

# **An E-Commerce Website for Buying/Selling Used Goods within College**

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## • **Introduction:**

There are different kinds of challenges that a fresher faces when joining a college, some of them are meant to get easier with time and experience, but there are some which can be resolved with some effort and mindfulness. I, as a fresher, experienced some of these challenges, like managing my finances, while buying essential items which are cost effective and will provide a better return on investment. But finding such items, which meet your requirements, lie in your budget and prove to be cost effective can be very confusing.

So, in order to solve this problem I am planning to work on an E-Commerce Website, called “**Kifayati Bazaar**” an economical market for students(especially freshers) for buying and selling used goods such as cycles, mattresses, mugs and buckets, clothes hangers, and every other thing that a student in a technical college might need. It will also solve a problem for the graduating students, they will then be able to sell their cycles, mattresses, etc in a more efficient way. Also, it will reduce the plastic waste in the college.

## • **Technologies Used:**

### **1) HTML, CSS, Bootstrap:**

For the front-end development, we utilised HTML for structuring the web pages, CSS for styling and layout, and Bootstrap to expedite the development process while ensuring a responsive and consistent user interface across devices.

### **2) Flask (Backend Framework):**

The backend of our system is powered by Flask, a Python web framework. Flask enables us to handle server-side operations, manage routing, and interact with the database. Its simplicity and flexibility make it an ideal choice for our application.

### **3) MongoDB (Database):**

To manage and store information related to the website, we implemented MongoDB as our NoSQL database. MongoDB's ability to handle semi-structured data and scalability makes it a suitable choice for our dynamic content storage needs.

## • Objectives:

### 1) Smooth and Secure Purchases:

- To help new students buying economical goods and making their days here, simpler.
- To help students, make some extra bucks, by reselling their goods.

### 2) User-Friendly Interface:

- Design an intuitive and easy-to-navigate user interface.
- Enable users to easily create listings, search for items, communicate with each other.
- Optimize the platform for mobile devices to enhance accessibility.

### 3) Accessibility and Inclusivity:

- Ensure that the platform is accessible to users with different abilities.
- Consider diverse user needs and preferences in design and functionality.
- Strive for inclusivity by addressing potential barriers to participation.

### 4) Endorse Reusability and Reduce Waste:

- To help reduce metal, plastic and other kinds of dangerous waste inside the campus.

## • Complete Database Schema:

### 1. TABLE: USER MODEL

Column Name	Data Type	Constraints
id	INT	PRIMARY KEY
username	VARCHAR(150)	UNIQUE, NOT NULL
password	VARCHAR(128)	NOT NULL
first_name	VARCHAR(255)	NOT NULL
last_name	VARCHAR(255)	NOT NULL
address	VARCHAR(255)	NOT NULL
phone_number	STRING	NOT NULL
is_buyer	BOOLEAN	DEFAULT : FALSE
is_seller	BOOLEAN	DEFAULT : FALSE

## 2. TABLE: PRODUCT MODEL

Column Name	Data Type	Constraints
id	INT	PRIMARY KEY
title	VARCHAR(255)	NOT NULL
description	TEXT	NOT NULL
price	FLOAT	NOT NULL
condition	VARCHAR(255)	NOT NULL
seller_id	INT	NOT NULL, FOREIGN KEY
availability	VARCHAR(255)	NOT NULL

