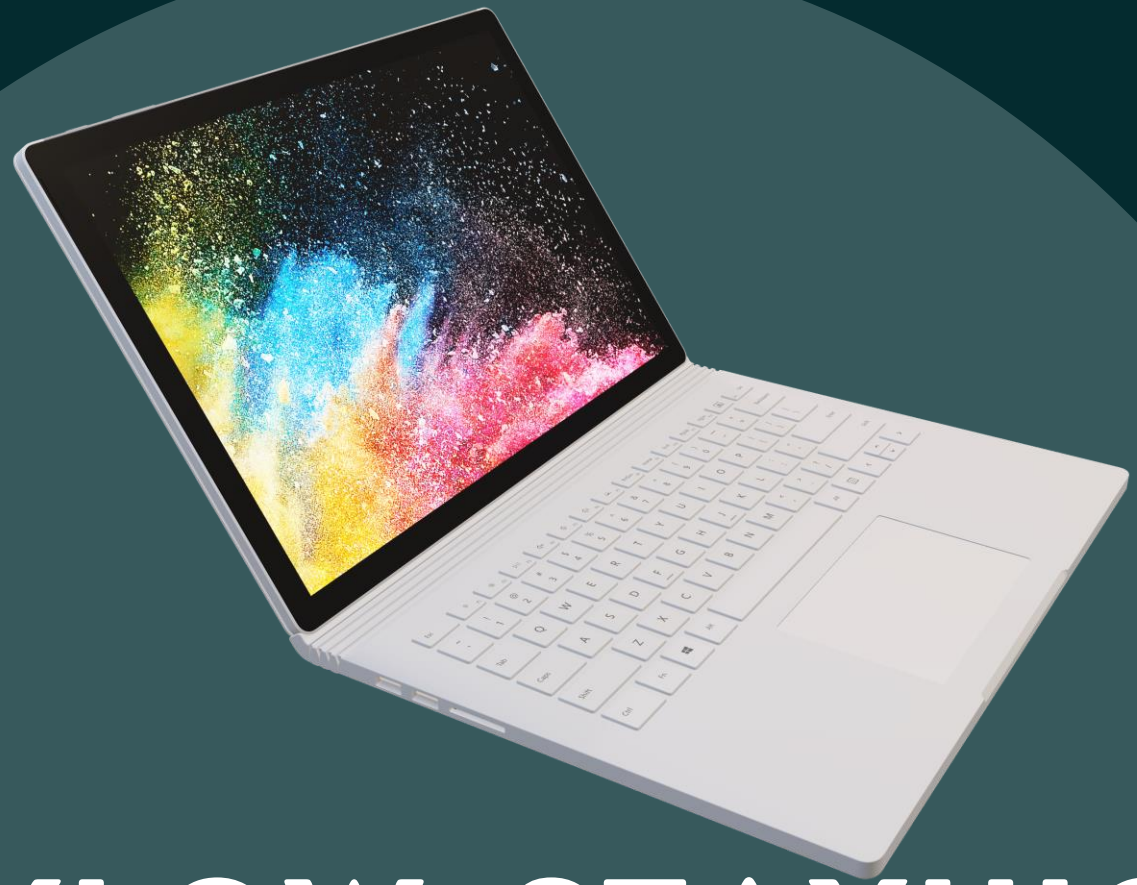
ECOMMERCE WEBSITE



BUYLOW-STAYHIGH

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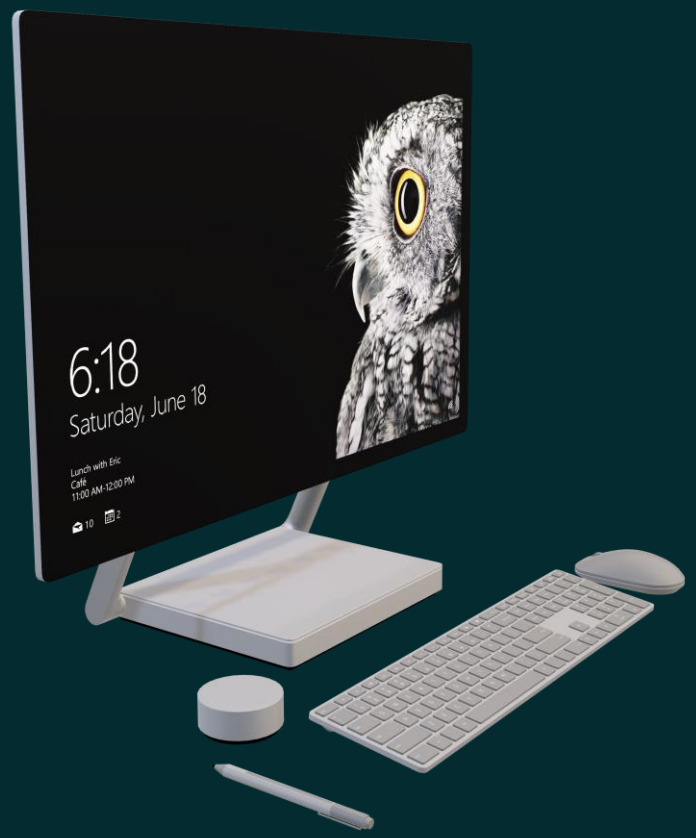
ABOUT

- PROBLEM STATEMENT
- DATA FLOW
- FUNCTIONALITY
- FUTURE WORK



TOPICS

PROBLEM STATEMENT

Design and Build an e-commerce application involves several key components and features to ensure a seamless and user-friendly experience for both customers and administrators.

