



# A NOVEL APPROACH TO E-COMMERCE INTERFACE

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**Abstract:** In earlier days, the consumer or the retailer could not buy or sell the commodities directly from the manufacturer. There have always been some middlemen whose involvement led to increase in transactions and the product price, which intern would help them in making enormous profits leaving the retailers with very marginal profits and the consumers with the least. The e-commerce platform is playing a very important role in today's Trade and Business. There are many social enterprises connecting manufacturers and consumers which help in providing qualitative and quantitative products to consumers and ensure sustainability and fair income to manufacturers. The aim of this proposed project is to build and develop a reliable website for an Enterprise with the vision of changing the landscape of business practices in our country as per the current e-commerce theories and standards, develop effective and well-designed web pages with robust data storage. This proposed website will help consumers/retailers buy or sell products online which will intern help manufacturers buy or sell their products online without the involvement of middlemen. The speciality of the website will be that even buyers will be able to view the analytic of the sales in a graphical format so that they can know the most selling items. The buyers will be able to buy the product in bulk so they get the product at the best price. This way both consumers and manufacturers get fair prices throughout the year irrespective of market fluctuation and consumers get to experience transparency throughout the processes.

**Keywords**—*bulk, graphical format, middlemen, robust data storage.*

## I. INTRODUCTION

E-Commerce, commonly referred as electronic commerce or internet commerce, is the term used to describe the exchange of money and data for the purpose of transacting business through the internet. The term "e-commerce" is frequently used to refer to the online sale of tangible goods, but it can also refer to any form of a business deal made possible by the internet.

E-Commerce, as opposed to e-business, is the term used exclusively to describe the exchange of goods and service online. On August 11, 1994 a man used his website Net Market, an American retail platform, to sell a CD by the band Sting to a friend, starting the history of e-commerce. This is the first instance of a customer making a purchase from a company over the World Wide Web, or "e-commerce" as it is now generally known.

Since then, internet shops and market places have developed to make it simpler to find and buy things. E-Commerce has benefited independent contractors, small enterprises, and big businesses alike by allowing them to offer their products and services on a scale that was not feasible with conventional offline shopping.

An e-commerce website that is being developed will help in the business-to-business model. Through this website, buyer and seller will be able to view the analytic of the product sales, buy and sell the best-selling products in a wholesale manner.

## II. LITERATURE REVIEW

The automated business to business system proposed is pretty much smarter because the researchers believe that is the only system that gives different services on one platform. The system can be used to find the company employee's contact details accurately who deals with business-to-business communication setting. By using certain tools, the system crawls over the web and stores the data in data base.[4]

The study suggests the six main business to business marketing research streams they should follow to resolve problems that business-to-business marketers are going to face in upcoming years: innovation, customer's journey and relationship value, data analysis, marketing finance interface, harnessing technology, growth in revenue and industry ecosystem.[6]

Another research was conducted how to explore the electronic commerce involvement of small and medium scaled enterprises (SME's) in terms of goals, strategies, operative and performance. The e-commerce strategies contribute to the SME's sales growth, profit.[11]

The paper shows the previous generations of Business-to-Business e-commerce hub solutions integrated did not successfully full fill the requirements of buyers and sellers in various domains to carry out daily business, online commercial transactions due to lack of flexibility and their inappropriateness.[15]

### Objectives:

- To trade quality products online at comfortable prices in bulk quantity.
- To provide graphical representation of sales data.
- To achieve customer satisfaction and gain their loyalty.
- To increase profitability.

## III. METHODOLOGY

Mission to design and develop a website where business owners can sell and buy products in bulk quantities and to make the website secure with authentication.

