

# E COMMERCE MANAGEMENT SYSTEM

## A MINI PROJECT REPORT

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## BONAFIDE CERTIFICATE

Certified that this project report “E COMMERCE MANAGEMENT SYSTEM” is the bonafide work of “ASHIKHASHREE KARTHIKEYAN(231501021), AKSHAYA B (231501010), ASHWIN T (231501024), AKAASH SAI(231501009)” who carried out the project work under my supervision.

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## ABSTRACT

The e-commerce website serves as a comprehensive platform for online shopping, offering a wide range of products across various categories. Users can easily browse, search, and filter items to find what they need. The site features a user-friendly interface that facilitates account creation, secure payment processing, and efficient order tracking.

Enhanced with customer reviews and recommendations, it aims to provide a personalized shopping experience. Additionally, the website includes features such as promotional offers and a responsive design for mobile accessibility. Overall, the e-commerce platform is designed to streamline the shopping process, ensuring convenience and satisfaction for users.

## ACKNOWLEDEMENT

Before we describe in brief about our project, we would like to add a few heartfelt words for the people who were very much helpful for us in developing this project. We heartily thank to our Mam " Ms. Alka kumari " for giving us this opportunity to develop the project. We give him our sincere salute for inspiring and motivating us. We would like to thank whole teaching staff of Arka Jain university , who have contributed greatly to the success of this project. I would like to specially thank " Dr. Arvind Kumar Pandey " our Head of the Department who gave me the golden opportunity to do this wonderful project on the topic "Library Management System", which helped me in research and I came to know about so many things.

## TABLE OF CONTENT

### Chapter 1

#### 1. Introduction

##### 1.1 Introduction

##### 1 1.2 Objective

##### 1 1.3 module

### Chapter 2

#### 2. Survey of Technologies.

##### 1 Software description

##### 2 2.2 Languages

##### 2.2.1 HTML

##### 2.2.2 CSS

##### 2 2.2.3 PHP

##### 2 2.2.4 MySQL

### Chapter 3 3. Requirements and analysis

#### 3.1 Requirement Specification

#### 3.2 Hardware and Software Requirements

#### 3.3 Data flow diagram

##### 3.3.1 Level 0

##### 3.3.2 Level 1

#### 3.3 Data Dictionary

#### 3.4 ER-Diagram

#### 3. 5 Normalization

### Chapter 4

#### 4. Program code

##### 4.1 Code Details and Code Efficiency

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Chapter 5

5. Result and Discussion

Chapter 6

6. References

Chapter 7

7. Conclusion

# Ch 1. INTRODUCTION

## 1.1:Introduction:

An e-commerce website is a software platform designed to streamline the buying and selling of goods online. It enables businesses to showcase products and provides customers with a convenient way to browse, add items to their cart, and make purchases. This system automates various retail functions, such as inventory tracking, order processing, and payment handling, making online transactions smooth and efficient.

The platform allows administrators to manage product listings, track stock levels, and handle customer orders, while customers benefit from a seamless shopping experience with options to search for products, make purchases, and view their order history. An e-commerce website serves as a digital storefront, enhancing the accessibility and reach of a business by enabling customers to shop anytime, anywhere.

## 1.2 OBJECTIVE

The main objective of the e-commerce website is to manage details of products, customers, orders, inventory, and payments. It centralizes information related to product listings, customer accounts, and order processing, ensuring efficient operations. Developed for administrative use, the system provides secure access for administrators to manage products, track inventory, and oversee transactions, enhancing operational efficiency and customer experience.

## Ch 2. SURVEY OF TECHNOLOGY

### 2.1:Software Description

**NetBeans** is a free, open-source Integrated Development Environment (IDE) primarily used for Java development. It provides a comprehensive set of tools for building, debugging, and deploying applications. Known for its modular structure, NetBeans allows developers to manage complex projects efficiently through its support for Java, as well as languages like PHP, HTML, and JavaScript.

### 2.2 LANGUAGES

HTML (HyperText Markup Language) is the standard language for creating and structuring content on the web, defining elements like headings, paragraphs, links, and images.

CSS (Cascading Style Sheets) is used to style HTML elements, controlling the layout, design, colors, fonts, and overall appearance of a web page.

MySQL is an open-source relational database management system that uses SQL to manage and store data in structured tables, making it ideal for dynamic, data-driven applications.

Java is a versatile, object-oriented programming language used for building platform-independent applications, known for its reliability, scalability, and strong support for web and enterprise-level development.



## Ch 3. REQUIREMENT AND ANALYSIS

### 3.1 Requirement specification

#### User Requirements

The e-commerce system should allow users to browse products by categories, search for specific items by name, price range, and filter based on product attributes. Users should be able to register, log in, view product details, add products to the shopping cart, and complete the checkout process. Administrators should be able to manage product listings, orders, and customer accounts.

#### System Requirements

The system should provide real-time inventory management, secure user authentication, and a smooth checkout process. There should be backup mechanisms for database and order data to ensure data integrity and security. The operating system should be Windows 10 or higher, and the website should be accessible through modern web browsers.

