট ওজন:	বারোমাসি সবজি টমেটো মোট ৫জন ১০০ কেজি	পরিবহন ফি: 1000 টাকা	পরিবহন ফি: 1000 টাকা

Figure 6.38: Transport Payment History

In Figure 6.38, we have shown the transport payment history of the buyers of Krishiseba website. In this section of our project, the “Buyer” can view the transport payment history they paid to the transport owner at the time of selection to deliver his goods. Also, by clicking on the red color button he will be able to confirm that he has received his product properly. Here the red button means he didn't receive his products yet.

6.7.4 Confirm Product Received

Payment : 1 day ago	
বিক্রেতার বিবরণ	পরিবহন মালিকের বিবরণ
বিক্রেতার নাম: বিক্রেতার মোবাইল নম্বর: বিক্রেতার ঠিকানা:	SALMAN 01816064999 Cox's Bazar
পণ্যের বিবরণ	পরিবহন ফি
পণ্যের নাম: পণ্যের প্রকার: পণ্যের জাত: মোট ওজন:	চাউল সিঁক মিমিকেট ১৭০ কেজি
If you get the delivered product please Click	

Figure 6.39: Confirm Product Received

In Figure 6.39, we have shown the confirmed status that he has received his product properly, the red button has disappeared and a notification will appear at the top of the page that “Delivered Done Successfully”.

6.8 Transport Owner

6.8.1 Payment History

The screenshot shows the Krishiseba website's payment history section for a transport owner. At the top right, there is a search bar and a user profile icon. The main content area is divided into three green sections (Completed Payments) and one yellow section (Pending Payment).

Completed Payments (Green Boxes):

- Payment : 4 days ago**

বিক্রেতার বিবরণ		ক্রেতার বিবরণ	
বিক্রেতার নাম:	MD SHAHALAM	ক্রেতার নাম:	FAYSAL
বিক্রেতার মোবাইল নাম্বর:	01816064618	ক্রেতার মোবাইল নাম্বর:	01816064944
বিক্রেতার ঠিকানা:	chattogram	ক্রেতার ঠিকানা:	Cox's Bazar
পণ্যের বিবরণ		পেমেন্ট তথ্য	
পণ্যের নাম:	ধান	পরিবহন ফি:	1000 টাকা
পণ্যের প্রকার:	আমন ধান	পরিসেবা চার্জ:	100 টাকা
পণ্যের জাত:	বিল্ব	মোট টাকা:	900 টাকা (পরিসেবা চার্জ ছাড়া)
মোট ওজন:	১০০ কেজি		
- Payment : 1 day ago**

বিক্রেতার বিবরণ		ক্রেতার বিবরণ	
বিক্রেতার নাম:	SALMAN	ক্রেতার নাম:	Syed Md Shorfuddin
বিক্রেতার মোবাইল নাম্বর:	01816064999	ক্রেতার মোবাইল নাম্বর:	01816064818
বিক্রেতার ঠিকানা:	Cox's Bazar	ক্রেতার ঠিকানা:	982, Ramju Mia lane,Badurtola, Chattogram.
পণ্যের বিবরণ		পেমেন্ট তথ্য	
পণ্যের নাম:	বারোমাসি সবজি	পরিবহন ফি:	1000 টাকা
পণ্যের প্রকার:	টমেটো	পরিসেবা চার্জ:	100 টাকা
পণ্যের জাত:		মোট টাকা:	900 টাকা (পরিসেবা চার্জ ছাড়া)
মোট ওজন:	১০০ কেজি		
- Payment : 1 day ago**

বিক্রেতার বিবরণ		ক্রেতার বিবরণ	
বিক্রেতার নাম:	MD SHAHALAM	ক্রেতার নাম:	FAYSAL
বিক্রেতার মোবাইল নাম্বর:	01816064618	ক্রেতার মোবাইল নাম্বর:	01816064944
বিক্রেতার ঠিকানা:	chattogram	ক্রেতার ঠিকানা:	Cox's Bazar
পণ্যের বিবরণ		পেমেন্ট তথ্য	
পণ্যের নাম:	ধান	পরিবহন ফি:	3000 টাকা
পণ্যের প্রকার:	আমন ধান	পরিসেবা চার্জ:	300 টাকা
পণ্যের জাত:	ক্রিশাইল	মোট টাকা:	2700 টাকা (পরিসেবা চার্জ ছাড়া)
মোট ওজন:	১২০ কেজি		

Pending Payment (Yellow Box):

- Payment : 1 day ago**

দয়া করে লেনদেনের জন্য অপেক্ষা করুন।			
ক্রেতা এখনো পণ্যটি পাননি।			

Figure 6.40: Transport Owner Payment History

In Figure 6.40, we have shown the payment history of the transport owner of Krishiseba website. In this section of our project the “Transport Owner” can view the payment history they get from the buyers. At the top of this page, they will see how much money is in their account. They can see on this page how many of their payments have been completed and how many payments are pending and how many buyers get their product. Here green color means the payment has been completed and the red color means the payment has not been completed yet because the buyer didn’t receive their product properly and the yellow color means the buyer get their product properly but the admin has not completed the payment yet.

6.9 Super Admin

6.9.1 Dashboard

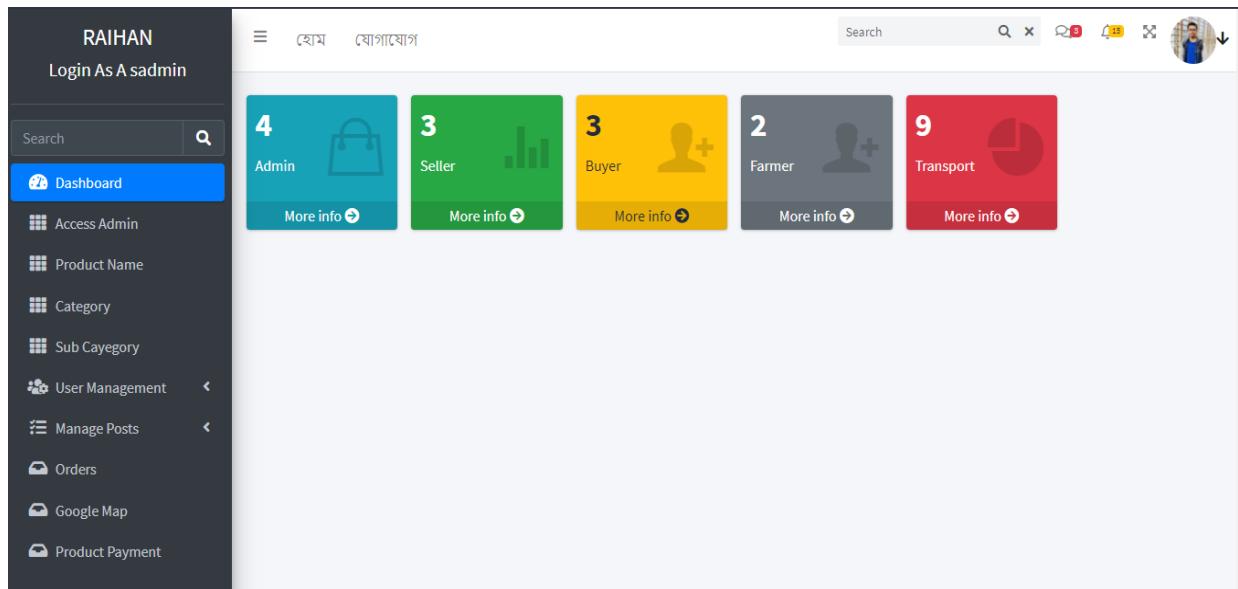


Figure 6.41: Dashboard

In Figure 6.41, we have shown the super admin dashboard of Krishiseba website. In this section of our project the super admin can see how many users registered on our website according to the user role here. Without super admin, there are five types of users in our Krishiseba website: admin, seller, farmer, buyer and transport owner.

