

MILITARY INSTITUTE OF SCIENCE AND TECHNOLOGY, DHAKA

Department of Computer Science and Engineering

Course Name: Software Development Project(SDP-01)

Course Code: CSE-364

Submitted By

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1. Project Name: HaatBazar- A Wholesaler's Marketplace

2. Introduction

E-commerce has transformed many industries by enhancing efficiency and transparency, yet agricultural e-commerce platforms often face significant challenges. Issues such as inefficient logistics, inconsistent pricing transparency, and fraudulent transactions hinder the scalability and reliability of these platforms. Additionally, many existing systems lack user-friendly features tailored for wholesalers and buyers, leading to fragmented operations and limited adoption. HaatBazar aims to address these gaps by introducing key tools like dynamic product listings, allowing sellers to manage inventories with detailed descriptions, images, and zone-specific pricing. Buyers benefit from secure order tracking, fraud prevention measures, and downloadable transaction receipts, ensuring accountability and transparency. Complaint resolution systems and chat functionality enable smooth communication between buyers, sellers, and administrators. Admins play a pivotal role in HaatBazar by overseeing registrations, verifying credentials, monitoring market trends, and addressing fraudulent activities. Through streamlined stock management and enhanced admin oversight, HaatBazar ensures an efficient and transparent marketplace experience. By focusing exclusively on wholesalers and buyers, HaatBazar eliminates unnecessary complexities, offering a reliable and scalable platform tailored to their needs. This targeted approach not only optimizes supply chain operations but also fosters trust and efficiency within agricultural e-commerce.

3. Related Project

There are only a limited number of applications existing in the online platforms. Existing agricultural e-commerce systems, as highlighted in recent studies, reveal notable challenges, it is not clear how well these techniques would perform in real-world applications or what the limitations of this approach might be.

- **Fashol:** This platform connects farmers with retailers to streamline produce distribution. However, it is limited by logistical challenges, including inconsistent last mile delivery, especially in rural areas, and insufficient scalability to serve a wider audience. Limited adoption of secure payment gateways and poor digital literacy among farmers further reduce platform effectiveness.
- **Halal Agro Farm:** Focused on sustainable and organic produce, this platform excels in niche markets but lacks comprehensive features for supply chain optimization and transparent pricing. Its operations are not yet scaled to handle larger, diverse customer bases.
- **e-Hub:** While it provides a marketplace for agricultural goods, e-Hub's reliance on third-party logistics often leads to delivery inefficiencies and increased costs. It also lacks tools for fraud prevention and product traceability, reducing user trust.

4. Objectives

- **Facilitate Seamless Connections:** Create a user-friendly digital marketplace for direct communication and transactions between wholesalers and buyers.
- **Ensure Transparency and Trust:** Implement fraud detection, license verification, and a complaint management system to enhance security and user confidence.
- **Promote Fair Pricing:** Enable real-time monitoring of regional market trends to support equitable pricing strategies.
- **Optimize Product Management:** Provide tools for sellers to manage product listings, inventory, and sales efficiently.
- **Improve Accessibility:** Incorporate search and filtering options by category, price, and region for easier product discovery.
- **Enhance Administrative Oversight:** Equip admins to oversee transactions, verify sellers, and handle complaints effectively.

In order to ensure sustainability, technological advancements, and smart innovation, ensuring productivity in the agricultural sector, we focus on the following sustainable development goals of our project.

- **SDG 2: Zero Hunger:** HaatBazar helps sellers to sell their sourced products directly and efficiently, reducing food waste and ensuring people get fresh, affordable food. This strengthens food security across Bangladesh.
- **SDG 3: Good Health and Well-being:** By promoting a transparent supply chain, HaatBazar reduces the risk of food adulteration. People get safer, healthier food, improving overall public health.
- **SDG 5: Gender Equality:** Women in agriculture and small businesses can use HaatBazar to reach buyers without facing market discrimination, helping them grow financially and independently.
- **SDG 8: Decent Work and Economic Growth:** The platform promotes self empowerment, ensures fair prices, and supports the digital transformation of agriculture, boosting Bangladesh's economy.
- **SDG 10: Reduced Inequalities:** By giving small businesses fair access to buyers and reducing economic exploitation, HaatBazar helps balancing income distribution and uplifts rural communities.

5. Features

HaatBazar is designed to streamline agricultural trade by offering a range of functionalities that cater to the needs of admins, wholesalers, and buyers. The platform focuses on ensuring efficient product management, secure transactions, and seamless communication among users. Here are the key functionalities:

- **Product Search and Filtering:** Enable users to search products by category, price, or region for easy discovery.
- **Real-time Buyer-Seller Communication:** Provide an integrated chat system for direct and seamless communication between buyers and sellers.
- **Efficient Product Management:** Allow wholesalers to upload, update, and manage product listings with detailed descriptions and images.
- **Fraud Detection and Reporting:** Implement mechanisms to detect and report fraudulent activities, ensuring accountability and trust.
- **License Verification:** Ensure that sellers comply with regulations by verifying licenses for selling specific products.
- **Complaint Management:** Offer a system for buyers to submit complaints to admins for timely resolution of issues.
- **Market Trend Monitoring:** Facilitate admins in tracking regional market trends and pricing to support fair and competitive practices.
- **Administrative Oversight:** Enable admins to monitor transactions, manage platform fees, and ensure smooth platform operations.