### 3.2 HARDWARE AND SOFTWARE REQUIREMENTS

#### Software Requirements

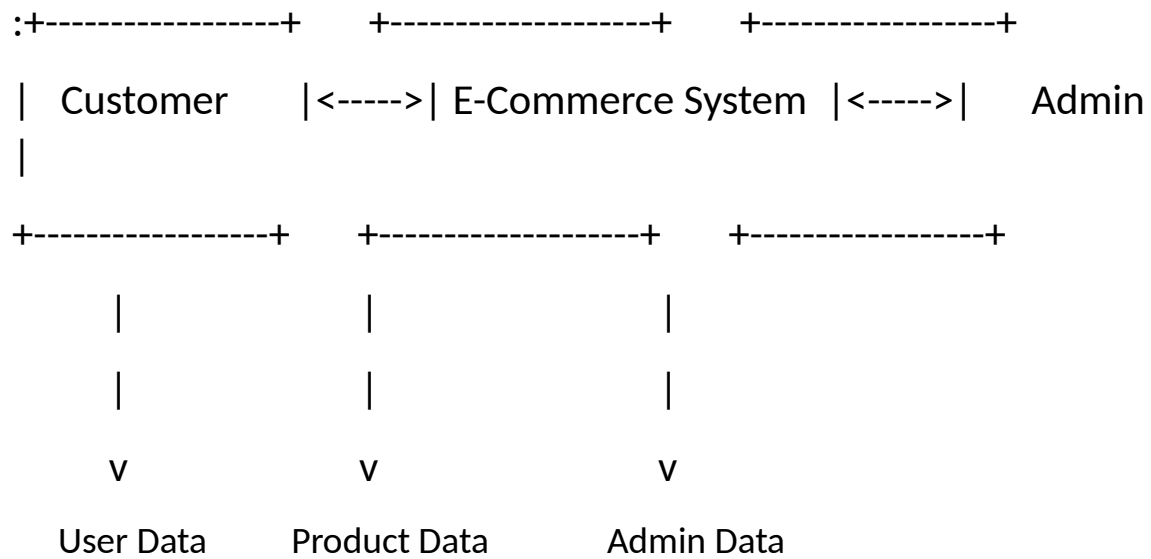
- **Operating System:** Windows 10 or higher
- **Front End:** HTML, CSS, JavaScript
- **Back End:** Java (with NetBeans IDE)
- **Database:** MySQL
- **Web Browser:** Chrome, Firefox, or any modern web browser
- **Additional Software:** Apache Tomcat (for deploying Java web applications)

#### Hardware Requirements

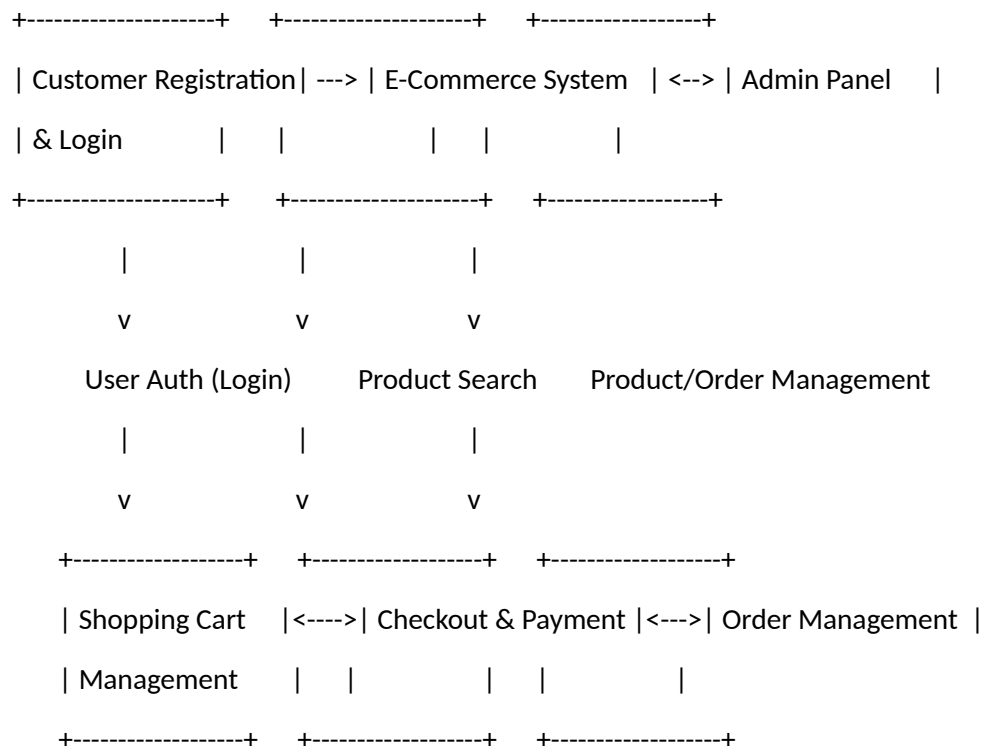
- **Desktop PC or Laptop**
- **Printer** (optional for generating invoices or receipts)
- **Operating System:** Windows 10 or higher
- **Processor:** Intel® Core™ i3 or equivalent
- **RAM:** 4 GB or higher
- **Storage:** Minimum 500 MB of free disk space
- **Monitor Resolution:** 1024 x 768 or higher

### 3.3 Data flow diagram

## Level 0 DFD



## Level 1 - Detailed Diagram



## 3.3 DATA DICTIONARY

### 1. Users Table

Stores user information for both customers and admins.

Field	Data Type	Description	Constraints
user_id	INT	Unique identifier for each user	Primary Key, Auto Increment
username	VARCHAR(255)	Username for login	Unique, Not Null
email	VARCHAR(255)	User's email address	Unique, Not Null
password_hash	VARCHAR(255)	Hashed password	Not Null
role	ENUM('customer', 'admin')	Role of the user (customer/admin)	Default: 'customer', Not Null
created_at	DATETIME	Timestamp for when the user was created	Not Null
updated_at	DATETIME	Timestamp for when the user was last updated	Not Null

### 2. Products Table

Stores product details available in the e-commerce store.

Field	Data Type	Description	Constraints
product_id	INT	Unique identifier for each product	Primary Key, Auto Increment
name	VARCHAR(255)	Name of the product	Not Null
description	TEXT	Detailed description of the product	Not Null
price	DECIMAL(10,2)	Price of the product	Not Null
stock_quantity	INT	Number of items available in stock	Not Null, Default: 0
image_url	VARCHAR(255)	URL of the product image	Not Null
category	VARCHAR(100)	Category of the product (e.g., electronics)	Not Null
created_at	DATETIME	Timestamp for when the product was added	Not Null
updated_at	DATETIME	Timestamp for when the product details were last updated	Not Null

### 3. Orders Table

Stores details about customer orders.