6.9.2 Admin List

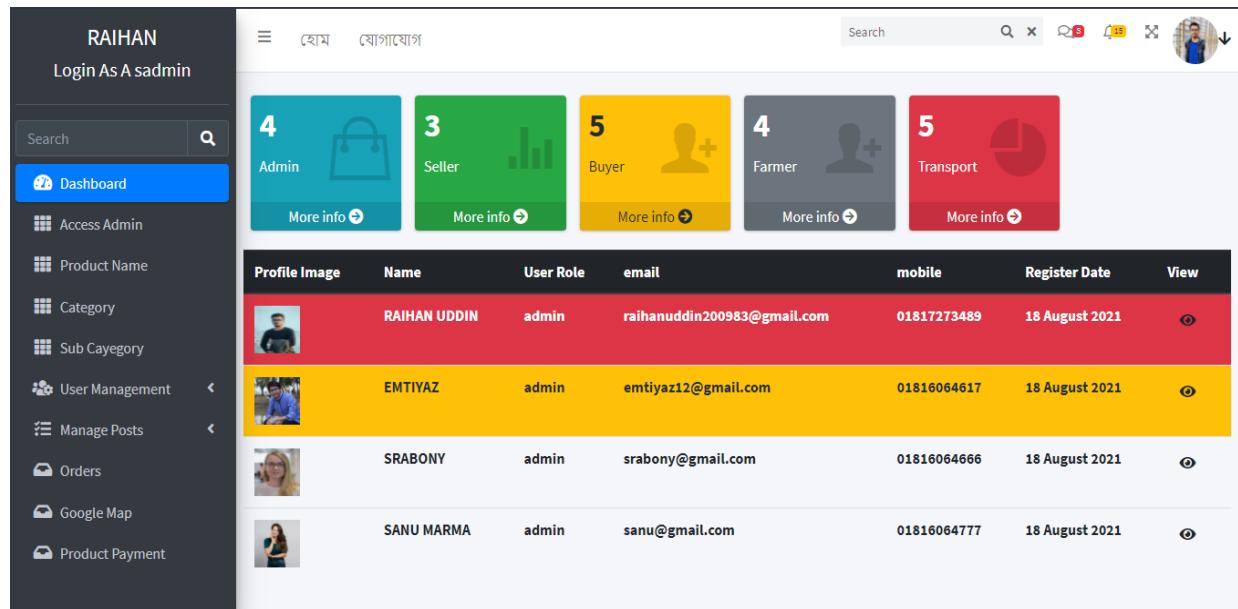
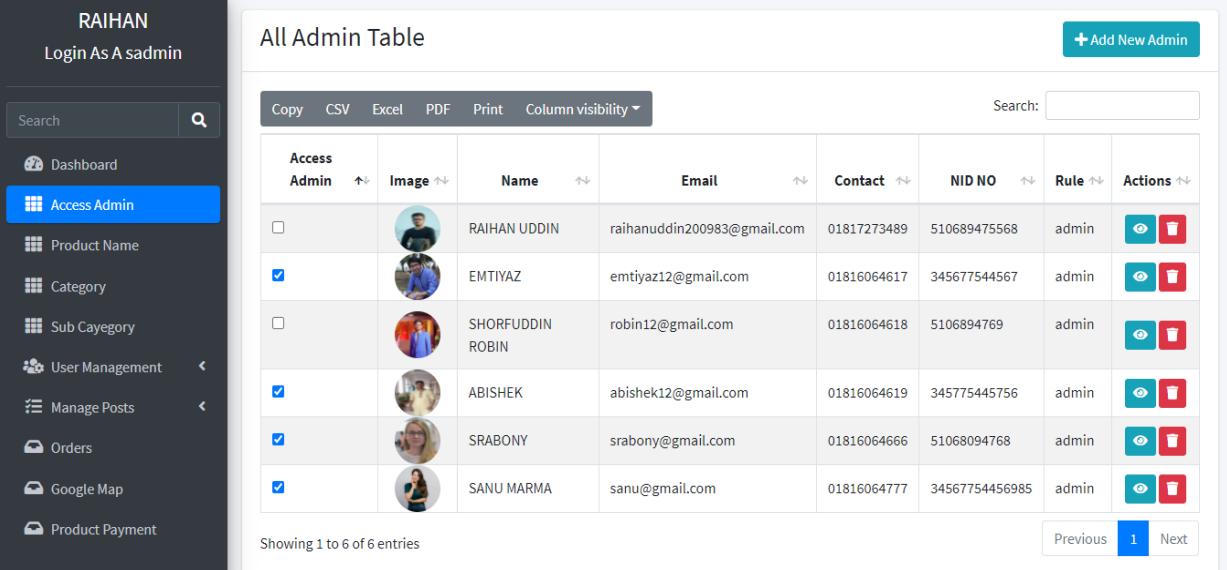


Figure 6.42: Admin List

In Figure 6.42, we have shown the admin list of Krishiseba website. In this section of our project the super admin can see how many admins have registered on our website and how many admins have been given access and how many admins have not been given access.

6.9.3 Admin List



The screenshot shows the 'All Admin Table' section of the Krishiseba admin panel. The table has columns for Access Admin, Image, Name, Email, Contact, NID NO, Rule, and Actions. There are 6 entries listed:

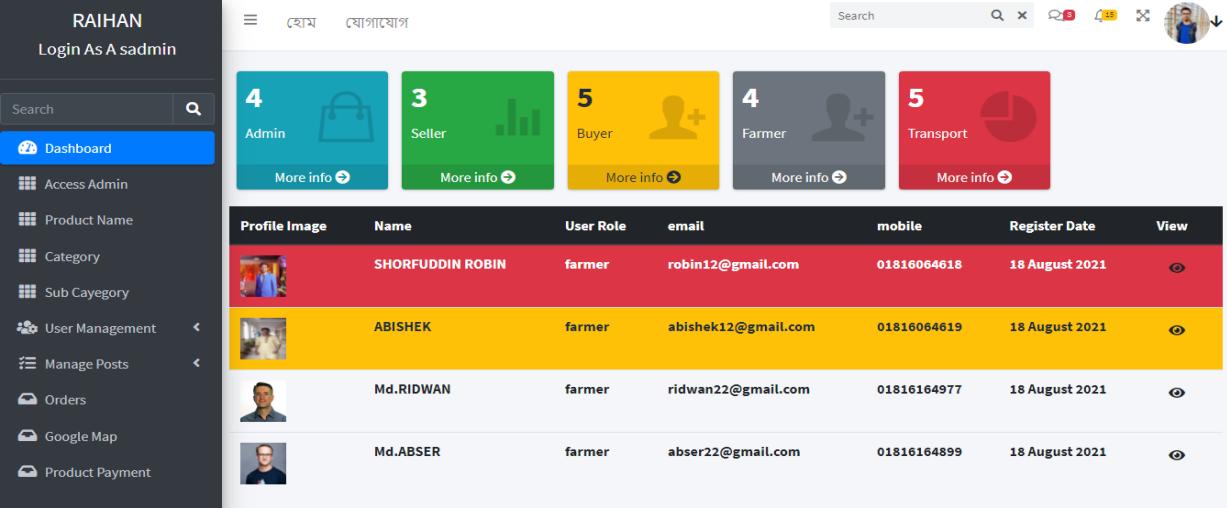
Access Admin	Image	Name	Email	Contact	NID NO	Rule	Actions
<input type="checkbox"/>		RAIHAN UDDIN	raihanuddin200983@gmail.com	01817273489	510689475568	admin	
<input checked="" type="checkbox"/>		EMTIYAZ	emtiyaz12@gmail.com	01816064617	345677544567	admin	
<input type="checkbox"/>		SHORFUDDIN ROBIN	robin12@gmail.com	01816064618	5106894769	admin	
<input checked="" type="checkbox"/>		ABISHEK	abishek12@gmail.com	01816064619	345775445756	admin	
<input checked="" type="checkbox"/>		SRABONY	srabony@gmail.com	01816064666	51068094768	admin	
<input checked="" type="checkbox"/>		SANU MARMA	sanu@gmail.com	01816064777	34567754456985	admin	

Showing 1 to 6 of 6 entries

Figure 6.43: Admin Access List

In Figure 6.43, we have shown the admin list of Krishiseba website. In this section of our project the super admin can see how many admins have registered on our website and how many admins have been given access and how many admins have not been given access. Super Admin can go to a specific Admin details section to check details and be given access.

6.9.4 Farmer List



The screenshot shows the 'Farmer' section of the Krishiseba admin panel. It displays a summary of user roles and then a detailed list of farmers:

Profile Image	Name	User Role	email	mobile	Register Date	View
	SHORFUDDIN ROBIN	farmer	robin12@gmail.com	01816064618	18 August 2021	
	ABISHEK	farmer	abishek12@gmail.com	01816064619	18 August 2021	
	Md.RIDWAN	farmer	ridwan22@gmail.com	01816164977	18 August 2021	
	Md.ABSER	farmer	abser22@gmail.com	01816164899	18 August 2021	

Figure 6.44: Farmer List

In Figure 6.44, we have shown the farmers list of Krishiseba website. In this section of our project the super admin can see how many farmers have registered on our website and how many farmers have been given access and how many users are waiting for access. Here the red color means this user has not verified his mobile number yet and the yellow color means this user has verified his mobile number but no admin has given him access yet. Super Admin can go to a specific farmer details page for check details. Also, the super admin can delete a farmer if needed.

6.9.5 Seller List

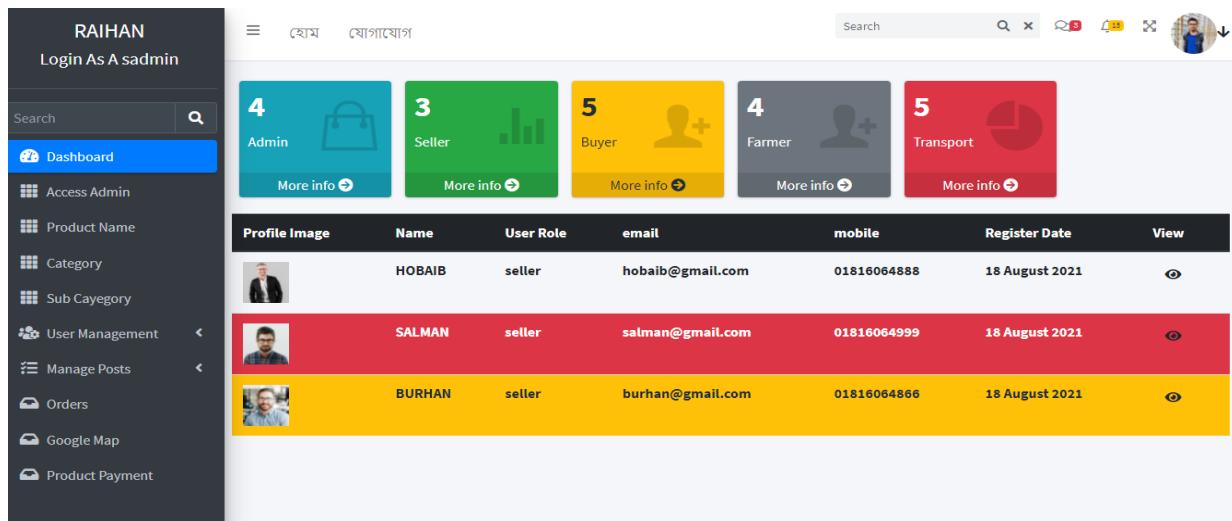


Figure 6.45: Seller List

In Figure 6.45, we have shown the sellers list of Krishiseba website. In this section of our project the super admin can see how many sellers have registered on our website and how many sellers have been given access and how many sellers are waiting for access. Here the red color means this user has not verified his mobile number yet and the yellow color means this user has verified his mobile number but no admin has given him access yet. Super Admin can go to a specific seller details page check detail. Also, the super admin can delete a farmer if needed.

6.9.6 Buyer List

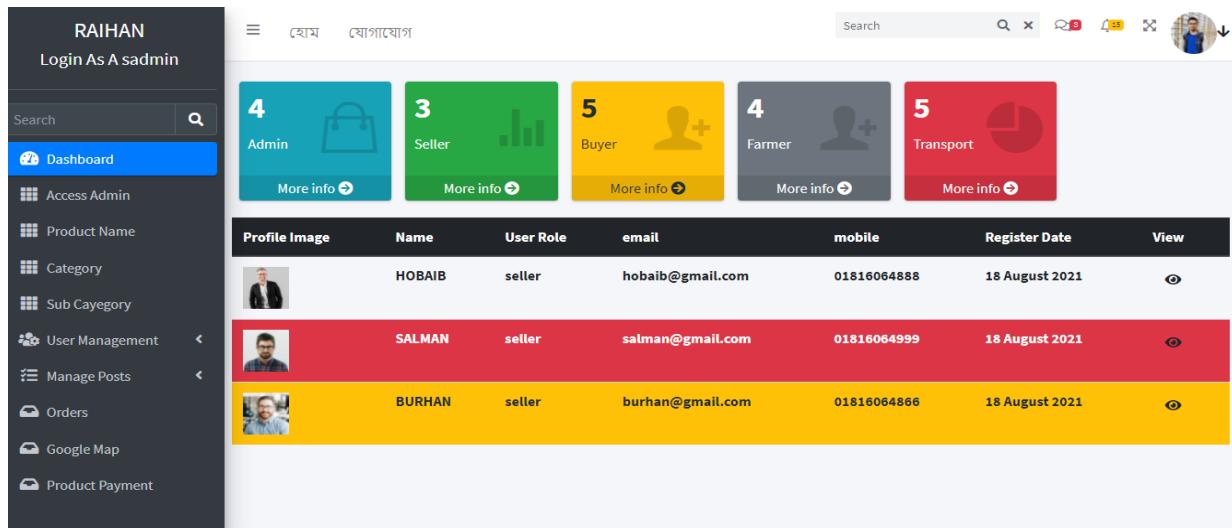


Figure 6.46: Buyer List

In Figure 6.46, we have shown the buyers list of Krishiseba website. In this section of our project the super admin can see how many buyers have registered on our website and how many buyers have been given access and how many buyers are waiting for access. Here the red color means this user has not verified his mobile number yet and the yellow color means this user has verified his mobile number but no admin has given him access yet. Super Admin can go to a specific buyer details page for check details. Also, the super admin can delete a farmer if needed.