End User Level :
- Product Listings
- Product Details
- Shopping Cart
- Checkout
- Confirmation Page

Pricing:
- Define Pricing at each Product level
- Apply charge breakdown with tax applicable
- Apply discount
- Apply special vouchers/coupon code

Payment:
- Handle different payment methods
- Admin Level Module: Account Management Inventory Availability Information Pricing

FUNCTIONALITY

- **Home Component** - To display Suggested products.

- **Products Component** - To Display List of Components in grid or in list layout
  Products Details Component - To Display Details of Product.
- **Cart Component** - To Add the Product in Cart and Save in DB
- **Order Component -** To Simulate the Placing Order Process like other E-Commerce Websites
- **Login and Register Components** - To Create Account in DB.
- Admin page component – To enable admin having control on users and products

DATAFLOW

1.User Registration Flow:

1. The user fills out a registration form with their first name, last name, email, address, mobile number, and password and role .
2. The user submits the registration form.
3. The system validates the form data, checks for unique email addresses, and saves the user details in the Users table.
4. After successful registration, the user can log in to access their account.

2.User Login Flow:

1. The user enters their email and password in the login form.
2. The user submits the login form.
3. The system verifies the provided email and password against the data stored in the Users table.
4. If the credentials match an existing user, the user is granted access to their account.

DATAFLOW

- Product Listing and Ordering Flow:
  - The system displays a list of available products from the Products table.
  - The user can browse through the products and select the desired ones.
  - Once the user selects the products, the system adds them to the cart by creating a record in the Carts table.
  - The user can proceed to checkout, where the system calculates the total amount, applies any applicable offers or discounts, and adds the order details to the Orders table.
  - The system then generates a payment form where the user enters the necessary payment details.
  - On successful payment, the system adds a record to the Payments table and completes the order process.

DATAFLOW

- Cart Management Flow:
  - The user can view their cart, which retrieves the cart items from the CartItems table based on the CartId associated with the user.
  - The user can remove items from the cart, which involves modifying or deleting records in the CartItems table.
  - The user can also proceed to checkout from the cart page, initiating the order process described above.
- Review and Feedback Flow:
  - The user can submit a review or feedback for a product they have purchased or used.
  - The system saves the review details in the Reviews table, associating it with the UserId and ProductId.

- Products Component:
  - The Products component will present users with a list of available components in a grid or list layout.
  - Its purpose is to provide users with a comprehensive overview of the available products in the e-commerce application.
  - The component should display essential information for each product, such as the product name, image, price, rating, and any other relevant details.
  - It should support pagination or infinite scrolling to handle large product catalogs efficiently.
  - Users should be able to browse and search for products based on price.
  - The Products component can include sorting options, such as sorting products by price, popularity, or new arrivals, to help users find the products they're interested in.
  - It should provide clear and concise interfaces for users to interact with the products, such as adding them to the cart or viewing more details about each product.

PORTRAITS

- **Admin page Component:**
- It includes buttons for fetching and displaying user data and product data.
- When the "Get Users Data" button is clicked, the getUsersData() method is called. This method retrieves the data of all users and displays it in a table. Each row in the table represents a user and includes their name, email, address, and mobile number. There is also a "Delete" button for each user that allows the admin to delete a user from the system.
- Similarly, when the "Get Products Data" button is clicked, the getProductsData() method is called. This method retrieves the data of all products and displays it in a table. Each row in the table represents a product and includes its category, quantity, description, and offers. There is also an "Edit" button for each product that allows the admin to edit the product's description, price, and quantity. The admin can then save or cancel the changes, or delete the product from the system.
- Overall, the AdminPage component provides the admin with a dashboard to manage and view user and product data.

Current Cart

Order

Total Items	4
Total Price	56000
Shipping Charges	1000
Discount	10000
You Have to Pay	46000

Cart Items

Redmi 9A Sport (Coral Green, ...
6650 -5%
~~7000~~

Delete

Redmi 9A Sport (Coral Green, ...
6650 -5%
~~7000~~

Delete

HP 247 G8 Laptop (Athlon P-3...
22500 -25%
~~30000~~

Delete

HASTHIP Gaming Chair, Ergon...
10200 -15%
~~12000~~

Delete

Previous Orders

Ordered On : 05-Mar-2024 **Items: 2** **Price Paid : 144000** Cancel Order Return Order

Samsung Galax...

Samsung Galax...

Ordered On : 05-Mar-2024 **Items: 4** **Price Paid : 46000** Cancel Order Return Order

Redmi 9A Sport ...

Redmi 9A Sport ...

HP 247 G8 Lapt...

HASTHIP Gamin...

FUTURE SCOE

- **Admin-Based Role and Inventory Management:** Implementing admin-based role and inventory management involves assigning different access levels and privileges to administrators based on their roles. An admin dashboard or interface can be created to enable tasks such as managing user roles, creating and updating product categories, adding new products, and handling inventory details. The system can include workflows for product approval and activation, bulk order management, and reporting and analytics functionalities for effective administration.
- **Use of Redis for In-Memory Caching**: Utilizing Redis as an in-memory cache improves the performance and scalability of the e-commerce application. Redis caching can store frequently accessed data, such as product details, user information, and session data, reducing database queries and enhancing response times. Redis' data structures and features optimize storage and retrieval, and its Pub/Sub functionality enables real-time notifications for inventory updates and order status changes. Redis persistence mechanisms ensure data durability and reliability.
- Automating the process of return case.

THANK YOU