Field	Data Type	Description	Constraints
order_id	INT	Unique identifier for each order	Primary Key, Auto Increment
user_id	INT	Foreign key referencing the Users table	Not Null, Foreign Key
total_amount	DECIMAL(10,2)	Total price of the order	Not Null
tax	DECIMAL(10,2)	Tax amount for the order	Not Null
shipping_address	TEXT	Shipping address for the order	Not Null
status	ENUM('pending', 'shipped', 'delivered', 'cancelled')	Status of the order	Default: 'pending', Not Null
created_at	DATETIME	Timestamp for when the order was placed	Not Null
updated_at	DATETIME	Timestamp for when the order was last updated	Not Null

### 4. Order\_Items Table

Stores details about the items in each order.

Field	Data Type	Description	Constraints
order_item_id	INT	Unique identifier for each order item	Primary Key, Auto Increment
order_id	INT	Foreign key referencing the Orders table	Not Null, Foreign Key
product_id	INT	Foreign key referencing the Products table	Not Null, Foreign Key
quantity	INT	Quantity of the product in the order	Not Null
unit_price	DECIMAL(10,2)	Price per unit of the product at the time of the order	Not Null

## 5. Shopping\_Cart Table

Stores temporary cart items for customers before they checkout.

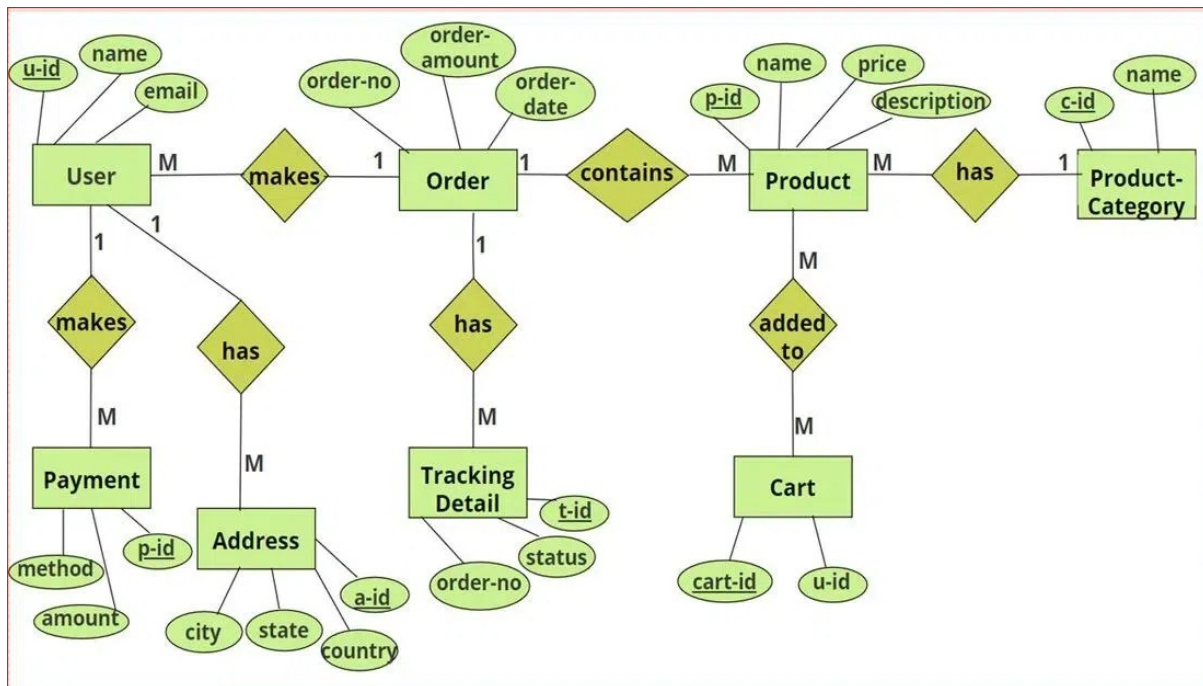
Field	Data Type	Description	Constraints
cart_id	INT	Unique identifier for each cart item	Primary Key, Auto Increment
user_id	INT	Foreign key referencing the Users table	Not Null, Foreign Key
product_id	INT	Foreign key referencing the Products table	Not Null, Foreign Key
quantity	INT	Quantity of the product added to the cart	Not Null
added_at	DATETIME	Timestamp for when the item was added to the cart	Not Null

## 6. Payment Table

Stores payment information for completed orders.

Field	Data Type	Description	Constraints
payment_id	INT	Unique identifier for each payment	Primary Key, Auto Increment
order_id	INT	Foreign key referencing the Orders table	Not Null, Foreign Key
payment_method	ENUM('credit card', 'debit card', 'paypal', 'bank transfer')	Payment method used for the order	Not Null
payment_status	ENUM('pending', 'completed', 'failed')	Status of the payment	Default: 'pending', Not Null
payment_date	DATETIME	Date and time of payment	Not Null

## 3.4 ER DIAGRAM



The ER diagram for an e-commerce platform includes these main entities:

1. **User:** Stores user information.
2. **Product:** Lists products with details.
3. **Order:** Records user purchases.
4. **OrderItem:** Details products within orders.
5. **CartItem:** Tracks items in users' carts.

#### Relationships:

- A User can place multiple Orders.
- An Order can include multiple OrderItems.
- Products are linked to OrderItems and CartItems.
- Users can have multiple CartItems.