6.9.7 Transport Owner List

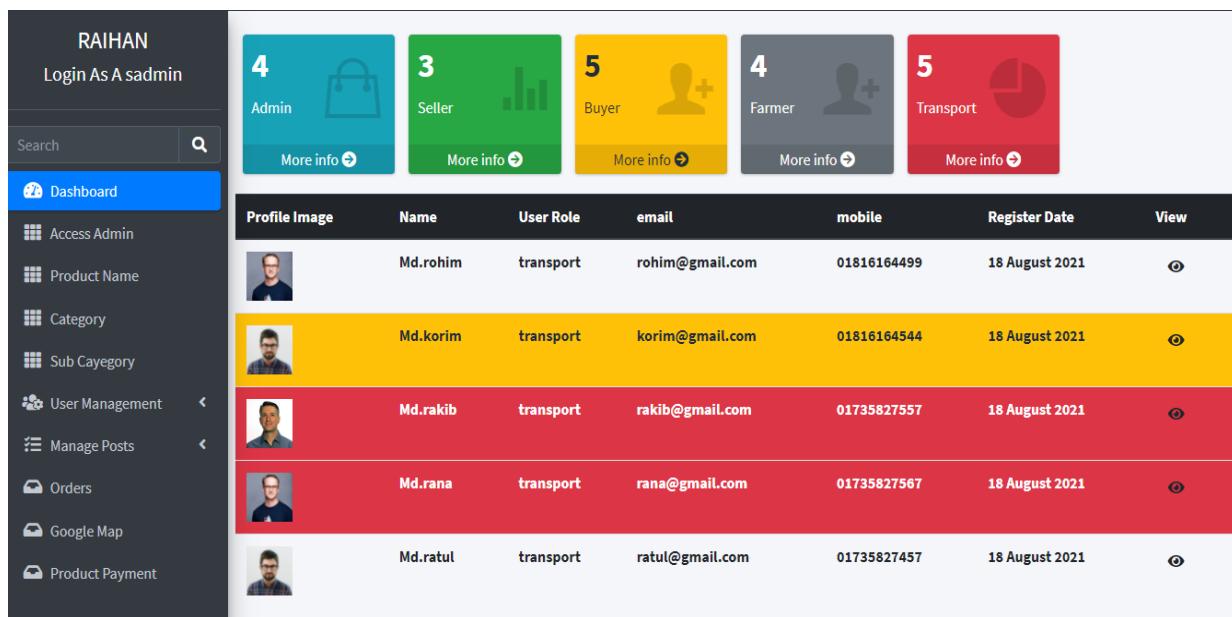


Figure 6.47: Transport Owner List

In Figure 6.47, we have shown the transport owner list of Krishiseba website. In this section of our project the super admin can see how many transport owners have registered on our website and how many transport owners have been given access and how many buyers are waiting for access. Here the red color means this user has not verified his mobile number yet and the yellow color means this user has verified his mobile number but no admin has given him access yet. Super Admin can go to a specific transport's owner details page for check details.

6.9.8 Add Users

Figure 6.48: Add User

In Figure 6.48, we have shown the add user section. In this section of our project the “Super Admin” can add a new user. Super Admin can set the role that the user will perform.

6.9.9 User Details

The screenshot shows the Krishiseba website's user management interface. On the left, a dark sidebar menu lists various admin functions: Dashboard, Access Admin, Product Name, Category, Sub Category, User Management, Manage Posts, Orders, Google Map, Product Payment, Transport Payment, and Logout. The main content area displays a user profile for 'RAIHAN'. It includes a profile picture of a man with glasses, a National ID Card (NID) image showing details like Name: Raihan Uddin, Date of Birth: 02 Jul 1997, and ID No: 510689475568, and a table with user information: Name: RAIHAN UDDIN, Contact: 01817273489, Address: cox's Bazar, Amount: 43000, Nid No: 510689475568. Below the table are buttons for 'Close' and 'Access to'. At the top, there is a navigation bar with 'Home' and 'যোগাযোগ' (Contact), a search bar, and a user profile icon.

Figure 6.49: User Details

In Figure 6.49, we have shown the users details page of Krishiseba website. In this section of our project the “Super Admin” can see the details of a user. Super admin gets the necessary info of that user if he needed. Super Admin can be given access to any user.

6.9.10 Users on Maps

The screenshot shows the Krishiseba website's map feature. The left sidebar is identical to Figure 6.49. The main area features a Google Map of Chittagong city, specifically the Sholokbari and Panchlaish areas. A callout box on the map displays the details of a user named EMTIYAZ, including his name, email (emtiyaz12@gmail.com), contact number (01816064617), and address (Chattogram). The map also shows various landmarks such as Bakalia Ghatkul Government Primary School, Sanowara Islam Govt. Primary School, and Blooming Park. A small video thumbnail of the user is also visible on the map.

Figure 6.50: User on Maps

In Figure 6.50, we have shown the users on the map section. In this section of our project the “Super Admin” can see all users on maps according to their location coordinates. Also “Super Admin” can see the specific user details of a user on google map.

6.10 Super Admin and Admin

6.10.1 User List

Figure 6.51: User List

In Figure 6.51, we have shown the all-users list of Krishiseba website. In this section of our project the “Admin” can also view the user list. Admin can see specific user details.

6.10.2 User Farmer Details

Figure 6.52: User Farmer Details

In Figure 6.52, we have shown the farmers details page of Krishiseba website. In this section of our project "Admin" can see the details of any farmer. The admin can grant access to any farmer. Also, the "admin" can send messages to the specific farmer.

6.10.3 User Seller Details

The screenshot shows the Krishiseba website's user profile section for a seller. The top navigation bar includes 'Search', 'Home', 'যোগাযোগ' (Contact), and a user icon. The main content area is titled 'seller Profile'. It displays a profile picture of a man in a blue suit, the name 'ROBIN', contact number '01816064818', address 'chattogram', NID number '51068947669', role 'seller', and trade license number '1485698'. Below this is a placeholder for an ID card with fields like Name, Date of Birth, and ID NO. A message box on the right allows sending messages to 'ROBIN' with fields for Name, mobile, and comments, and buttons for 'Send' and 'Clear Form'.

Figure 6.53: User Seller Details

In Figure 6.53, we have shown the seller's details page of Krishiseba website. In this section of our project "Admin" can see the details of any seller. The admin can grant access to any seller. Also, the "admin" can send messages to the specific seller.