6. Stakeholders/Users

HaatBazar is designed to serve three primary stakeholders — Sellers, Buyers, and Admins — each with specific functionalities to enhance the efficiency of agricultural trade. Here are the key roles and responsibilities of each stakeholder:

1. Sellers:

- **Registration with License Criteria:** Ensure compliance by registering only those wholesalers who meet the required licensing standards.
- **Product Management:** Enable sellers to upload, update, and manage product listings efficiently.
- **Price Zone Visibility:** Provide insights into regional pricing trends to help sellers set competitive prices.
- **Stock Management:** Allow sellers to track and update inventory levels seamlessly.
- **Sales Reporting:** Facilitate access to sales analytics for better decision-making and growth planning.

2. Buyers:

- **Dynamic Product Search:** Offer advanced search filters by category, price, and region for easy product discovery.
- **Seamless Ordering:** Simplify the purchasing process with an intuitive ordering system.
- **Downloadable Receipts:** Provide automated and downloadable purchase receipts for transparency.
- **Fraud List Access and Complaint System:** Allow buyers to access a fraud list and file complaints against sellers if needed.
- **Product Review:** Enable buyers to leave feedback on products, promoting transparency and trust.

3. Admins:

- **Seller Verification:** Review and verify sellers to maintain the credibility of the platform.
- **Fraud Detection:** Implement tools to detect and act against fraudulent activities.
- **Market Trend Monitoring:** Analyze market data to support fair pricing and prevent exploitation.
- **Platform Earnings Tracking:** Manage and monitor revenue from platform fees effectively.
- **Complaint Management:** Address and resolve buyer complaints to enhance user satisfaction and trust.

7. Project Architecture Diagram

The architectural diagram of HaatBazar, shown in Fig:1 shows a complete marketplace system with three main parts. The frontend uses React.js for different user interfaces (admin, seller, buyer), while the backend uses Express.js to host specialized services like seller management, fraud detection, market oversight. These services connect through an API Gateway that routes requests between the frontend and backend services. All data is stored in a MongoDB database, which is a flexible NoSQL system perfect for varied marketplace information. This microservices architecture allows each component to work independently while still communicating seamlessly, making the system easier to maintain and scale as your marketplace grows.

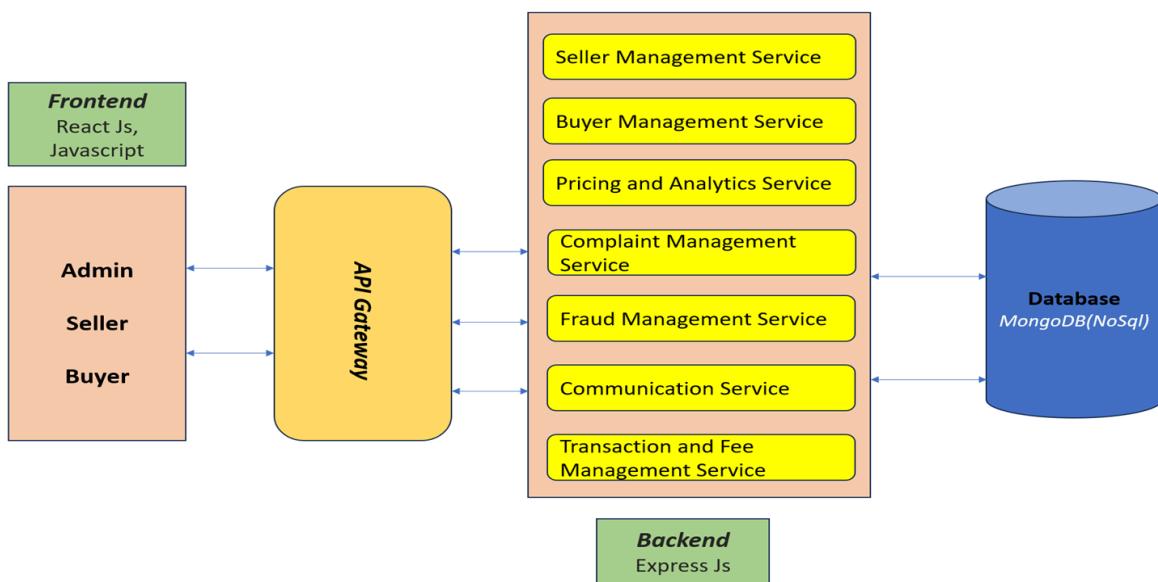


Fig1.: Architecture Diagram

8. Frontend

For frontend we are using the followings for the website development

- **HTML:** HTML serves as the foundational markup language for HaatBazar, enabling the structuring of web pages and defining their content. It forms the backbone of our web application, ensuring seamless rendering in browsers while supporting accessibility and interactivity.
- **CSS:** CSS is utilized in HaatBazar to style HTML elements, ensuring a visually appealing and user-friendly interface. It enhances the design, layout, and responsiveness of our web application, optimizing the user experience across different devices.
- **Tailwind CSS:** Tailwind CSS, a utility-first CSS framework, is employed in HaatBazar to streamline UI development with pre-defined utility classes. It allows for rapid styling, improved maintainability, and greater flexibility in designing custom, responsive interfaces without the need for writing extensive traditional CSS.
- **React.js :** React.js is used to develop the dynamic front-end of HaatBazar, ensuring an interactive and responsive user experience. By leveraging React's component-based architecture, the application efficiently manages UI states, optimizes performance, and delivers a seamless browsing experience for wholesalers and users.