### 3. 5 NORMALIZATION

#### Unnormalized Table:

OrderID	CustomerID	CustomerName	Email	ShippingAddress	ProductID	ProductName	Quantity	Price	SupplierID	SupplierName
101	1	John Doe	<a href="mailto:john.doe@gmail.com">john.doe@gmail.com</a>	123 Elm St, NY	201	Laptop	2	1000	301	TechCorp
101	1	John Doe	<a href="mailto:john.doe@gmail.com">john.doe@gmail.com</a>	123 Elm St, NY	202	Mouse	1	20	302	GadgetCo
102	2	Jane Smith	<a href="mailto:jane.smith@yahoo.com">jane.smith@yahoo.com</a>	456 Oak St, LA	203	Keyboard	1	50	303	OfficeGear
102	2	Jane Smith	<a href="mailto:jane.smith@yahoo.com">jane.smith@yahoo.com</a>	456 Oak St, LA	201	Laptop	1	1000	301	TechCorp
103	3	Alice Brown	<a href="mailto:alice.brown@gmail.com">alice.brown@gmail.com</a>	789 Pine St, SF	204	Monitor	2	200	304	DisplayPro
103	3	Alice Brown	<a href="mailto:alice.brown@gmail.com">alice.brown@gmail.com</a>	789 Pine St, SF	202	Mouse	1	20	302	GadgetCo

## First Normal Form (1NF)

Normalized to 1NF:

OrderID	CustomerID	CustomerName	Email	ShippingAddress	ProductID	ProductName	Quantity	Price	SupplierID	SupplierName
101	1	John Doe	<a href="mailto:john.doe@gmail.com">john.doe@gmail.com</a>	123 Elm St, NY	201	Laptop	2	1000	301	TechCorp
101	1	John Doe	<a href="mailto:john.doe@gmail.com">john.doe@gmail.com</a>	123 Elm St, NY	202	Mouse	1	20	302	GadgetCo
102	2	Jane Smith	<a href="mailto:jane.smith@yahoo.com">jane.smith@yahoo.com</a>	456 Oak St, LA	203	Keyboard	1	50	303	OfficeGear
102	2	Jane Smith	<a href="mailto:jane.smith@yahoo.com">jane.smith@yahoo.com</a>	456 Oak St, LA	201	Laptop	1	1000	301	TechCorp
103	3	Alice Brown	<a href="mailto:alice.brown@gmail.com">alice.brown@gmail.com</a>	789 Pine St, SF	204	Monitor	2	200	304	DisplayPro
103	3	Alice Brown	<a href="mailto:alice.brown@gmail.com">alice.brown@gmail.com</a>	789 Pine St, SF	202	Mouse	1	20	302	GadgetCo

## Normalized to 2NF:

CustomerID	CustomerName	Email	ShippingAddress
1	John Doe	<a href="mailto:john.doe@gmail.com">john.doe@gmail.com</a>	123 Elm St, NY
2	Jane Smith	<a href="mailto:jane.smith@yahoo.com">jane.smith@yahoo.com</a>	456 Oak St, LA
3	Alice Brown	<a href="mailto:alice.brown@gmail.com">alice.brown@gmail.com</a>	789 Pine St, SF

### 2. Orders Table:

OrderID	CustomerID
101	1
102	2
103	3

### 3. Products Table:

ProductID	ProductName	Price
201	Laptop	1000
202	Mouse	20
203	Keyboard	50
204	Monitor	200

#### 4. Suppliers Table:

SupplierID	SupplierName
301	TechCorp
302	GadgetCo
303	OfficeGear
304	DisplayPro

#### 5. OrderItems Table:

OrderID	ProductID	Quantity	SupplierID
101	201	2	301
101	202	1	302
102	203	1	303
102	201	1	301
103	204	2	304
103	202	1	302

### Final Tables in 3NF:

#### 1. Customers Table:

CustomerID	CustomerName	Email	ShippingAddress
1	John Doe	<a href="mailto:john.doe@gmail.com">john.doe@gmail.com</a>	123 Elm St, NY
2	Jane Smith	<a href="mailto:jane.smith@yahoo.com">jane.smith@yahoo.com</a>	456 Oak St, LA
3	Alice Brown	<a href="mailto:alice.brown@gmail.com">alice.brown@gmail.com</a>	789 Pine St, SF

#### 2. Orders Table:

OrderID	CustomerID
101	1
102	2
103	3



### 3. Products Table:

ProductID	ProductName	Price
201	Laptop	1000
202	Mouse	20
203	Keyboard	50
204	Monitor	200

### 4. Suppliers Table:

SupplierID	SupplierName
301	TechCorp
302	GadgetCo
303	OfficeGear
304	DisplayPro

### 5. OrderItems Table:

OrderID	ProductID	Quantity	SupplierID
101	201	2	301
101	202	1	302
102	203	1	303
102	201	1	301
103	204	2	304
103	202	1	302

## 4 PROGRAM CODE

### 4.1. CODE DETAILS AND CODE EFFICIENCY

FRONTEND :

```
<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>E-commerce Sign Up / Sign In</title>

<style>

/* Global Styles */

body {

font-family: 'Helvetica Neue', Arial, sans-serif;

background: linear-gradient(120deg, #f6d365 0%, #fda085 100%);

display: flex;

justify-content: center;

align-items: center;

height: 100vh;

margin: 0;

}

/* Container Styles */

.container {

background: rgba(255, 255, 255, 0.9);
```

```
padding: 50px;

border-radius: 12px;

box-shadow: 0 0 25px rgba(0, 0, 0, 0.2);

width: 100%;

max-width: 500px;

text-align: center;

}

.container h2 {

margin-bottom: 30px;

font-size: 24px;

color: #333;

}

/* Form Input Styles */

.container input[type="text"],

.container input[type="password"],

.container input[type="email"] {

width: 100%;

padding: 15px;

margin: 15px 0;

border: 1px solid #ccc;

border-radius: 6px;

font-size: 16px;

}
```

```
/* Button Styles */

.container button {

width: 100%;

padding: 15px;

background-color: #ff6600;

border: none;

border-radius: 6px;

color: #fff;

font-size: 18px;

cursor: pointer;

transition: background-color 0.3s ease;

}
```

```
.container button:hover {

background-color: #cc5200;

}
```

```
/* Link Styles */

.container a {

display: block;

margin: 15px 0;

color: #ff6600;

text-decoration: none;
```

```
}
```

```
.container a:hover {  
text-decoration: underline;  
}
```

```
/* Tabs Styles */
```

```
.tabs {  
  
display: flex;  
  
justify-content: center;  
  
margin-bottom: 30px;  
}
```

```
.tabs button {  
  
flex: 1;  
  
padding: 15px;  
  
background-color: #eee;  
  
border: none;  
  
border-radius: 6px 6px 0 0;  
  
cursor: pointer;  
  
transition: background-color 0.3s ease;  
}
```

```
.tabs button.active {  
  
background-color: #ff6600;  
  
color: #fff;  
  
}
```

```
/* Form Wrapper Styles */  
  
.form-wrapper {  
  
display: none;  
  
}
```

```
.form-wrapper.active {  
  
display: block;  
  
}
```

```
</style>
```

```
<script>
```

```
function showForm(formId) {  
  
document.querySelectorAll('.form-wrapper').forEach(form => {  
  
form.classList.remove('active');  
  
});  
  
document.getElementById(formId).classList.add('active');  
  
document.querySelectorAll('.tabs button').forEach(tab => {  
  
tab.classList.remove('active');  
  
});
```

```

document.getElementById(formId + '-tab').classList.add('active');

}

window.onload = function() {

showForm('signin-form'); // Show sign in form by default

};

</script>

</head>

<body>

<div class="container">

<div class="tabs">

<button id="signin-form-tab" class="active" onclick="showForm('signin-form')">Sign
In</button>

<button id="signup-form-tab" onclick="showForm('signup-form')">Sign Up</button>

</div>

<div id="signin-form" class="form-wrapper active">

<h2>Sign In</h2>

<form>

<input type="text" placeholder="Username" required>

<input type="password" placeholder="Password" required>

<button type="submit">Sign In</button>

<a href="#">Forgot Password?</a>

</form>

</div>

<div id="signup-form" class="form-wrapper">