6.10.4 User Buyer Details

The screenshot shows the Krishiseba website's user profile section for a buyer. The top navigation bar includes 'Search', 'Home', 'যোগাযোগ' (Contact), and a user icon. The main content area is titled 'buyer Profile'. It displays a profile picture of a man in a blue shirt, the name 'RAIHAN', contact number '01816064616', address 'cox's Bazar barmese market', NID number '5106894768', role 'buyer', and an ACCESS TO checkbox. Below this is a placeholder for an ID card with fields like Name, Date of Birth, and ID NO. A message box on the right allows sending messages to 'RAIHAN' with fields for Name, mobile, and comments, and buttons for 'Send' and 'Clear Form'.

Figure 6.54: User Buyer Details

In Figure 6.54, we have shown the buyers details page of Krishiseba website. In this section of our project "Admin" can see the details of any buyer. The admin can grant access to any buyer. Also, the "admin" can send messages to the specific buyer.

6.10.5 User Transport Owner Details

Figure 6.55: User Transport Owner Details

In Figure 6.55, we have shown the transport owners details page of Krishiseba website. In this section of our project "Admin" can see the details of any transport owner. Admin can grant access to any transport owner. Also, the "admin" can send messages to the specific transport owner.

6.10.6 Add User

Figure 6.56: User Add

In Figure 6.56, we have shown the add user section of Krishiseba website. In this section of our project the "Admin" can add a new user. Admin can set the role that the user will perform.

6.10.7 Add Product Name

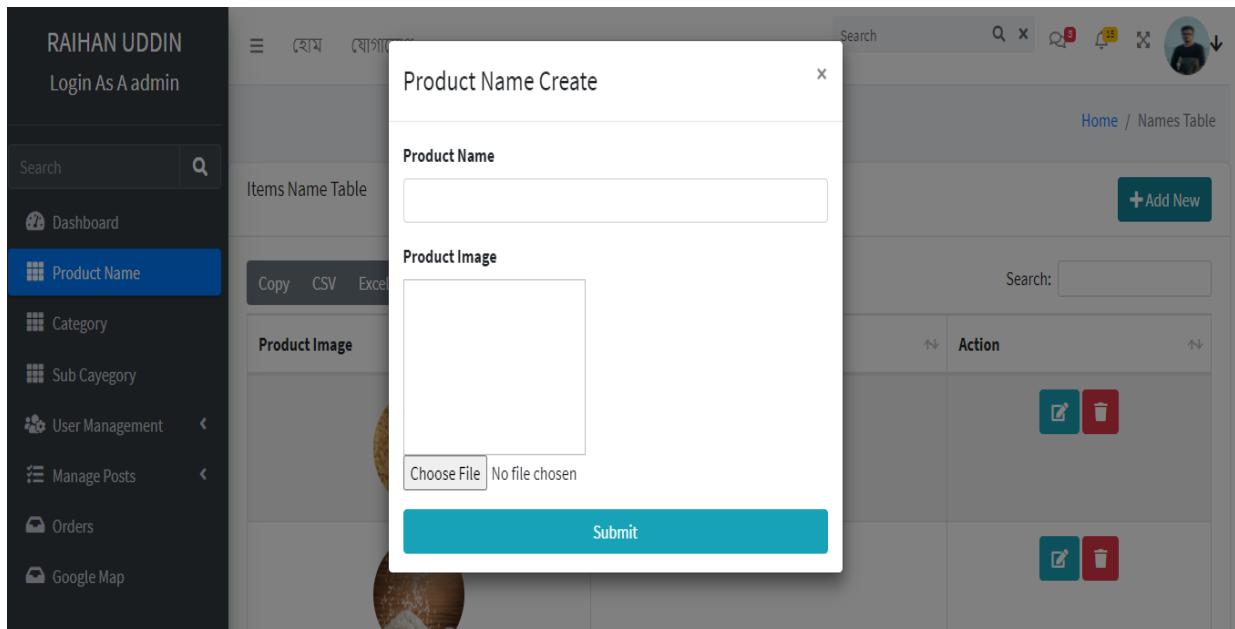


Figure 6.57: Add Product Name

In Figure 6.57, we have shown the add product name section of Krishiseba website. In this section the “Admin” can add product name with image to our Krishiseba website.

6.10.8 Product Name List

Items Name Table		
Product Image	Product Name	Action
	ধান	
	চাউল	
	বাণিয়ামাসি সবজি	
	শ্রীগ্রন্থকলীন সবজি	

Figure 6.58: Product Name List

In Figure 6.58, we have shown the product name list of Krishiseba website. In this section the “Admin” can view the product name list. Also, the admin can move to the details page and edit page section of the category. If needed also can delete the product name.

6.10.9 Category Add

Category Name	Product id	Action
আর্কিড	ফুল	<input checked="" type="checkbox"/> Delete
আউশ ধান	ধান	<input checked="" type="checkbox"/> Delete
আঙুর	বারোমাসি ফল	<input checked="" type="checkbox"/> Delete
আতপ	চাউল	<input checked="" type="checkbox"/> Delete
আনারস	গ্রীষ্মকালীন ফলমূল	<input checked="" type="checkbox"/> Delete
আপ	চাউল	<input checked="" type="checkbox"/> Delete

Figure 6.59: Category Add

In Figure 6.59, we have shown the add product category section of Krishiseba website. In this section the “Admin” can add product category name with image to our Krishiseba website.

6.10.10 Category List

Category Name	Product id	Action
আর্কিড	ফুল	<input checked="" type="checkbox"/> Delete
আউশ ধান	ধান	<input checked="" type="checkbox"/> Delete
আঙুর	বারোমাসি ফল	<input checked="" type="checkbox"/> Delete
আতপ	চাউল	<input checked="" type="checkbox"/> Delete
আনারস	গ্রীষ্মকালীন ফলমূল	<input checked="" type="checkbox"/> Delete
আপ	চাউল	<input checked="" type="checkbox"/> Delete

Figure 6.60: Category List

In Figure 6.60, we have shown the product category list of Krishiseba website. In this section the “Admin” can view the product category list of Krishiseba website. Also, the admin can move to the details page and edit page section of the category.

6.10.11 Sub-Category Add

The screenshot shows the Krishiseba admin interface. On the left is a sidebar with navigation links: Dashboard, Product Name, Category, Sub Category, User Management, Manage Posts, Orders, and Google Map. The main area has a header with 'RAIHAN UDDIN' and 'Login As A Admin'. Below the header is a search bar and a 'Home / Sub-Category Table' link. A modal window titled 'Insert SubCategory' is open, containing fields for 'Category Name' (set to 'আটশ ধান') and 'SubCategory Name'. At the bottom of the modal is a large blue 'Submit' button. In the background, there is a table with several rows of sub-category data, each with 'Name' and 'Action' (Edit and Delete) columns.

Figure 6.61: Sub-Category Add

In Figure 6.61, we have shown the add subcategory section of Krishiseba website. In this section the “Admin” can add product subcategory name with image to our Krishiseba website.