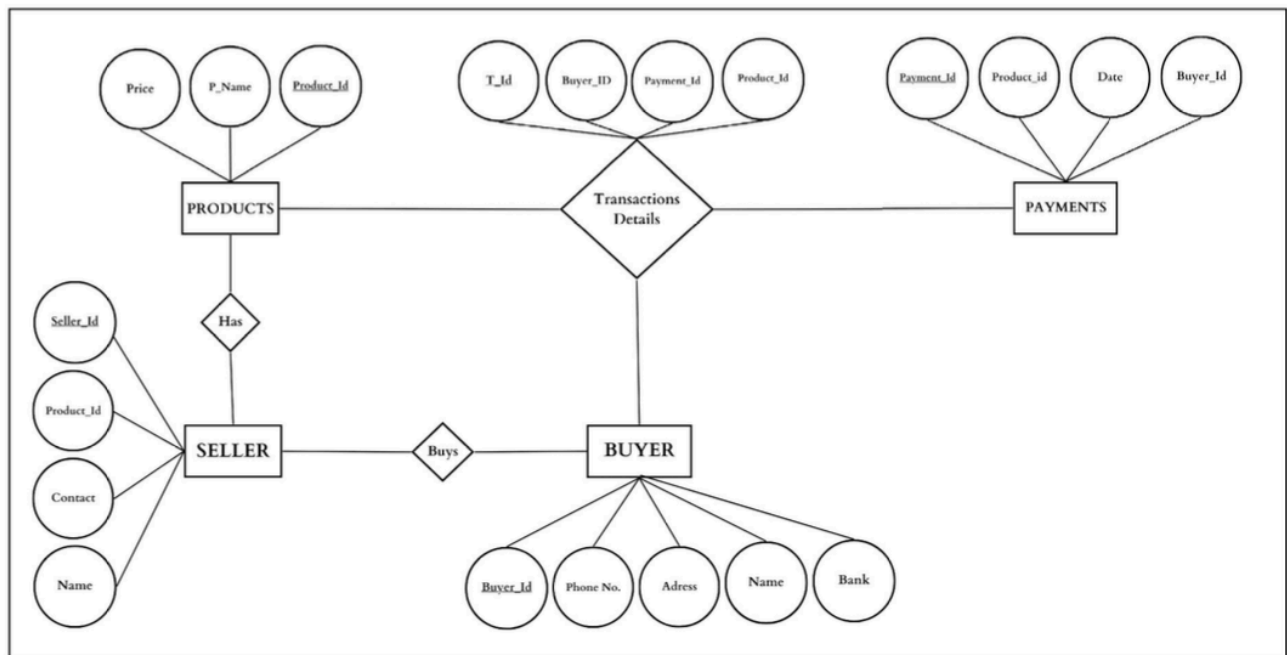
## 3. TABLE: ORDER MODEL

Column Name	Data Type	Constraints
id	INT	PRIMARY KEY
buyer_id	INT	NOT NULL, FOREIGN KEY
seller_id	INT	NOT NULL, FOREIGN KEY
product_id	INT	NOT NULL, FOREIGN KEY
order_date	TIMESTAMP	DEFAULT : CURRENT TIMESTAMP
total_amount	FLOAT	NOT NULL
status	VARCHAR(255)	NOT NULL
payment_method	INT	NOT NULL, FOREIGN KEY

## 4. TABLE: ADMIN MODEL

id	INT	PRIMARY KEY
username	VARCHAR(150)	UNIQUE, NOT NULL
email	VARCHAR(255)	NOT NULL
password	VARCHAR(255)	NOT NULL
first_name	VARCHAR(255)	NOT NULL
last_name	VARCHAR(255)	NOT NULL

- **E-R Diagram:**



- **List of Stakeholders for the problem:**

1. **ADMINS:** Developer and/or College Administrators
2. **SELLER(Student):** Senior Student (or a any student) who wants to sell any of the above mentioned used good(s) on this platform.
3. **BUYER(Student):** Freshers (or any other student of the college) who wants to buy the used good(s) from this platform.

## • **End-User Roles:**

### **1) Administrator:**

- Overall system management and configuration.
- User management, including the ability to add, delete, or modify user accounts.
- Content moderation to ensure compliance with community guidelines.
- Access to analytics and reports for platform performance.

### **2) Seller:**

- Create and manage listings for used goods.
- Set prices, provide product descriptions, and upload images.
- Communicate with potential buyers.
- Mark items as sold or remove listings when necessary.