### System Architecture:

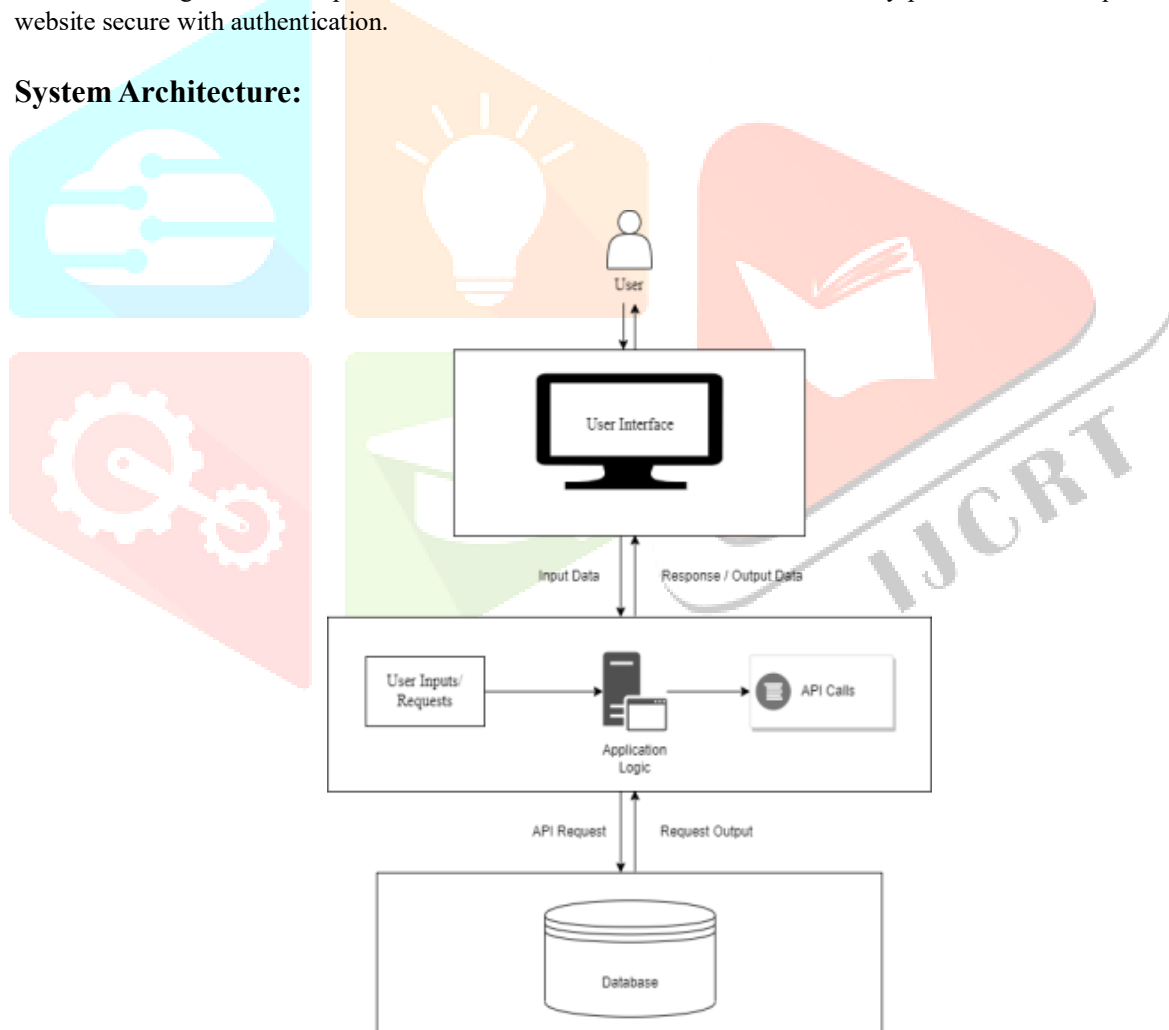


Figure 1: System Architecture

A System architecture is a representation of a system in which there is a mapping of functionality onto hardware and software components, a mapping of the software architecture onto hardware architecture, and human interaction with these components. In this system, user requests the data or information through user interface and that input data will be sent to the application logic where request will be processed using api calls and that api request will be stored in database. Later, when requested the output will be sent to user through application.

## Data Flow Diagram:

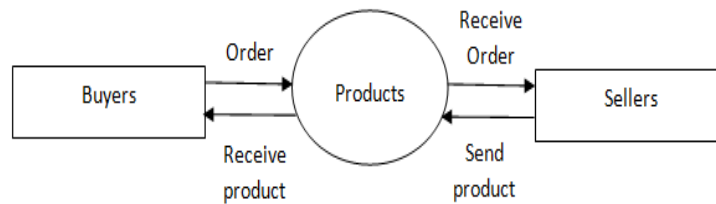


Figure 2: Data Flow Diagram

A data flow diagram is a graphical or visual representation using a standardized set of symbols and notations to describe a business's operations through data movement. Here, buyer will order the products and sellers will receive the order done by the buyers and after processing sellers will send the product and buyers will receive product.

## Description Of Modules:

- **Login Module:** Buyers and Sellers can access the website by providing their credentials (like Username and Password). Only registered users can log in to the website using their credentials.
- **Register Module:** Buyers and Sellers can register on the website by providing details such as email, username, password, GST number, etc. After registering they can log in to the website using those credentials.
- **View/ Order Products:** In this module, Buyers can view and order the products they wish. While ordering the product user needs to provide the address where the products need to be delivered.
- **Add/ Edit Products:** In this module, Sellers can view, add, and edit their products. And sellers can also view the orders been placed and complete the placed orders.
- **View Analytics:** Here buyers can view the recent and total sales of the products in a graphical form. And sellers can view the sales of their products in this module.