9. Backend

For HaatBazar's backend, we are using Express.js, a minimal and fast Node.js framework that simplifies backend development. It helps manage HTTP requests, APIs, and database interactions efficiently, ensuring a smooth user experience.

- **Simplified Routing:** Easy-to-use routing system for handling requests efficiently.
- **Seamless Integration:** Works well with databases like MongoDB & frontend frameworks like React.
- **Large Community & Ecosystem:** Rich libraries, tools, and active developer support.
- **Middleware Support:** Enhances functionality by processing requests before reaching endpoints
- **Lightweight & Fast:** Minimal framework with high performance for web applications.

10. Prototype of the Project

Tool Used: Figma [Prototype Link](#) is attached with.

During the prototyping phase of our project, as shown in Fig2, we selected Figma as our design tool due to its versatile features and efficiency in streamlining the design workflow. This choice was influenced by several key factors that enhanced collaboration, consistency, and ease of development handoff.

- **Collaborative Design:** Figma's real-time collaboration allowed our team to work simultaneously, streamlining feedback and design iterations.
- **Cloud-Based Access:** Being cloud-based, Figma enabled easy access to designs from anywhere without the need for installations.
- **Component Reusability:** Its component and style libraries helped maintain consistency across multiple pages and sped up the design process.
- **Prototyping Capabilities:** Built-in prototyping tools allowed us to create interactive mockups directly within Figma, simplifying the transition to development.
- **Developer Handoff:** Figma's inspect mode provided CSS code snippets and design specs, making it easier for developers to implement designs accurately.