```

```
<h2>Sign Up</h2>

<form>

<input type="text" placeholder="Username" required>

<input type="email" placeholder="Email" required>

<input type="password" placeholder="Password" required>

<button type="submit">Sign Up</button>

</form>

</div>

</div>

</body>

</html>
```

## HOME PAGE

```
<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>E-commerce Home Page</title>

<style>

/* Global Styles */

body {

font-family: 'Helvetica Neue', Arial, sans-serif;

background-color: #f4f4f4;
```



```
margin: 0;

padding: 0;

}

header {

background-color: #ff6600;

color: #fff;

padding: 10px 0;

text-align: center;

}

header h1 {

margin: 0;

}
```

```
/* Navbar Styles */
```

```
.navbar {

display: flex;

justify-content: center;

background-color: #333;

overflow: hidden;

}

.navbar a {

float: left;

display: block;
```

```
color: white;

text-align: center;

padding: 14px 20px;

text-decoration: none;

}

.navbar a:hover {

background-color: #ddd;

color: black;

}
```

```
/* Main Content Styles */
```

```
.main-content {

padding: 20px;

}

.section-title {

font-size: 24px;

color: #333;

margin-bottom: 20px;

}

.product-grid {

display: grid;

grid-template-columns: repeat(auto-fill, minmax(200px, 1fr));

gap: 20px;
```

```
}

.product {

background-color: #fff;

border-radius: 8px;

box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);

padding: 15px;

text-align: center;

}

.product img {

width: 100%;

height: auto;

border-bottom: 1px solid #eee;

margin-bottom: 10px;

}

.product h3 {

font-size: 18px;

color: #333;

}

.product p {

font-size: 14px;

color: #777;

}

.product .details {
```

```
margin-top: 10px;  
  
font-size: 12px;  
  
color: #999;  
  
}
```

```
/* Footer Styles */
```

```
footer {  
  
background-color: #333;  
  
color: #fff;  
  
text-align: center;  
  
padding: 10px 0;  
  
position: fixed;  
  
bottom: 0;  
  
width: 100%;  
  
}
```

```
</style>
```

```
</head>
```

```
<body>
```

```
<header>
```

```
<h1>My E-commerce Site</h1>
```

```
</header>
```

```
<div class="navbar">
```

```
<a href="#">Home</a>
```

```
<a href="#">Products</a>

<a href="#">Categories</a>

<a href="#">Contact</a>

</div>

<div class="main-content">

<div class="section-title">Featured Products</div>

<div class="product-grid">

<div class="product">



<h3>Product 1</h3>

<p>High-quality product for everyday use.</p>

<div class="details">Product ID: 101</div>

</div>

<div class="product">



<h3>Product 2</h3>

<p>Durable and reliable, perfect for your needs.</p>

<div class="details">Product ID: 102</div>

</div>

<div class="product">



<h3>Product 3</h3>

<p>Innovative design and excellent performance.</p>
```

```
<div class="details">Product ID: 103</div>
```

```
</div>
```

```
</div>
```

```
</div>
```

```
<footer>
```

```
&copy; 2024 My E-commerce Site. All rights reserved.
```

```
</footer>
```

```
</body>
```

```
</html>
```

### Product Detail Page:

```
<!DOCTYPE html>
```

```
<html lang="en">
```

```
<head>
```

```
<meta charset="UTF-8">
```

```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```

```
<title>Product Listing Page</title>
```

```
<style>
```

```
/* Global Styles */
```

```
body {
```

```
font-family: 'Helvetica Neue', Arial, sans-serif;
```

```
background-color: #f4f4f4;
```

```
margin: 0;
```

```
padding: 0;
```

```
}  
  
header {  
  
background-color: #ff6600;  
  
color: #fff;  
  
padding: 10px 0;  
  
text-align: center;  
  
}  
  
header h1 {  
  
margin: 0;  
  
}
```

```
/* Navbar Styles */  
  
.navbar {  
  
display: flex;  
  
justify-content: center;  
  
background-color: #333;  
  
overflow: hidden;  
  
}  
  
.navbar a {  
  
float: left;  
  
display: block;  
  
color: white;  
  
text-align: center;
```

```
padding: 14px 20px;

text-decoration: none;

}

.navbar a:hover {

background-color: #ddd;

color: black;

}
```

```
/* Main Content Styles */
```

```
.main-content {

padding: 20px;

}

.section-title {

font-size: 24px;

color: #333;

margin-bottom: 20px;