## Implementation:

### Programming Language Selection

A MERN website is an effective and powerful way to create full-stack online applications. Using the same programming language, JavaScript, the MERN stack, which consists of MongoDB, Express, React, and Node.js, allows a smooth integration of both the frontend and backend technologies. As a result, the web application's development cycles can be completed more quickly and its maintenance is made simpler. The MERN stack's wealth of libraries, resources, and tools make it simple for developers to create complex web applications with a wide range of features and functionalities.

### Selection of Platform

We are developing this project as a website. Since websites can be accessed from anywhere. And they also support all the platforms (both desktop and mobile).

### Requirements

Operating System: Windows 8.1

Languages Used: Node JS, Express, HTML and CSS

Data Base: Mongo DB

Tool: Power BI

## IV. RESULTS

1) **Register:** Buyers and Sellers can register on the website by providing details such as email, username, password, GST number, etc. After registering they can log in to the website using those credentials.

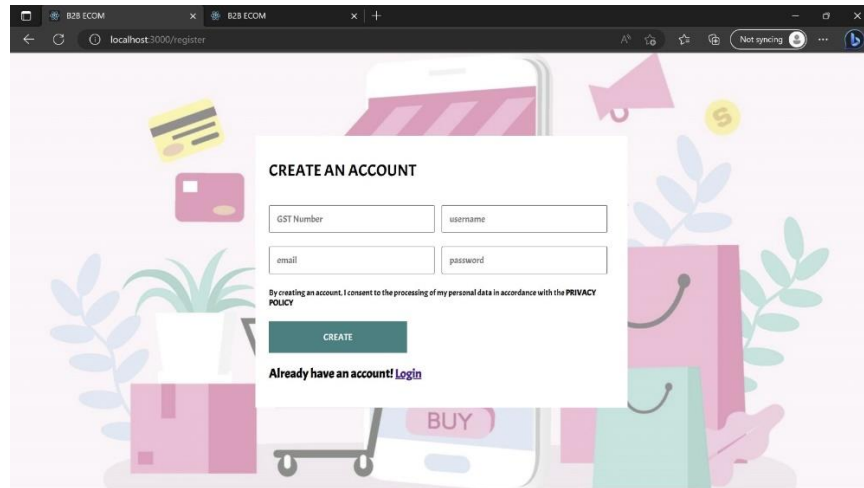


Figure 3: Register Page

2) **Login:** Buyers and Sellers can access the website by providing their credentials (like Username and Password). Only registered users can log in to the website using their credentials.

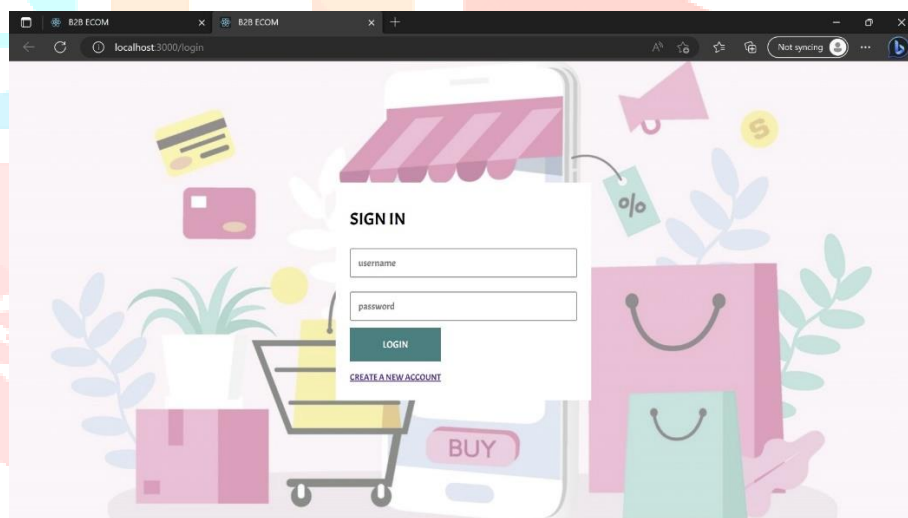


Figure 4: Login Page

3) **View/ Order Products:** In this module, Buyers can view and order the products they wish. While ordering the product user needs to provide the address where the products need to be delivered.