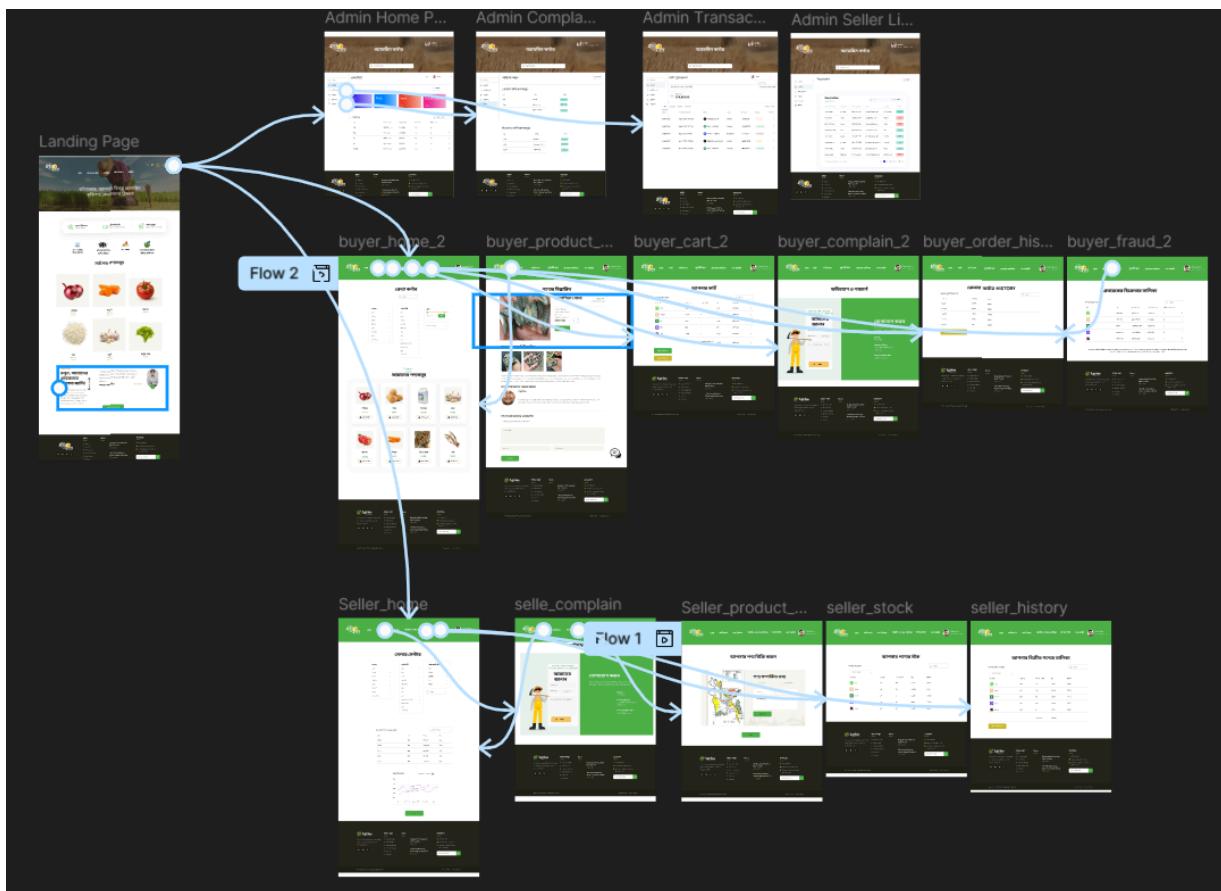


Fig2.: Prototype of the Project

11. Cost Estimation

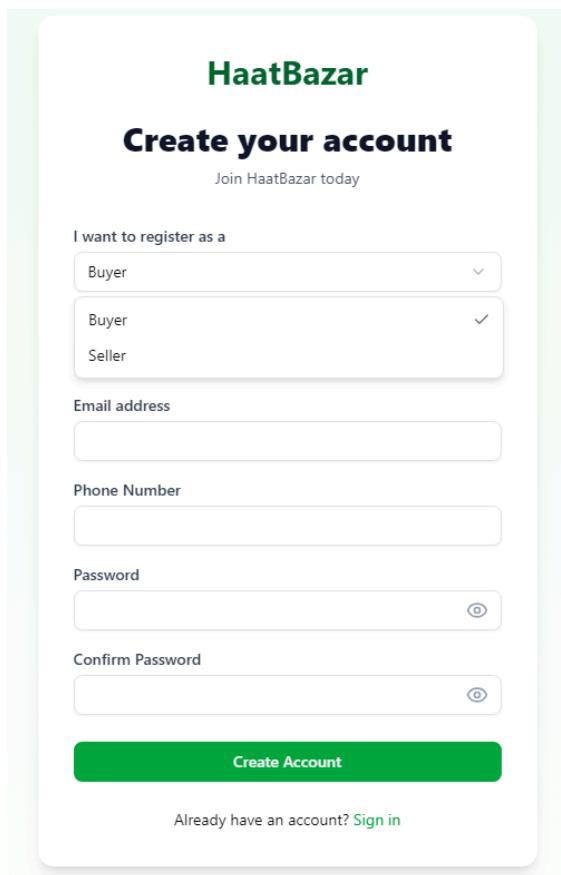
Stage	Estimated Monthly Cost (BDT)	Approximate Time	Total Cost (BDT)
Planning	50,000	1 month	50,000
UI/UX Design	15,000	1 month	15,000
Prototyping	45,000	1 month	45,000
Frontend Development	50,000	3 months	150,000
Backend Development	40,000	3 months	120,000
API Integration	30,000	2 months	60,000
Database	20,000	1 month	20,000
Testing and Quality Assurance	60,000	1 month	60,000
Documentation & Training	-	-	50,000
Operation & Maintenance	-	-	100,000
Total	-	-	670,000

Table1: Cost Estimation

12. Final UI of the Project

The HaatBazar platform features a sleek and user-friendly interface with modern design elements, interactive features, and accessibility enhancements. The following are the UI components, organized based on the different user roles.

12.1: User LogIn and SignUp:

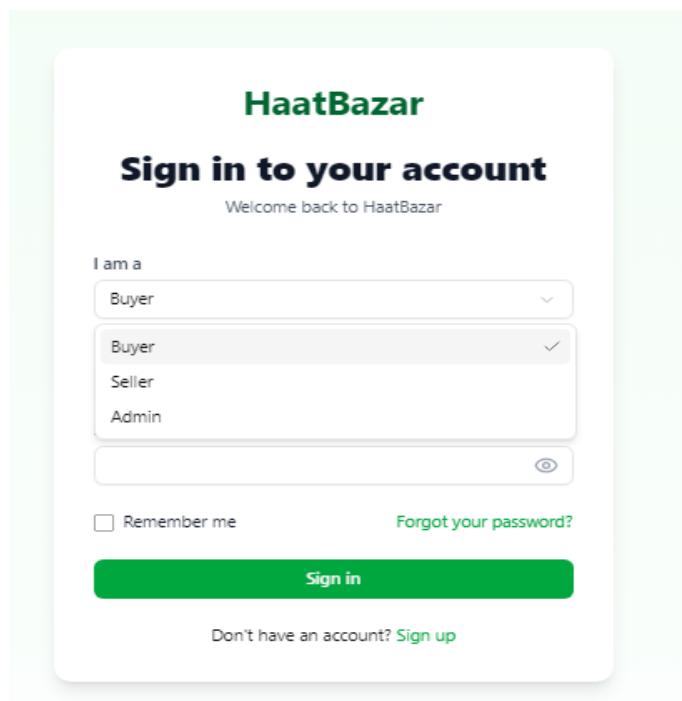


The screenshot shows the 'Create your account' form for HaatBazar. At the top, it says 'HaatBazar' and 'Create your account'. Below that is a sub-instruction 'Join HaatBazar today'. The main form fields include:

- A dropdown menu labeled 'I want to register as a' with options 'Buyer' (selected) and 'Seller'.
- An 'Email address' input field.
- An 'Phone Number' input field.
- A 'Password' input field with a visibility icon.
- A 'Confirm Password' input field with a visibility icon.

At the bottom is a green 'Create Account' button and a link 'Already have an account? [Sign in](#)'.

Fig3.: User Account Create



The screenshot shows the 'Sign in to your account' form for HaatBazar. At the top, it says 'HaatBazar' and 'Sign in to your account'. Below that is a sub-instruction 'Welcome back to HaatBazar'. The main form fields include:

- A dropdown menu labeled 'I am a' with options 'Buyer' (selected), 'Seller', and 'Admin'.
- A checkbox for 'Remember me'.
- A link 'Forgot your password?'.
- A large green 'Sign in' button.
- A link 'Don't have an account? [Sign up](#)' at the bottom.