### **3) Buyer:**

- Browse listings and search for specific items.
- Contact sellers to inquire about products.
- Make offers or negotiate prices.
- Rate and leave feedback for sellers after transactions.

### **4) Customer Support:**

- Assist users with account-related issues.
- Handle general inquiries and provide support during transactions.
- Help resolve disputes and conflicts between buyers and sellers.

## • Database Schema for each Stakeholder:

### 1. Schema for Seller Student:

Table Name	Attributes	Description
Student	student_id, username, first_name, last_name, address, phone_number, is_seller, is_buyer	The student should see only his information as a seller.
Products	product_id, title, description, price, seller_id, condition, availability	The student should see all the products that he/she has listed.
Order	order_id, buyer_id, seller_id, product_id, order_date, total_amount, status	Transaction Details of products purchased from him.

### 2. Schema for Buyer Student:

Table Name	Attributes	Description
Student	student_id, username, first_name, last_name, address, phone_number, is_seller, is_buyer	The student should see only his information as a buyer
Products	product_id, title, description, price, seller_id, condition, availability	The student should see all the products that are listed
Order	order_id, buyer_id, seller_id, product_id, order_date, total_amount, status	Kis product ko uss ne khareedha hain

### 3. Schema for Administrator:

Table Name	Attributes	Description
Admin	admin_id, email, username, first_name, last_name	Should be able to see his own profile(no. of users and no. of prods sold)
Seller	student_id, username, first_name, last_name, address, phone_number, is_seller	How many sellers are active show him his profiles and number of products sold by them
Buyer	student_id, username, first_name, last_name, address, phone_number, is_buyer	How many buyers are there active inside the college and how many products they have purchased
Order	order_id, buyer_id, seller_id, product_id, order_date, total_amount, status	Transaction Details

- **Database Used and their Views:**

- **Database Used:** MongoDB

- **Database Views:**

**1. Admin:** Admin Collection:

Fields:

- adminID(Primary Key: unique for each admin)
- username(admin's username for login)
- email(admin's email)
- password(hashed/encrypted)
- role(DB administrator, Moderator etc)

**2. Seller:** Seller Collection:

Fields:

- sellerID(Primary Key: unique for each seller)
- studentID(Foreign Key: seller is also a student here)
- username(student's username)
- password(hashed/encrypted)
- first\_name(student's first name)
- last\_name(student's last name)
- address(student's address)
- phone\_number(student's phone number)

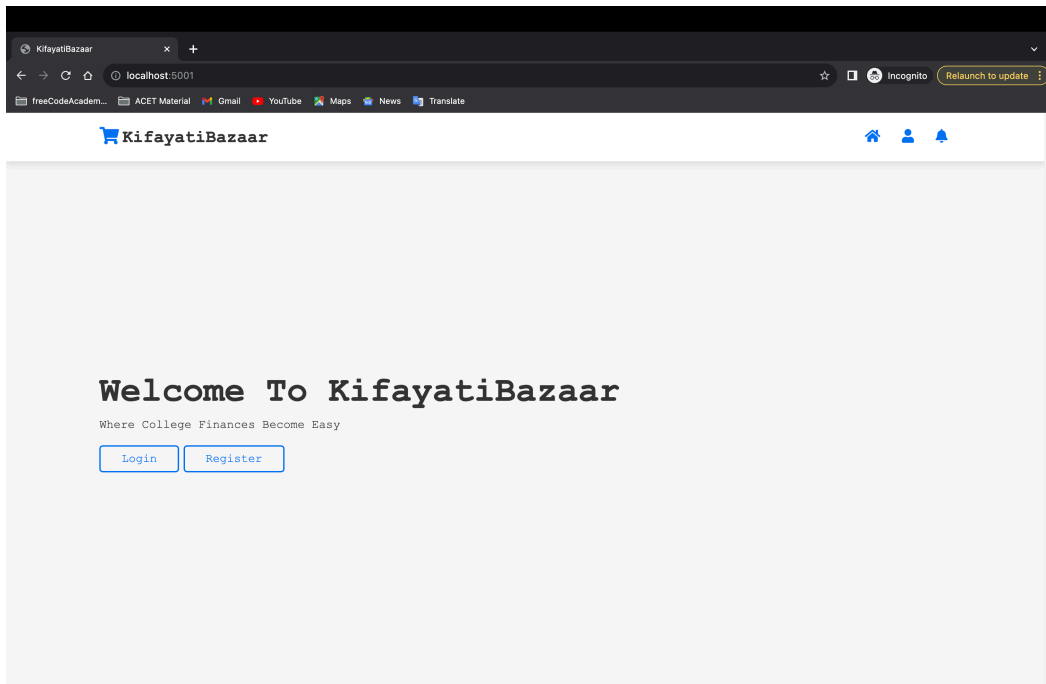
**3. Buyer:** Buyer Collection:

Fields:

- buyerID(Primary Key: unique for each buyer)
- studentID(Foreign Key: buyer is also a student here)
- username(student's username)
- password(hashed/encrypted)
- first\_name(student's first name)
- last\_name(student's last name)
- address(student's address)
- phone\_number(student's phone number)

- **FrontEnd Screenshots (Views of Stake Holders):**

## 1) home.html : home page



## 2) register.html & login.html : register & login page

A screenshot of a web browser showing the 'Kifayati Bazaar Registration' page. The browser's address bar shows 'localhost:5001/register'. The registration form is a white box with a shadow, containing the following fields: 'Username' (with placeholder 'Enter Your Roll Number'), 'Password' (with placeholder 'Enter Password'), 'Confirm Password' (with placeholder 'Re-Enter Password'), 'Full Name' (with placeholder 'Enter Your Full Name'), 'Phone Number' (with placeholder 'Enter Valid Phone Number'), and 'Hostel' (with placeholder 'Enter Hostel Name'). There is a 'User Type' dropdown menu with 'Select' as the current selection. A blue 'Register' button is at the bottom of the form. Below the button, it says 'Already have an account? [Login here](#)'.





Username

Password

User Type

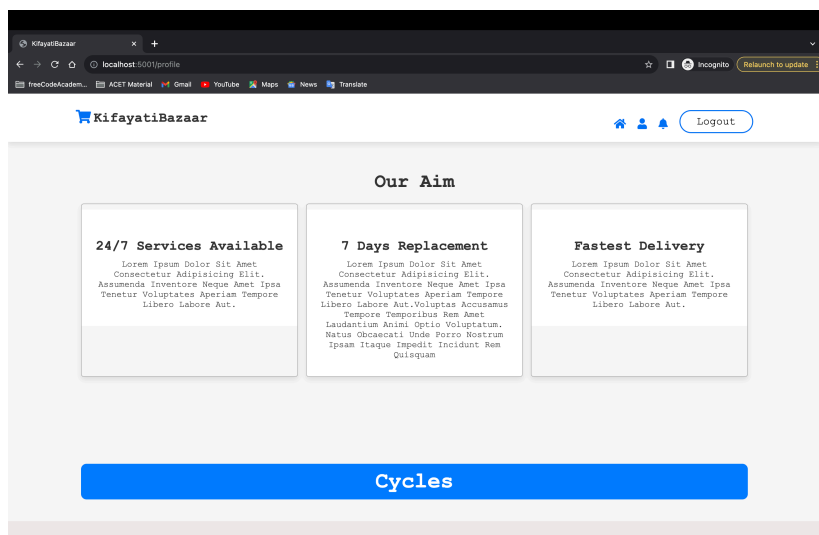
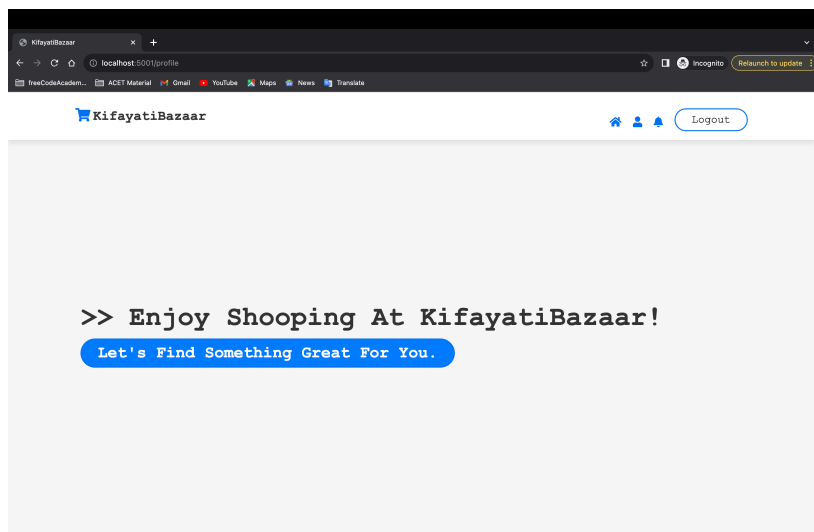
Select