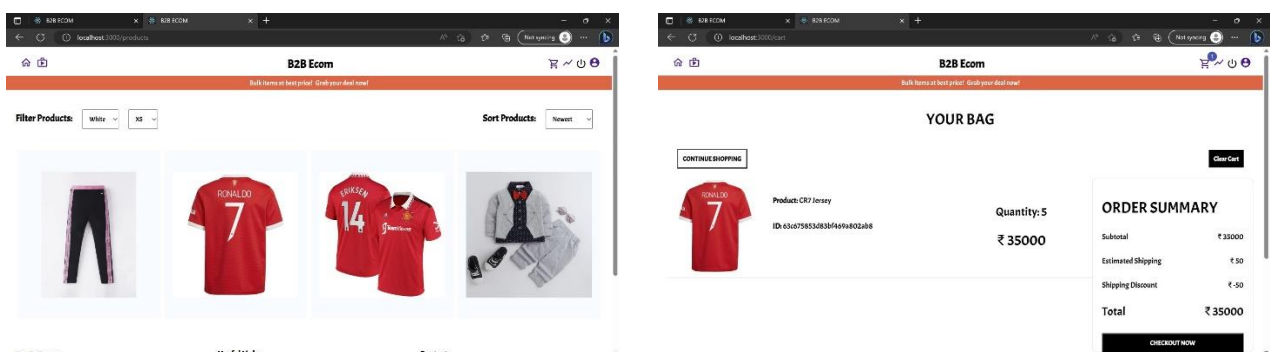


Figure 5: View/Order Products Page

**4) Add/ Edit Products:** In this module, Sellers can view, add, and edit their products. And sellers can also view the orders been placed and complete the placed orders.

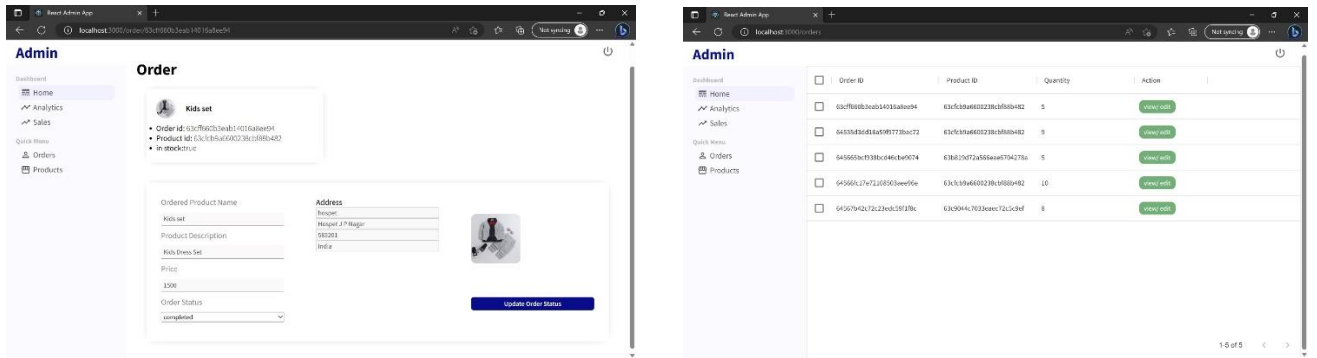


Figure 6: Add/Edit Products Page

**5) View Analytics:** Here buyers can view the recent and total sales of the products in a graphical form. And sellers can view the sales of their products in this module.