6.10.12 Sub-Category List

The screenshot shows the Krishiseba admin interface. On the left is a sidebar with navigation links: Dashboard, Product Name, Category (which is selected and highlighted in blue), Sub Category, User Management, Manage Posts, Orders, and Google Map. The main area has a header with 'RAIHAN UDDIN' and 'Login As A Admin'. Below the header is a search bar and a 'Home / Category Table' link. A modal window titled 'Category Table' is open, containing a table with columns for 'Category Name', 'Product id', and 'Action'. The table lists various categories with their corresponding product IDs and edit/delete icons. The 'Category' link in the sidebar is also highlighted in blue.

Figure 6.62: Sub-Category List

In Figure 6.62, we have shown the product subcategory list of Krishiseba website. In this section the “Admin” can view the product subcategory list of Krishiseba website. Also, the admin can move to the details page and edit page section of the subcategory.

6.10.13 All Product

Figure 6.63: All Product List

In Figure 6.63, we have shown the all-product list of Krishiseba website. In this section the “Admin” can view all product list of Krishiseba website. Also, the admin can move to the details page and edit page of the specific product.

6.10.14 Product Pending Payment

Figure 6.64: Product Pending Payment

In Figure 6.64, we have shown the product pending payment history of Krishiseba website. In this section of our project, the admin can view all seller’s and farmer’s pending payments. The admin verifies the payment information of those who have a pending payment.

6.10.15 Product Payment Gateway

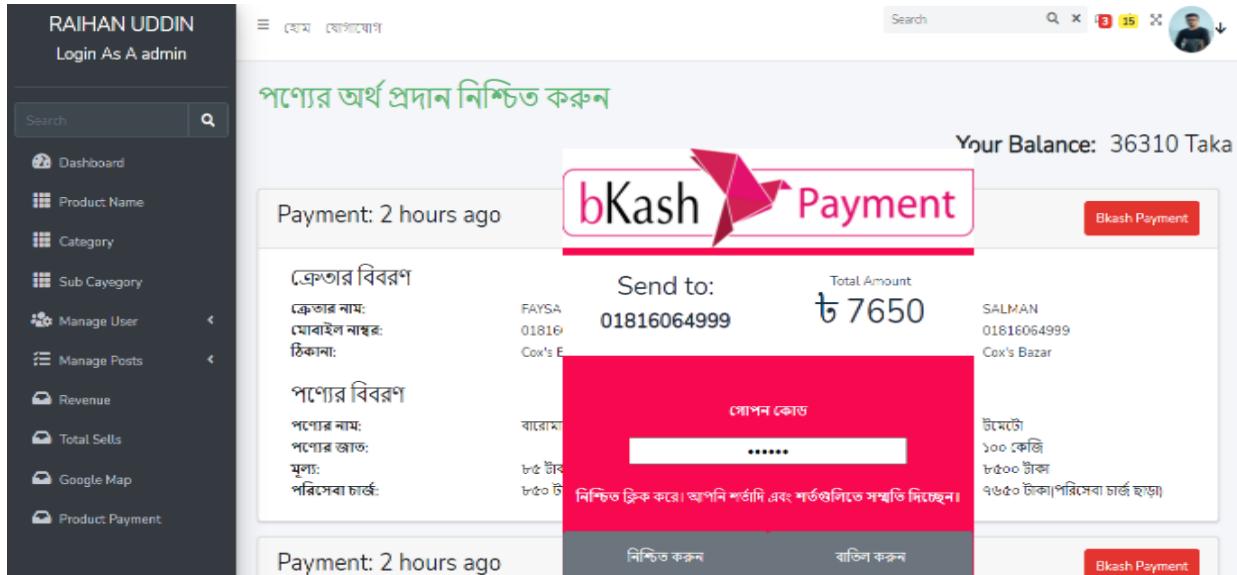


Figure 6.65: Product Payment Gateway

In Figure 6.65, we have shown the product payment gateway of Krishiseba website. In this section of our project, the admin can send payment to the farmer. After verifying the information of pending payment, the admin sends their money to them by bKash payment gateway.

6.10.16 Transport Pending Payment

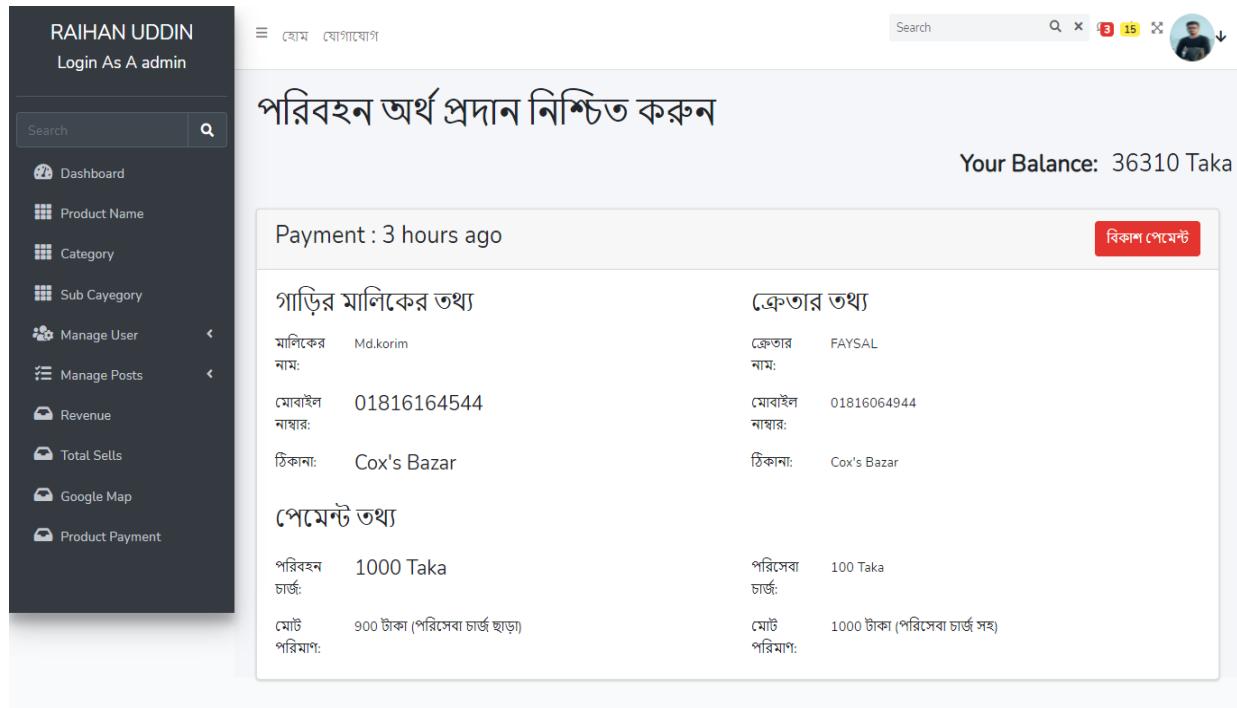


Figure 6.66: Transport Pending Payment

In Figure 6.66, we have shown the transport pending payment history of Krishiseba website. In this section of our project, the admin can view all transport owner pending payments. The admin verifies the payment information of those who have a pending payment.