}

.product-grid {

display: grid;

grid-template-columns: repeat(auto-fill, minmax(200px, 1fr));

gap: 20px;

}

.product {
```



```
background-color: #fff;

border-radius: 8px;

box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);

padding: 15px;

text-align: center;

}

.product img {

width: 100%;

height: auto;

border-bottom: 1px solid #eee;

margin-bottom: 10px;

}

.product h3 {

font-size: 18px;

color: #333;

}

.product p {

font-size: 14px;

color: #777;

}

.product .details {

margin-top: 10px;

font-size: 12px;
```

```
color: #999;

}

/* Footer Styles */

footer {

background-color: #333;

color: #fff;

text-align: center;

padding: 10px 0;

position: fixed;

bottom: 0;

width: 100%;

}

</style>

</head>

<body>

<header>

<h1>My E-commerce Site</h1>

</header>

<div class="navbar">

<a href="#">Home</a>

<a href="#">Products</a>

<a href="#">Categories</a>
```

```
<a href="#">Contact</a>

</div>

<div class="main-content">

<div class="section-title">Product Listing</div>

<div class="product-grid">

<div class="product">



<h3>Product 1</h3>

<p>High-quality product for everyday use.</p>

<div class="details">Product ID: 101</div>

<div class="details">Price: $29.99</div>

<div class="details">Available: In Stock</div>

</div>

<div class="product">



<h3>Product 2</h3>

<p>Durable and reliable, perfect for your needs.</p>

<div class="details">Product ID: 102</div>

<div class="details">Price: $49.99</div>

<div class="details">Available: In Stock</div>

</div>

<div class="product">


```

```
<h3>Product 3</h3>

<p>Innovative design and excellent performance.</p>

<div class="details">Product ID: 103</div>

<div class="details">Price: $39.99</div>

<div class="details">Available: Out of Stock</div>

</div>

<div class="product">



<h3>Product 4</h3>

<p>Stylish and comfortable, perfect for daily wear.</p>

<div class="details">Product ID: 104</div>

<div class="details">Price: $59.99</div>

<div class="details">Available: In Stock</div>

</div>

<div class="product">



<h3>Product 5</h3>

<p>Compact and efficient, ideal for small spaces.</p>

<div class="details">Product ID: 105</div>

<div class="details">Price: $19.99</div>

<div class="details">Available: In Stock</div>

</div>

<div class="product">
```

```


<h3>Product 6</h3>

<p>Powerful and versatile, perfect for any task.</p>

<div class="details">Product ID: 106</div>

<div class="details">Price: $89.99</div>

<div class="details">Available: In Stock</div>

</div>

<div class="product">



<h3>Product 7</h3>

<p>Elegant design with top-notch functionality.</p>

<div class="details">Product ID: 107</div>

<div class="details">Price: $99.99</div>

<div class="details">Available: In Stock</div>

</div>

<div class="product">



<h3>Product 8</h3>

<p>Innovative technology for the modern home.</p>

<div class="details">Product ID: 108</div>

<div class="details">Price: $79.99</div>

<div class="details">Available: Out of Stock</div>

</div>
```

```
<div class="product">



<h3>Product 9</h3>

<p>Perfect blend of style and performance.</p>

<div class="details">Product ID: 109</div>

<div class="details">Price: $39.99</div>

<div class="details">Available: In Stock</div>

</div>

<div class="product">



<h3>Product 10</h3>

<p>High durability and excellent craftsmanship.</p>

<div class="details">Product ID: 110</div>

<div class="details">Price: $59.99</div>

<div class="details">Available: In Stock</div>

</div>

<div class="product">



<h3>Product 11</h3>

<p>Superior quality and unmatched performance.</p>

<div class="details">Product ID: 111</div>

<div class="details">Price: $69.99</div>

<div class="details">Available: Out of Stock</div>
```

```

</div>

<div class="product">



<h3>Product 12</h3>

<p>Designed for comfort and efficiency.</p>

<div class="details">Product ID: 112</div>

<div class="details">Price: $49.99</div>

<div class="details">Available: In Stock</div>

</div>

<div class="product">



<h3>Product 13</

```

## Shopping Cart Page:

```

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>Shopping Cart</title>

<style>

/* Global Styles */

body {

font-family: 'Helvetica Neue', Arial, sans-serif;

```

```
background-color: #f4f4f4;
```

```
margin: 0;
```

```
padding: 0;
```

```
}
```

```
header {
```

```
background-color: #ff6600;
```

```
color: #fff;
```

```
padding: 10px 0;
```

```
text-align: center;
```

```
}
```

```
header h1 {
```

```
margin: 0;
```

```
}
```

```
/* Navbar Styles */
```

```
.navbar {
```

```
display: flex;
```

```
justify-content: center;
```

```
background-color: #333;
```

```
overflow: hidden;
```

```
}
```

```
.navbar a {
```

```
float: left;
```



```
display: block;

color: white;

text-align: center;

padding: 14px 20px;

text-decoration: none;

}

.navbar a:hover {

background-color: #ddd;

color: black;

}


/* Main Content Styles */

.main-content {

padding: 20px;

}

.section-title {

font-size: 24px;

color: #333;

margin-bottom: 20px;

}

.cart-table {

width: 100%;

border-collapse: collapse;
```

```
margin-bottom: 20px;

}

.cart-table th, .cart-table td {

padding: 15px;

text-align: left;

border-bottom: 1px solid #ddd;

}

.cart-table th {

background-color: #ff6600;

color: #fff;

}

.cart-table td {

background-color: #fff;

}

.cart-table img {

width: 50px;

height: auto;

}

.cart-summary {

text-align: right;

font-size: 18px;

color: #333;

}
```

```
.cart-summary .total {  
  
font-weight: bold;  
  
margin-top: 10px;  
  
}  
  
.checkout-button {  
  
background-color: #ff6600;  
  
color: #fff;  
  
padding: 10px 20px;  
  
border: none;  
  
border-radius: 4px;  
  
cursor: pointer;  
  
font-size: 18px;  
  