Fig4: User account Login

All users (Buyer, Seller and Admin) can log in to the platform by selecting account type and giving necessary information. If a user has no account he/she can create an account with required informations along with specific criterias as shown in

12.2: Landing Page:

The figure displays three screenshots of the HaatBazar website's landing page. The top-left screenshot shows the main homepage with a banner 'Fresh from Farm to Your Table', statistics (51 products, 3 sellers, 3 buyers), and a 'Why Choose HaatBazar?' section. The top-right screenshot shows the 'Why Choose HaatBazar?' page with sections for Verified Sellers, Secure Transaction, and Quality Assured. The bottom screenshot shows the 'Featured Products' page with a grid of eight product cards: Amrulati Mango, Organic regular Banana, Organic regular Grape, Organic regular Wheat, MugDal, Organic rivergrown Catla, Pangas from commercial Farming, and White Potato.

Fig 5.: Landing page

When no user is logged in the system, any one will see thai landing page when all products in the platform can be seen as of in Fig 5, dynamically searched and add filters for better visualization. Also tells overall seller, buyer and product number of the platform.

12.3 : Final UI for Buyer:

A buyer can dynamically search the available products in the inventory and filter based on specific criteria and price ranges, shown in Fig 6., how a user can search the products dynamically.

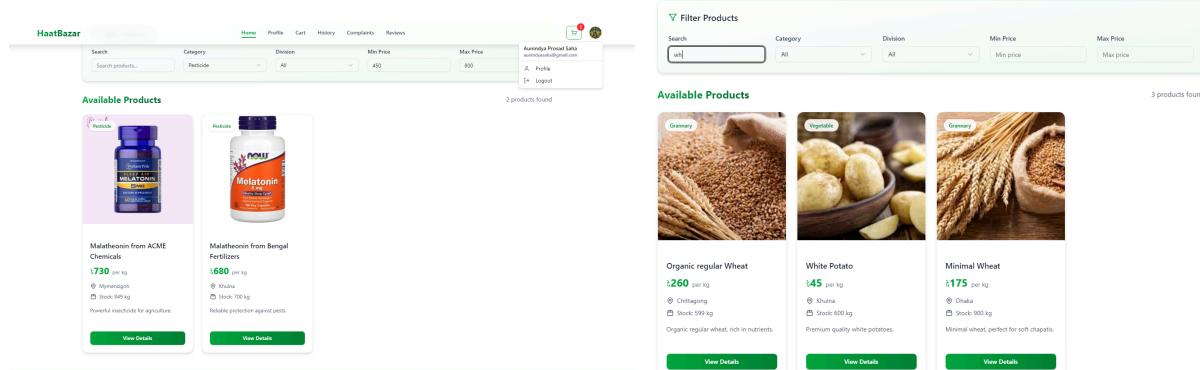


Fig 6.: Dynamically Searching for Products

Based on his required demands and wishes, he/she can add his required products to the cart shown in Fig7.

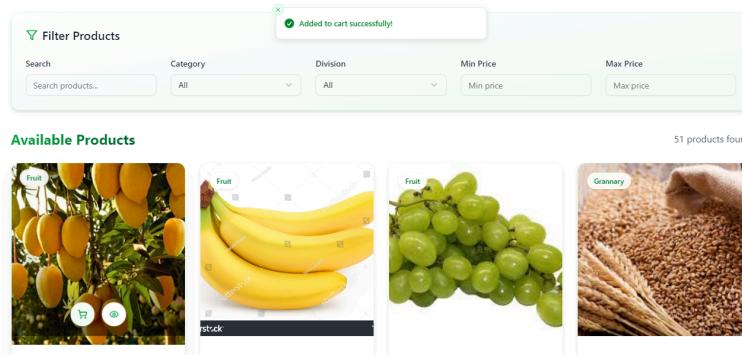


Fig 7.: Product Adding to the cart

In the cart, as shown in Fig 8, buyers can seamlessly increase and decrease the amount of the product and discard the unwanted product if he/she wishes. Initially a dummy payment system is implemented for payment proceedings.

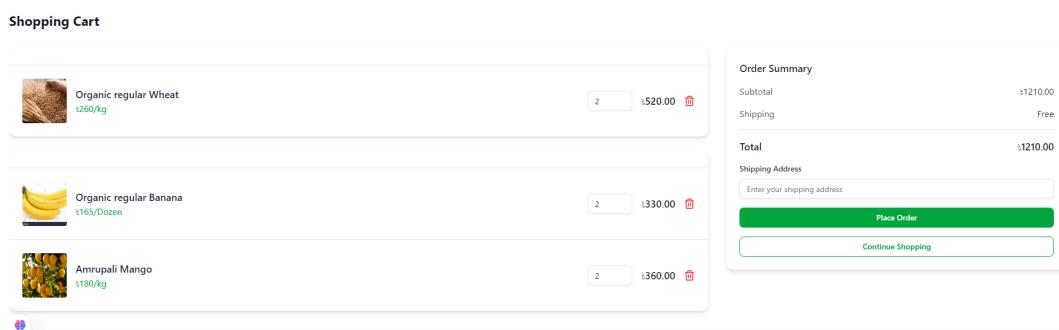
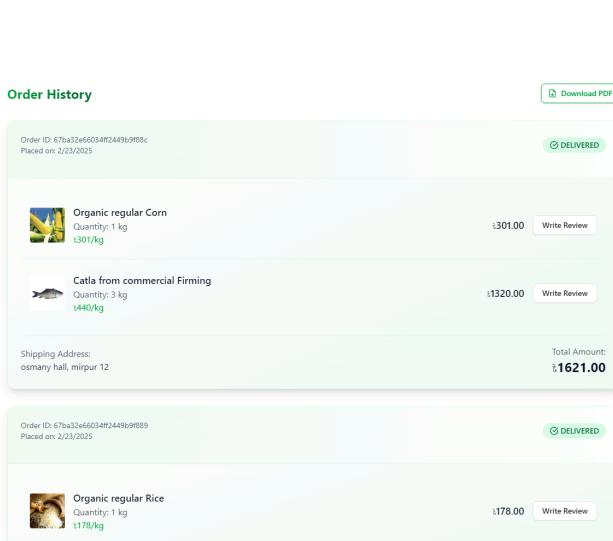