6.10.17 Transport Payment Gateway

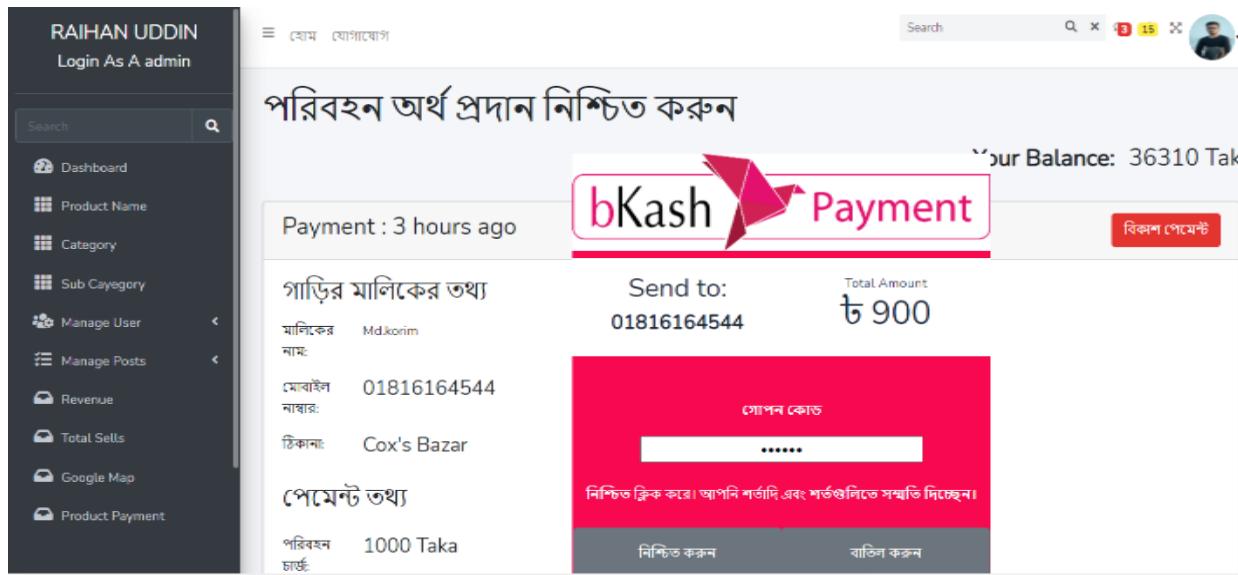


Figure 6.67: Transport Payment Gateway

In Figure 6.67, we have shown the transport payment gateway. In this section of our project, the admin can send payment to the transport owner. After verifying the information of pending payment, the admin sends their money to them through our payment gateway.

6.10.18 Revenue

No	Product Name	Quantity	Ordered	Delivered	Total	Payment	Revenue
1	আমন ধান	100 কেজি	27-August-2021	29-August-2021	₹2700	₹2430	₹270
2	টমেটো	100 কেজি	30-August-2021	30-August-2021	₹8500	₹7650	₹850
3	সিদ্ধ	170 কেজি	30-August-2021	30-August-2021	₹11050	₹9945	₹1105
4	আমন ধান	120 কেজি	30-August-2021	30-August-2021	₹3240	₹2916	₹324
5	টমেটো	40 কেজি	30-August-2021	30-August-2021	₹3400	₹3060	₹340
6	টমেটো	50 কেজি	30-August-2021	30-August-2021	₹4250	₹3825	₹425

Figure 6.68: Revenue

In Figure 6.68, we have shown the revenue history of Krishiseba website. In this section of our project the “Admin” can view the total revenue made from the sales each farmer and seller made to the buyer and how much a farmer and seller made from each sale. Admin can print the total revenue and can calculate their earnings from the Krishiseba website. It’s also an important task.

6.6 Desktop Application

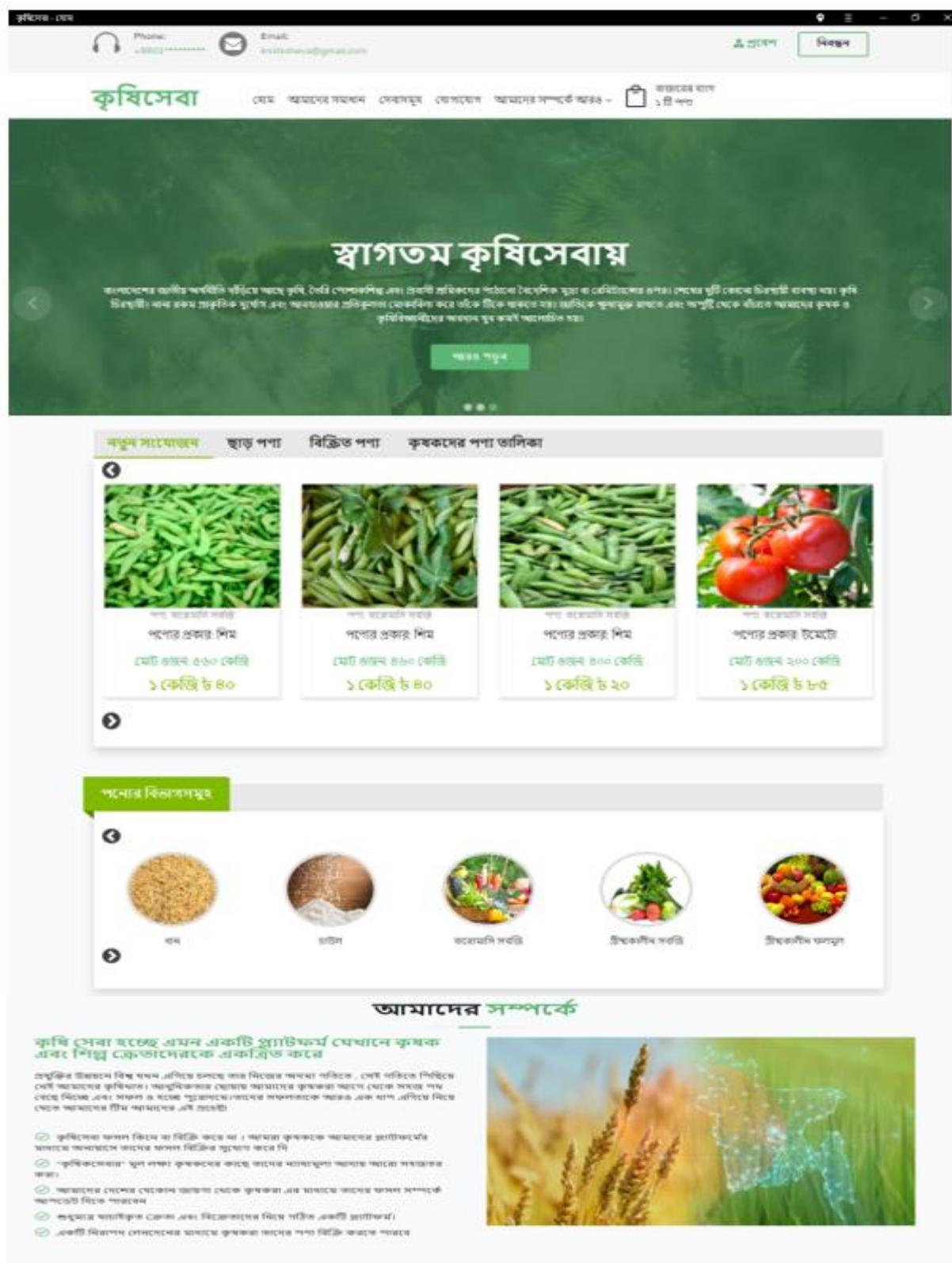


Figure 6.69: Desktop Application

In Figure 6.69, we have shown the desktop application of Krishiseba. By clicking on the install icon any users can download Krishiseba website as a desktop application from our website and any user can use that desktop application very easily.