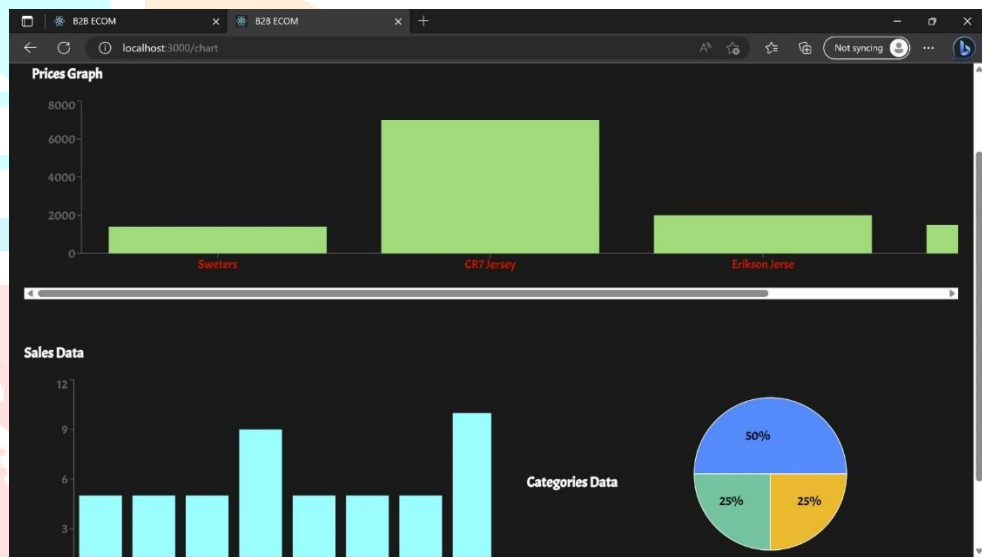


Figure 7: Analytics Page

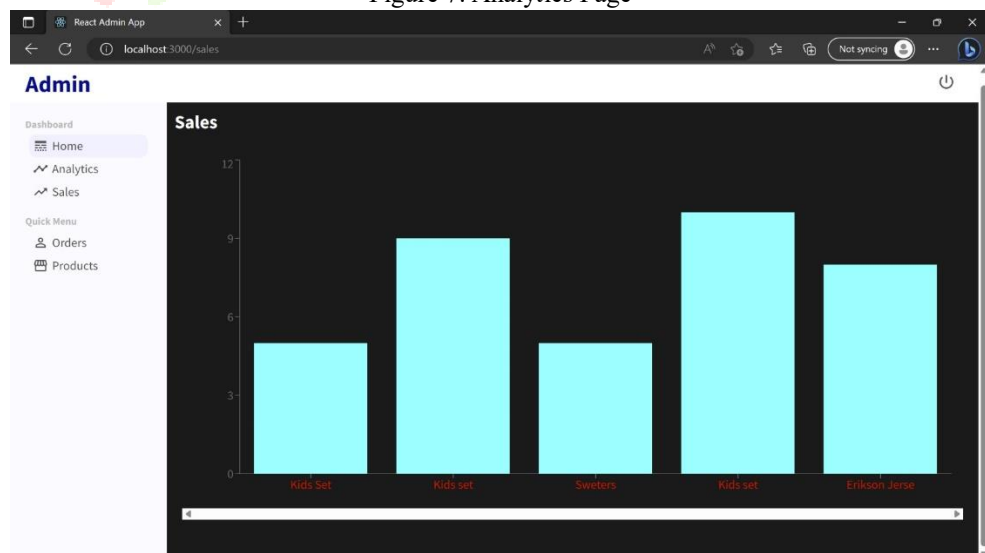


Figure 8: Analytics Page

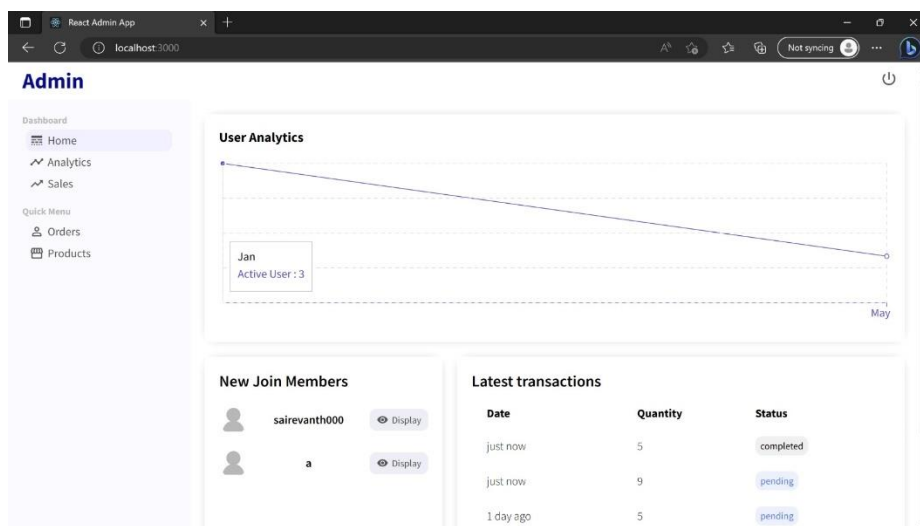


Figure 9: Analytics Page

## V. CONCLUSION

The system will be intended to perform functionalities like buying goods, selling goods and view the sales data. As of now there are no applications in the market that allows direct contacts with the owners of the goods. In this proposed system, buyers and sellers will be able to view the analysis of sales data in graphical form and can pick the best-selling products and can get bulk goods at comfortable prices.

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