Fig8.: User's Cart and product Ordering

A buyer has his own order history portal that contains all previous orders stored for his own monitoring shown in Fig 9. A buyer can update his profile with specific credentials if he/she intends to do so shown in Fig 10.



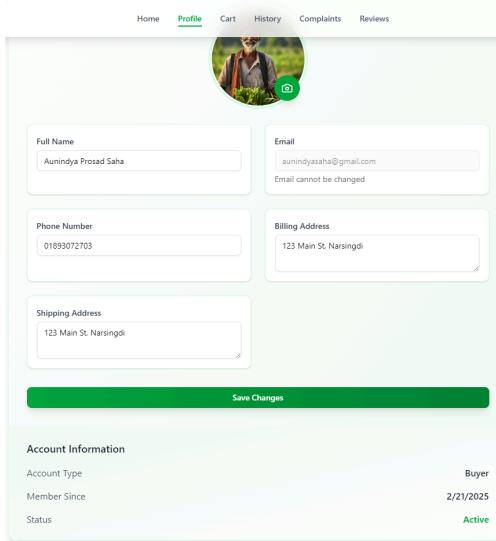
Order History

Order ID: 67ba32e66034ff2489c9f88c
Placed on: 2/23/2025

	Organic regular Corn Quantity: 1 kg ₹301/kg	₹301.00	Write Review
	Cata from commercial Firming Quantity: 3 kg ₹440/kg	₹1320.00	Write Review
Shipping Address: osmany hall, mirlpur 12		Total Amount: ₹1621.00	

Order ID: 67ba32e66034ff2489c9f889
Placed on: 2/23/2025

	Organic regular Rice Quantity: 1 kg ₹178/kg	₹178.00	Write Review
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Home **Profile** Cart History Complaints Reviews

 [Edit](#)

Full Name Aunindya Prosad Saha	Email aunindya.saha@gmail.com Email cannot be changed
Phone Number 01893072703	Billing Address 123 Main St. Narsingdi
Shipping Address 123 Main St. Narsingdi	

Save Changes

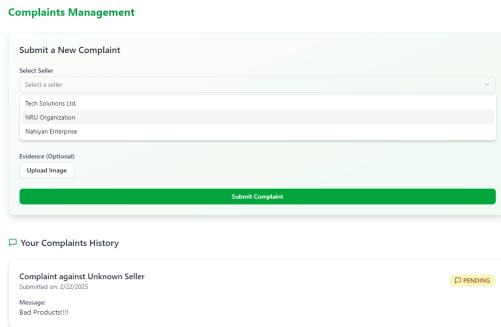
Account Information

Account Type Buyer	Member Since 2/21/2025
Status Active	

Fig 9.: Buyer Order History

Fig 10.: Buyer Profile Editing

Shown in Fig 11., If a buyer gets dissatisfied with any activity, service or any seller, he/she can lodge a complaint in the complaint management portal that would be assessed by the Admin. A buyer can rate any product as a review to give assessment of the products. As per shown in Fig 12.



Complaint Management

Submit a New Complaint

Select Seller
Select a seller
Tech Solutions Ltd.
NRU Organization
Nahyan Enterprise

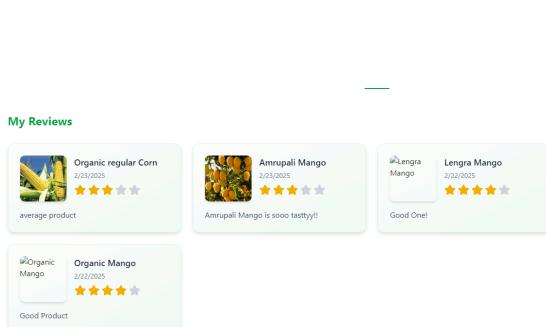
Evidence (Optional)
Upload Image

Submit Complaint

Your Complaints History

Complaint against Unknown Seller
Submitted on 2/25/2025
Message: Bad Product!!!!

PENDING



My Reviews

 Organic regular Corn 01/20/2025 average product	 Amrupali Mango 01/20/2025 Amrupali Mango is sooo tasty!!	 Lenga Mango 01/20/2025 Good One!
 Organic Mango 01/20/2025 Good Product	 Organic Mango 01/20/2025 ★★★★★	

Fig 11.: Complaint lodging

Fig 12.: Product rating

12.4: Final UI for Seller:

The screenshot shows the Seller Dashboard homepage. On the left, there's a sidebar with links for Home, Overview, Profile, Products, Upload Product, Transactions, Complaints, and Logout. The main area is titled "My Products" and displays four product cards. Each card includes a thumbnail image, the product name, price, location, stock level, and a brief description. There are also edit and delete icons for each product.