CHAPTER: 7

TESTING

7.1 Testing

Web testing is the name given to software testing that focuses on web applications. Complete testing of a web-based system before going live can help address issues before the system is revealed to the public. Issues may include the security of the web application, the basic functionality of the site, its accessibility to handicapped users and fully able users, its ability to adapt to the multitude of desktops, devices, and operating systems, as well as readiness for expected traffic and number of users and the ability to survive a massive spike in user traffic, both of which are related to load testing [15].

7.2 Types of Testing

The software testing process is often divided into three phases:

- ✓ Unit testing
- ✓ Black box testing
- ✓ White-box testing

7.2.1 Unit Testing

A unit test is a way of testing a unit - the smallest piece of code that can be logically isolated in a system. In most programming languages, that is a function, a subroutine, a method or property. The isolated part of the definition is important. In his book "Working Effectively with Legacy Code", author Michael Feathers states that such tests are not unit tests when they rely on external systems: "If it talks to the database, it talks across the network, it touches the file system, it requires system configuration, or it can't be run at the same time as any other test".

7.2.2 Black Box Testing

Black box testing is the technique of testing without having any knowledge of the interior workings of the application is called black-box testing. The tester is oblivious to the system architecture and does not have access to the source code. Typically, while performing a black-box test, a tester will interact with the system's user interface by providing inputs and examining outputs without knowing how and where the inputs are worked upon.

7.2.3 White Box Testing:

White box testing (also known as clear, glass box or structural testing) is a testing technique which evaluates the code and the internal structure of a program. White box testing involves looking at the structure of the code. When you know the internal structure of a product, tests can be conducted to ensure that the internal operations performed according to the specification. And all internal components have been adequately exercised 16.

7.3 Validations

7.3.1 Login Validations

প্রবেশ করুন

মোবাইল নাম্বার

01816064616 !

আপনার মোবাইল নাম্বার অথবা পাসওয়ার্ড ভুল হয়েছে

প্রাপ্তি পাসওয়ার্ড

আমাকে মনে রাখবেন

প্রবেশ করুন

আপনি কি পাসওয়ার্ড ভুলে গেছেন?
এখনও নিবন্ধন করেননি? নিবন্ধন করুন

Figure 7.1: Login Validation

In Figure 7.1, we have shown the login validation. We added login validations on our website. Without providing a proper valid mobile number and password the user can't login in our Krishiseba website.

7.3.2 Register Validations

নিবন্ধন করুন

আমি একজন*

কৃষক বিদ্যুতা ক্রেতা পরিবহনের মালিক

প্রোফাইল ছবি

Choose File No file chosen

নাম*

544454554njhhjhgffgfdhghh !

The name must not be greater than 20 characters.

মোবাইল*

0173583749 !

The mobile must be at least 11 characters.

জন্ম তারিখ*

07/02/1997

পাসওয়ার্ড*

The password confirmation does not match.

এনআইডি ছবি

Choose File No file chosen

স্থায়ী ঠিকানা

798, Haji Bari, Tekpara, Cox's Bazar Sadar 4700

পাসওয়ার্ড নিশ্চিতকরণ *

এনআইডি নাম্বার*

5106894744

Register

Figure 7.2: Register Validations (1)

This screenshot shows a registration form on the Krishiseba website. The fields and their validation messages are:

- আমি একজন***: Radio buttons for কৃষক (farmer), বিক্রেতা (seller), ক্রেতা (customer), and পরিবহনের মালিক (transporter).
- প্রোফাইল ছবি**: A placeholder for a profile picture with a "Choose File" button. Error message: "The profile img must be an image."
- নাম***: Input field containing "RAIHAN UDDIN".
- মোবাইল***: Input field containing "01816064616". Error message: "The mobile has already been taken."
- জন্ম তারিখ***: Input field containing "07/02/1997".
- পাসওয়ার্ড***: Input field containing "*****". Error message: "The password must be at least 8 characters."
- এনআইডি নাম্বার***: Input field containing "5106894768". Error message: "The nid has already been taken."
- প্রোফাইল ছবি**: A placeholder for an NID front image with a "Choose File" button. Error message: "The profile img must be an image." Another error message below it says: "The nid front img must be an image."
- Register**: A blue "Register" button.

Figure 7.3: Register Validations (2)

This screenshot shows a registration form on the Krishiseba website. The fields and their validation messages are:

- আমি একজন***: Radio buttons for কৃষক (farmer), বিক্রেতা (seller), ক্রেতা (customer), and পরিবহনের মালিক (transporter).
- প্রোফাইল ছবি**: A placeholder for a profile picture with a "Choose File" button. Error message: "The profile img must not be greater than 2048 kilobytes."
- নাম***: Input field containing "RAIHAN UDDIN".
- মোবাইল***: Input field containing "01735837498".
- জন্ম তারিখ***: Input field containing "mm/dd/yyyy".
- স্থায়ী ঠিকানা**: Input field containing "798, Haji Bari, Kabi Kaji Nazrul Islam Road, Tek".
- পাসওয়ার্ড***: Input field containing "*****". Error message: "The password must be at least 8 characters."
- পাসওয়ার্ড নিশ্চিতকরণ ***: Input field containing "*****".
- এনআইডি নাম্বার***: Input field containing "510685". Error message: "The nid must be at least 10 characters."
- প্রোফাইল ছবি**: A placeholder for an NID front image with a "Choose File" button. Error message: "The nid front img must be an image."
- Register**: A blue "Register" button.

Figure 7.4: Register Validations (3)

In Figure 7.1, we have shown the login validation. If the user tries to register on our Krishiseba website, he must fill up the registration form following our security rules. It is a must for them to complete the registration process.

CHAPTER: 8

CONCLUSION

8.1 Conclusion

The whole system has been developed with the highest priority of farmers, where the benefits of other buyers and sellers have been integrated. Farmers can sell their product without any hassle. The security of farmers money has been given the most attention here. We are trying to improve the living standards of rural farmers. We added a simple solution to the advanced delivery process, including the combination of transportation facilities.

8.2 Limitations

- ✓ We need to add more advanced technologies with our project to make the platform more secure for money transactions and save our platform from hackers.
- ✓ Users need a good internet connection to visit and explore our platforms. Sometimes it may take longer to load all the products if the internet connection is not so strong.
- ✓ Now, the admin manually provides user location coordinates because we don't use paid map API.
- ✓ Buyers can't purchase multiple products at the same time because buyers can pay their single product payment directly to the seller through the admin.

8.3 Future Works

- ✓ Add a chat box to contact between users and admin.
- ✓ Use two-factor authentication to strengthen our security.
- ✓ Use real time payment gateway such as bKash, nagad and so on.

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