}  
  
.checkout-button:hover {  
  
background-color: #cc5200;  
  
}  
  
/* Footer Styles */  
  
footer {  
  
background-color: #333;  
  
color: #fff;  
  
text-align: center;  
  
padding: 10px 0;
```

```
position: fixed;

bottom: 0;

width: 100%;

}

</style>

</head>

<body>

<header>

<h1>My E-commerce Site</h1>

</header>

<div class="navbar">

<a href="#">Home</a>

<a href="#">Products</a>

<a href="#">Categories</a>

<a href="#">Contact</a>

</div>

<div class="main-content">

<div class="section-title">Shopping Cart</div>

<table class="cart-table">

<tr>

<th>Product</th>

<th>ID</th>

<th>Quantity</th>
```

```

<th>Price</th>

<th>Total</th>

</tr>

<tr>

<td><br>Product 1</td>

<td>101</td>

<td>1</td>

<td>$29.99</td>

<td>$29.99</td>

</tr>

<tr>

<td><br>Product 2</td>

<td>102</td>

<td>2</td>

<td>$49.99</td>

<td>$99.98</td>

</tr>

<tr>

<td><br>Product 3</td>

<td>103</td>

<td>1</td>

<td>$39.99</td>

<td>$39.99</td>

```

```
</tr>

</table>

<div class="cart-summary">

<div>Subtotal: $169.96</div>

<div class="total">Total: $169.96</div>

<button class="checkout-button">Proceed to Checkout</button>

</div>

</div>

<footer>

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</footer>

</body>

</html>
```

## backend

### Database Connection (db.php):

```
<?php

$servername = "localhost";

$username = "root";

$password = "";

$dbname = "ecommerce";

$conn = new mysqli($servername, $username, $password, $dbname);
```

```
if ($conn->connect_error) {  
  
die("Connection failed: " . $conn->connect_error);  
  
}  
  
?>
```

Product Listing (products.php):

```
<?php  
  
include 'db.php';  
  
$sql = "SELECT id, name, description, price, image FROM products";  
  
$result = $conn->query($sql);  
  
if ($result->num_rows > 0) {  
  
while($row = $result->fetch_assoc()) {  
  
echo "<div class='product'>  
  
<img src='" . $row["image"] . "' alt='" . $row["name"] . "'>  
  
<h3>" . $row["name"] . "</h3>  
  
<p>" . $row["description"] . "</p>  
  
<p>Price: $" . $row["price"] . "</p>  
  
<form method='post' action='cart.php'>  
  
<input type='hidden' name='product_id' value='" . $row["id"] . "'>
```

```
<input type='submit' value='Add to Cart'>
```

```
</form>
```

```
</div>";
```

```
}
```

```
} else {
```

```
echo "0 results";
```

```
}
```

```
$conn->close();
```

```
?>
```

### **Shopping Cart (cart.php):**

```
<?php
```

```
session_start();
```

```
include 'db.php';
```

```
if ($_SERVER["REQUEST_METHOD"] == "POST") {
```

```
$product_id = $_POST["product_id"];
```

```
$sql = "SELECT id, name, price FROM products WHERE id='$product_id'";
```

```
$result = $conn->query($sql);
```

```
$product = $result->fetch_assoc();
```

```
if ($product) {
```



```

$item = array("id" => $product["id"], "name" => $product["name"], "price" =>
$product["price"], "quantity" => 1);

if (!isset($_SESSION["cart"])) {

    $_SESSION["cart"] = array();

}

array_push($_SESSION["cart"], $item);

}

}

$cart = isset($_SESSION["cart"]) ? $_SESSION["cart"] : array();

$total = 0;

echo "<h2>Shopping Cart</h2>";

echo "<table><tr><th>Name</th><th>Price</th><th>Quantity</th><th>Total</th></tr>";

foreach ($cart as $item) {

    $item_total = $item["price"] * $item["quantity"];

    echo "<tr>

    <td>" . $item["name"] . "</td>

    <td>" . $item["price"] . "</td>

    <td>" . $item["quantity"] . "</td>

    <td>" . $item_total . "</td>

```

```

</tr>";

$total += $item_total;

}

echo "<tr><td colspan='3'>Grand Total</td><td>" . $total . "</td></tr></table>";

echo "<a href='checkout.php'>Proceed to Checkout</a>";

$conn->close();

?>

```

### **Checkout Page (checkout.php):**

```

<?php

session_start();

if ($_SERVER["REQUEST_METHOD"] == "POST") {

    $billing_name = $_POST["billing_name"];

    $billing_email = $_POST["billing_email"];

    $billing_address = $_POST["billing_address"];

    $billing_city = $_POST["billing_city"];

    $billing_state = $_POST["billing_state"];

    $billing_zip = $_POST["billing_zip"];

    $billing_country = $_POST["billing_country"];

    // Payment processing logic here

```

```
// Order confirmation and saving to database logic here
```

```
unset($_SESSION["cart"]);
```

```
echo "Order placed successfully!";
```

```
} else {
```

```
$cart = isset($_SESSION["cart"]) ? $_SESSION["cart"] : array();
```

```
$total = 0;
```

```
foreach ($cart as $item) {
```

```
$total += $item["price"] * $item["quantity"];
```

```
}
```

```
echo "<h2>Checkout</h2>";
```

```
echo "<form method='post' action='checkout.php'>
```

```
<h3>Billing Information</h3>
```

```
<label for='billing_name'>Name</label><input type='text' name='billing_name'  
required><br>
```

```
<label for='billing_email'>Email</label><input type='email' name='billing_email'  
required><br>
```

```
<label for='billing_address'>Address</label><input type='text' name='billing_address'  
required><br>
```

```
<label for='billing_city'>City</label><input type='text' name='billing_city' required><br>
```

```
<label for='billing_state'>State</label><input type='text' name='billing_state' required><br>
```

```
<label for='billing_zip'>Zip Code</label><input type='text' name='billing_zip' required><br>
```