Product	Price	Location	Stock	Description
Organic regular Wheat	₹260 per kg	Chittagong	599 kg	Organic regular wheat, rich in nutrients.
MugDal	₹140 per kg	Chittagong	940 kg	Mug Dal, a nutritious choice for cooking.
Pangas from commercial Farming	₹340 per kg	Dhaka	900 kg	Commercially farmed Pangas, budget-friendly.
White Potato	₹45 per kg	Khulna	600 kg	Premium quality white potatoes.

Fig 13.: Seller Homepage

As shown in Fig 13, the seller can see all his products on the homepage. Can dynamically search and add filters to find them accordingly.

This screenshot shows the Product Management page. On the left, there's a list of products with their names and small thumbnail images. In the center, a modal window titled "Edit Product" is open for the "Organic regular Wheat" product. The modal contains fields for Product Name (set to "Organic regular Wheat"), Category (set to "Grannary"), Price per Unit (set to "260"), Unit (set to "kg"), Stock Available (set to "599"), Division (set to "Chittagong"), and a Description text area containing the note "Organic regular wheat, rich in nutrients.". At the bottom of the modal are "Cancel" and "Save Changes" buttons. To the right of the modal, there's a table listing all products with columns for Stock, Division, and Actions (edit and delete icons).

Stock	Division	Actions
599 kg	Chittagong	
940 kg	Chittagong	
900 kg	Dhaka	
600 kg	Khulna	
849 kg	Mymensignh	
769 Dozen	Rangpur	
649 kg	Barishal	

Fig14.: Uploading products information for updating the products.

In this pop-up form, the seller can update the information of uploaded products. And also, he/she can delete the product by clicking the delete icon by clicking on its respective row.

Transaction History						Download PDF
<input type="text"/> Search by order ID or buyer name...			mm/dd/yyyy	mm/dd/yyyy		
Total Transactions				Total Amount		
5				₹1498.00		
Transaction ID	Buyer	Amount	Payment Method	Status	Date	
67ba32e66034ff2449b9f893	Aunindya Prosad Saha	₹178.00	CARD	SUCCESS	23/02/2025	
Buyer Details		Order Details		Products		
Name: Aunindya Prosad Saha Phone: 01893072703		Order ID: 67ba32e66034ff2449b9f893 Shipping Address: osmany hall, mirpur 12		No products available		
67ba30466034ff2449b9f6c8	Aunindya Prosad Saha	₹990.00	CARD	SUCCESS	23/02/2025	
67ba1dd05f95aa6f79610209	Aunindya Prosad Saha	₹105.00	CARD	SUCCESS	23/02/2025	
67ba1d755f95aa6f79610079	Aunindya Prosad Saha	₹120.00	CARD	SUCCESS	23/02/2025	
67b8f3b2abfd72e810b0143	Aunindya Prosad Saha	₹105.00	CARD	SUCCESS	22/02/2025	

Fig 15.: Seller Transaction History

The seller can see all of his transaction history, including which buyers bought his products, can dynamically search with order ID or buyer name, and can add a filter to see the transactions that happened in a specific time range. Also, the seller can store the information locally in pdf format by clicking on the “Download PDF” button, as per shown in Fig 15.

Business Profile

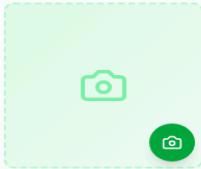
[Edit Profile](#)

Business Name	NRU Organization	Email	Nahui1449rahman@gmail.com
Phone Number	01780200016	Business Address	193/23 Paris road, Rajshahi
Business Description			
Business Information			
Account Type	Seller		
Member Since	Invalid Date		
Status	Active		

Fig 16.: Seller Business Profile page

The seller can update his information and add his own picture in this “Seller Profile” page, shown in Fig 16.

Add New Product


Upload a product image (max 5MB)

Product Name <input type="text"/>	Category <input type="button" value="Select category"/>
Price per Unit <input type="text"/>	Unit <input type="button" value="kg"/>
Stock Available <input type="text"/>	Division <input type="button" value="Select division"/>
Product Description <input type="text"/>	
<input type="button" value="Cancel"/>	<input style="background-color: #008000; color: white; font-weight: bold; border-radius: 5px; padding: 5px; width: 150px; height: 30px; border: none;" type="button" value="Add Product"/>

Fig17.. : Seller Product Upload Page

The seller can upload a new product along with the necessary information and profile picture of that product, as shown in Fig 17.

12.5: Final UI for Admin:



Money Transactions

Ref ID	Transaction Date	From	Type	Amount	Status
456789356	Sep 9, 2024, 04:30pm	fadel@email.com	Income	+\$5,670.00	Pending
456789356	Sep 8, 2024, 03:13pm	Wise - 5466xxxx	Savings	+\$15,000.00	Completed
456789356	Sep 7, 2024, 1:00pm	Paypal - 3345xxxx	Expenses	-\$3,456.00	Cancelled
456789356	Sep 6, 2024, 07:00am	kikikarisma@email.com	Income	+\$30,000.00	Pending
456789356	Sep 8, 2024, 03:13pm	Wise - 5466xxxx	Savings	+\$8,000.00	Completed

Fig18.. : Money Transactions

Admin can see all the money transactions done by all the users as per shown in Fig 18.