▼

Forgot Password?

Login

### 3) buyer (student) view:



## 4) seller (student) view:

### a) Create a new Product:

Admin Dashboard

Create ProductPresent OrdersPast PurchasesLogout

Add New Product

Product Id

Enter Your Roll Number

Product Name:

Enter product name

Seller Name:

Enter Seller name

Product Price:

Enter product price

Product Description:

Enter product description

Product Image:

Choose fileNo file chosen

Add Product

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### b) View Present Orders:

Admin Dashboard

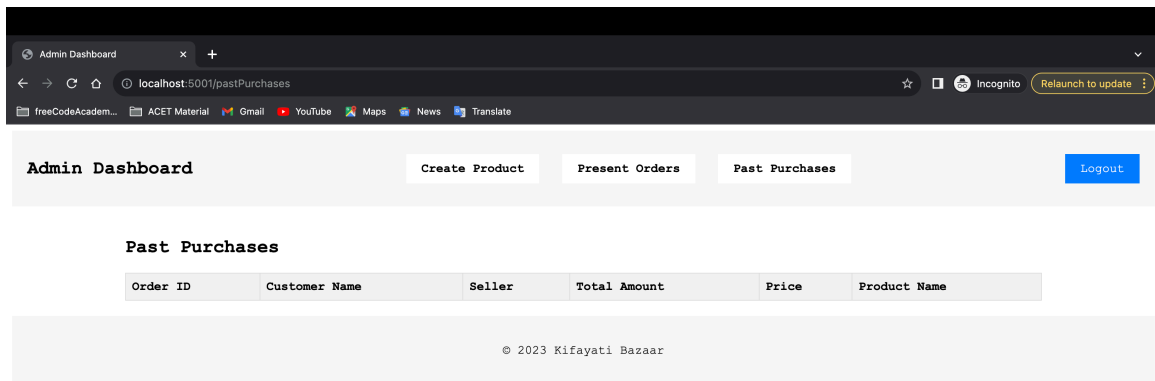
Create ProductPresent OrdersPast PurchasesLogout

Present Orders

Order ID	Customer Name	Seller Name	Customer Contact	Total Amount	Status
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### c)View Past Purchases:



### • Conclusion:

In conclusion, "Kifayati Bazaar" serves as a dynamic and community-centric web application tailored for the unique environment of a college campus, providing a seamless platform for buying and selling used goods. With a focus on safety, user-friendliness, and community engagement, the platform aims to foster a vibrant marketplace where students and faculty can easily connect to exchange items, reduce waste, and contribute to a sustainable and cost-effective lifestyle.