```
<label for='billing_country'>Country</label><input type='text' name='billing_country'
required><br>
```

```
<h3>Order Summary</h3>
```

```
<p>Total: $" . $total . "</p>
```

```
<button type='submit'>Confirm and Pay</button>
```

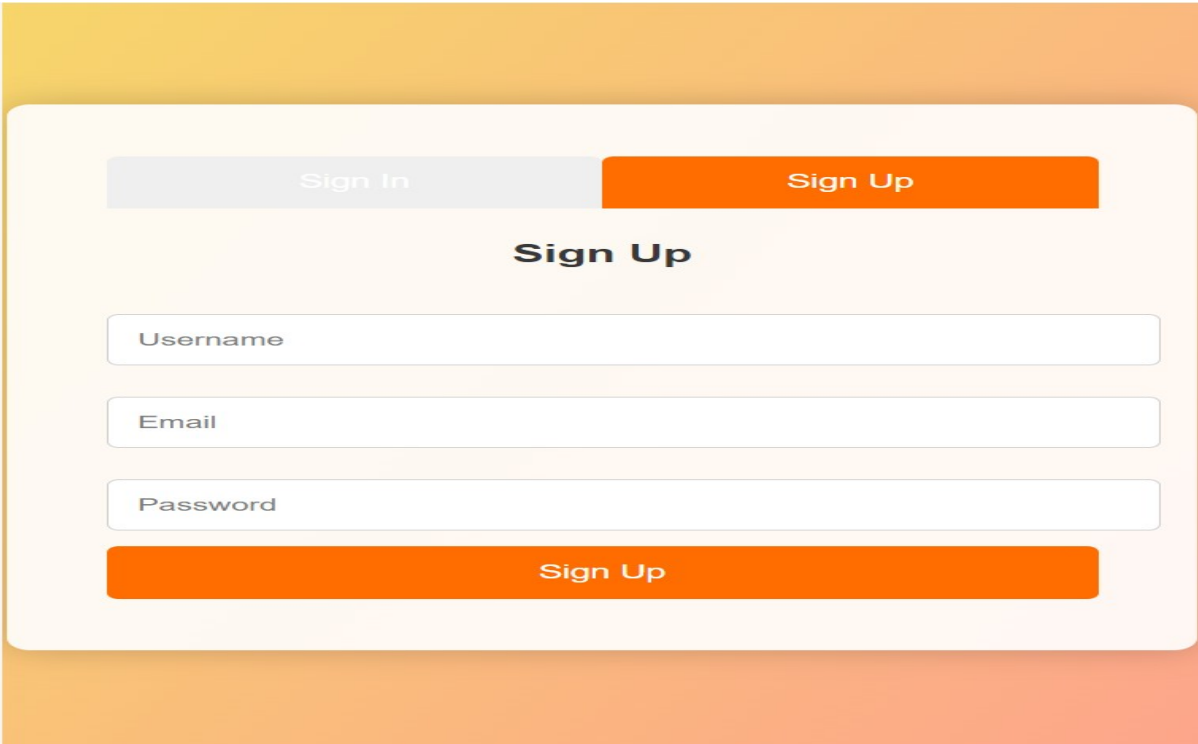
```
</form>";
```

```
}
```

```
?>
```

## 5.1 USER DOCUMENTATION LOGIN PAGE

### LOGIN PAGE



The image shows a 'Sign Up' form interface. At the top, there are two buttons: 'Sign In' (light gray) and 'Sign Up' (orange). Below these, the text 'Sign Up' is centered. The form contains three input fields: 'Username', 'Email', and 'Password'. At the bottom of the form is an orange 'Sign Up' button.

### SHOPPING CART PAGE

**FRESH**  
*&trending*

Shopping Cart				
Product	ID	Quantity	Price	Total
Lenovo AMD Ryzen 3 Quad Core 7330U - (8 GB/512 GB SSD/Wind...	101	1	₹30,300	₹30,300
POCO C65 (Matte Black, 128 GB)	102	2	₹6,999	₹6,999
Acer Aspire 3 Backlit Intel Core i5 12th Gen 1235U - (16 GB/512 GB ...	103	1	₹40,990	₹40,990
				Subtotal: \$169.96
				Total: \$169.96
				<a href="#">Proceed to Checkout</a>

### CHECKOUT PAGE

[Home](#)[Products](#)[Categories](#)[Contact](#)

Checkout

Billing Information

Name

Email

Address

City

State

Zip Code

Country

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CHECKOUT PAGE 2

Checkout

Billing Information

Name

Email

Address

City

State

Zip Code

Country

Shipping Information

Name

Email

Address

City

State

Zip Code

Country

Order Summary

Products

Product 1 - \$20.00

Product 2 - \$40.00

Product 3 - \$30.00

Total: \$90.00

Continue and Pay

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References:

Website:

1. <https://www.geeksforgeeks.org/e-commerce/>
2. <https://www.blackbox.ai/>
3. <https://openai.com/index/chatgpt/>

#### vidoes:

1. [https://www.youtube.com/results?search\\_query=html+css+project+e+commerce+](https://www.youtube.com/results?search_query=html+css+project+e+commerce+)
2. <https://www.youtube.com/watch?v=zZ6vybT1HQs>
3. [https://www.youtube.com/results?search\\_query=dbms+project+on+e+commerce+](https://www.youtube.com/results?search_query=dbms+project+on+e+commerce+)

#### Books:

1. **"SQL in 10 Minutes, Sams Teach Yourself"** by Ben Forta
2. **"PHP: A Beginner's Guide"** by Vikram Vaswani

## CONCLUSION

In conclusion, building an e-commerce platform involves a combination of frontend design, backend functionality, and database management. We developed HTML and CSS pages for product listing, shopping cart, and checkout, ensuring a seamless user experience. The backend PHP code handles database interactions, user sessions, and order processing, providing a robust framework for the platform. The ER diagram helps visualize the data relationships, ensuring efficient data management. By integrating these components, we create a comprehensive e-commerce solution that enhances user engagement and simplifies online shopping.