ID	Product Name	Category	Price (₹)	Stock
1	Rice	Grains	50	500
2	Jute	Fibers	100	200
3	Fish Feed	Animal Feed	200	150
4	Poultry Feed	Animal Feed	150	300
5	Potato	Vegetables	30	600
6	Onions	Vegetables	40	400

Fig19.. :Admin Landing Page

Admin can see all the products uploaded on the platform and can dynamically search them, shown in Fig 19, also can see the buyer seller ratio. Which will help him to take measurements to maintain supply chain demand.

Customer Name	Company	Phone Number	Email	Divison	Status
Jane Cooper	BD AgroMart	(225) 555-0118	jane@microsoft.com	Dhaka	Active
Floyd Miles	AR Enterprise	(205) 555-0100	floyd@yahoo.com	Khulna	Inactive
Ronald Richards	Nogor Agro	(302) 555-0107	ronald@adobe.com	Rajshahi	Inactive
Marvin McKinney	BD AgroMart	(252) 555-0126	marvin@tesla.com	Chittagong	Active
Jerome Bell	BD Agro	(629) 555-0129	jerome@google.com	Mymensingh	Active
Kathryn Murphy	Saha Traders	(406) 555-0120	kathryn@microsoft.com	Sylhet	Active
Jacob Jones	Nogor Agro	(208) 555-0112	jacob@yahoo.com	Rangpur	Active
Kristin Watson	BD AgroMart	(704) 555-0127	kristin@facebook.com	Khulna	Inactive

Fig20.. : Seller List

Admin can see all the seller lists on this page and can see their account status, as per shown in Fig 20.

Complaints							
Seller Complaints							
Offender Name	Offender Email	Message	Victim Email	Time	File	Action	
BD AgroMart	nahiyana.shraff@gmail.com	Seller provided a defective item.	aunindya.saha@gmail.com	3/8/2025, 9:25:08 PM	Show Image	Pending	

Buyer Complaints							
Offender Name	Offender Email	Message	Victim Email	Time	File	Action	
Fahim Tazwar	fahim@gmail.com	Buyer	seller1@example.com	3/8/2025, 9:25:08 PM	Show Image	Pending	

Complaint Details

Name: BD AgroMart

Message: Seller provided a defective item.

[Dismiss](#) [Warning](#) [Account Hold](#)

Fig21.. : Complain Page

In this page, Admin can see all the complaints of both seller and buyer. Upon clicking on the “Show Image” button, admin can see images if there are any submitted by the complainant. By clicking on the button showing in the “Action” column, the admin will take necessary action accordingly, as per shown in Fig 21.

13. Work Distribution

We had distributed the work among ourselves in the following manner:

Name	ID	Responsibilities
Aunindya Prashad Saha	202114014	Project Idea, Figma Design (Buyer), Frontend pages and Backend database connection of full system, Report Writing, Video Scripting, Documentation
GM Fahim Tazwar	202114025	Figma (Seller), Buyer UI/UX, Backend Connection and Database Setup and Table planning for full project, Video planning and voice over.
Md. Raiyan Buhiyan Loreen	202114052	Figma Design (Buyer), Frontend Design of Buyer, Database Setup and Table planning, Presentation
Nahiyan Ashraf Siddique	202214052	Figma Design (Seller), Frontend Design of Seller, Dummy Data setup for all users, Presentation
Md. Nahul Rahman	202214049	Figma Design (Admin), Frontend Design for Admin, UI/UX improvements for Buyer, Seller, Backend Connection of Admin, Video Editing, Presentation, and Documentation.

Table2: Work Distribution

14. Limitations

HaatBazar, despite its potential, faces a few challenges that could impact its efficiency and user experience:

- **Scalability Challenges:** Handling high traffic, multiple login and expanding product categories may demand additional infrastructure and resources.
- **Verification Complexity:** Sellers verify themselves by uploading eTin certificate pdf. No other real life verification processes are not implemented due to its complexity.
- **Dummy Payment Gateway:** A dummy payment gateway system has been built for transactions.
- **Pseudo Successful Transaction and Delivery:** All transactions and delivery are by default successful, when the “Confirm Payment” button is clicked.
- **Database Storage Limitation:** The database is hosted on MongoDB Atlas, and up to 500 MB of data it can store.
- **UI/UX Framework:** It is built with React v19, but it did not sync with many UI components, so had to forcefully sync them using `--force` and `--legacy-peer-deps` keywords` in the node modules.

15. Future Scope

To enhance its impact and user reach, HaatBazar has several promising avenues for future development:

- **Mobile Application Launch:** Plan to develop a mobile app to enhance accessibility for a broader user base.
- **Enhanced AI Features:** Integrate AI for personalized recommendations and predictive analytics to benefit buyers and sellers.
- **Expanded Payment Methods:** Aim to include multiple and localized payment options to simplify transactions.
- **Blockchain for Transparency:** Explore blockchain technology to ensure secure and transparent financial transactions.
- **Farmer Support Programs:** Introduce training modules to help farmers utilize the platform effectively.

16. Conclusion

HaatBazar effectively addresses key challenges in the agricultural supply chain by offering a fair, transparent, and efficient digital marketplace. The platform's user-centric design and focus on minimizing waste highlight its potential to transform agricultural commerce. With future enhancements and expanded capabilities, HaatBazar aims to become a comprehensive and trusted solution for both wholesalers and buyers.