

# Governor House Sindh Initiative AI Course

Name:Mehwish Sheikh  
Roll number:223558

## HACKATHON DAY 5

### TESTING, ERROR HANDLING, AND BACKEND INTEGRATION REFINEMENT

### GENERAL E-COMMERCE COMFORTY WEBSITE

## Introduction

Welcome to the **Marketplace Builder**, a next-generation e-commerce platform designed to empower businesses with cutting-edge features. With capabilities like wishlist management, inventory tracking, user authentication via Clerk, real-time notifications, chatbot support, advanced search and filtering, and Sanity Studio for seamless content management, this platform ensures a superior shopping experience for both buyers and sellers.

This document provides an overview of the platform's features, implementation details, and technical architecture to assist developers and stakeholders.

## Platform Features

Feature	Description
<b>Wishlist</b>	Allows users to save their favorite products for future reference.
<b>Add to Cart</b>	Enables users to add products to their cart and proceed to checkout.
<b>Inventory Management</b>	Tracks stock levels in real-time, displays warnings for low stock, and manages "Out of Stock" labels.
<b>Product Listings</b>	Provides detailed product pages with name, price, description, category, and ratings.
<b>Order Confirmation</b>	Displays a detailed summary of completed orders.
<b>Notifications</b>	Real-time toast notifications for user actions like adding to cart or completing a purchase.
<b>Product Ratings</b>	Allows users to rate and review products, with average ratings displayed.
<b>Search and Filters</b>	Advanced search and filtering options for category, price, and ratings.
<b>Authentication</b>	Secure sign-up, login, and logout functionality using Clerk.
<b>Pagination</b>	Efficient navigation for large product catalogs.
<b>Chatbot Support</b>	chatbot for instant customer support and FAQs.
<b>Sanity Studio</b>	A powerful CMS for managing and updating product data, categories, and content.

## Feature Highlights

### 1. Wishlist Management

- Overview:** Users can save products to a wishlist for later purchases.

# Governor House Sindh Initiative AI Course

Name: Mehwish Sheikh

Roll number: 223558









## HACKATHON DAY 5

### TESTING, ERROR HANDLING, AND BACKEND INTEGRATION REFINEMENT

## GENERAL E-COMMERCE COMFORTY WEBSITE

- **Benefits:**
  - Enhances user experience by allowing quick access to saved items.
  - Encourages repeat visits and purchases.
- **UI/UX:**
  - A heart icon to add/remove products from the wishlist.
  - A dedicated wishlist page showing saved items with options to add to cart or remove.

#### Wishlist

Wishlist Page			
	Library Stool Chair	Price: \$20	<button>Add to Cart</button> 
	Rose Luxe Armchair	Price: \$20	<button>Add to Cart</button> 
	SleekSpin	Price: \$20	<button>Add to Cart</button> 
	Rose Luxe Armchair	Price: \$20	<button>Add to Cart</button> 

#### 2. Add to Cart

- **Overview:** Simplifies the shopping process by allowing users to add products to a cart.
- **Benefits:**
  - Real-time cart updates.
  - Displays total items and costs dynamically.
- **UI/UX:**
  - A cart icon with a counter for total items.
  - A dropdown or dedicated cart page for detailed item views.


# Governor House Sindh Initiative AI Course



Name:Mehwish Sheikh  
Roll number:223558

## HACKATHON DAY 5



### TESTING, ERROR HANDLING, AND BACKEND INTEGRATION REFINEMENT GENERAL E-COMMERCE COMFORTY WEBSITE

ig



**Citrus Edge**  
Quantity:  
- 5 +  
 

MRP: \$20    Total: \$100.00

**Library Stool Chair**  
Quantity:  
- 1 +  
 

**Summary**  
Subtotal \$120.00  
Estimated Delivery & Handling Free  
Total \$120.00


Checkout



Activate Windows  
Go to Settings to activate Windows

### 3.Inventory Management



- **Overview:** Ensures accurate stock tracking and prevents overselling.
- **Benefits:**
  - Real-time stock updates.
  - Alerts for low stock and out-of-stock items.
- **Implementation:**
  - Inventory decreases when items are added to the cart.
  - Restocked items automatically update the product listing.

ig



**Citrus Edge**  
Quantity:  
- 5 +  
 

MRP: \$20    Total: \$100.00

**Library Stool Chair**  
Quantity:  
- 1 +  
 

**Summary**  
Subtotal \$120.00  
Estimated Delivery & Handling Free  
Total \$120.00

Checkout

Activate Windows  
Go to Settings to activate Windows


# Governor House Sindh Initiative AI Course

Name:Mehwish Sheikh  
Roll number:223558

## HACKATHON DAY 5

TESTING, ERROR HANDLING, AND BACKEND INTEGRATION REFINEMENT

## GENERAL E-COMMERCE COMFORTY WEBSITE



### Library Stool Chair

New

Wooden Chair

\$20

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nullam tincidunt erat enim. Lorem ipsum dolor sit amet, consectetur adipiscing

13 items remaining


★★★★★

- 7 +

Add to Cart

< 7 >

Activate Windows  
Go to Settings to activate Windows.



New

Wooden Chair

\$20

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nullam tincidunt erat enim. Lorem ipsum dolor sit amet, consectetur adipiscing

20 items remaining

★★★★★

- 0 +

Add to Cart

# Governor House Sindh Initiative AI Course

Name: Mehwish Sheikh

Roll number: 223558

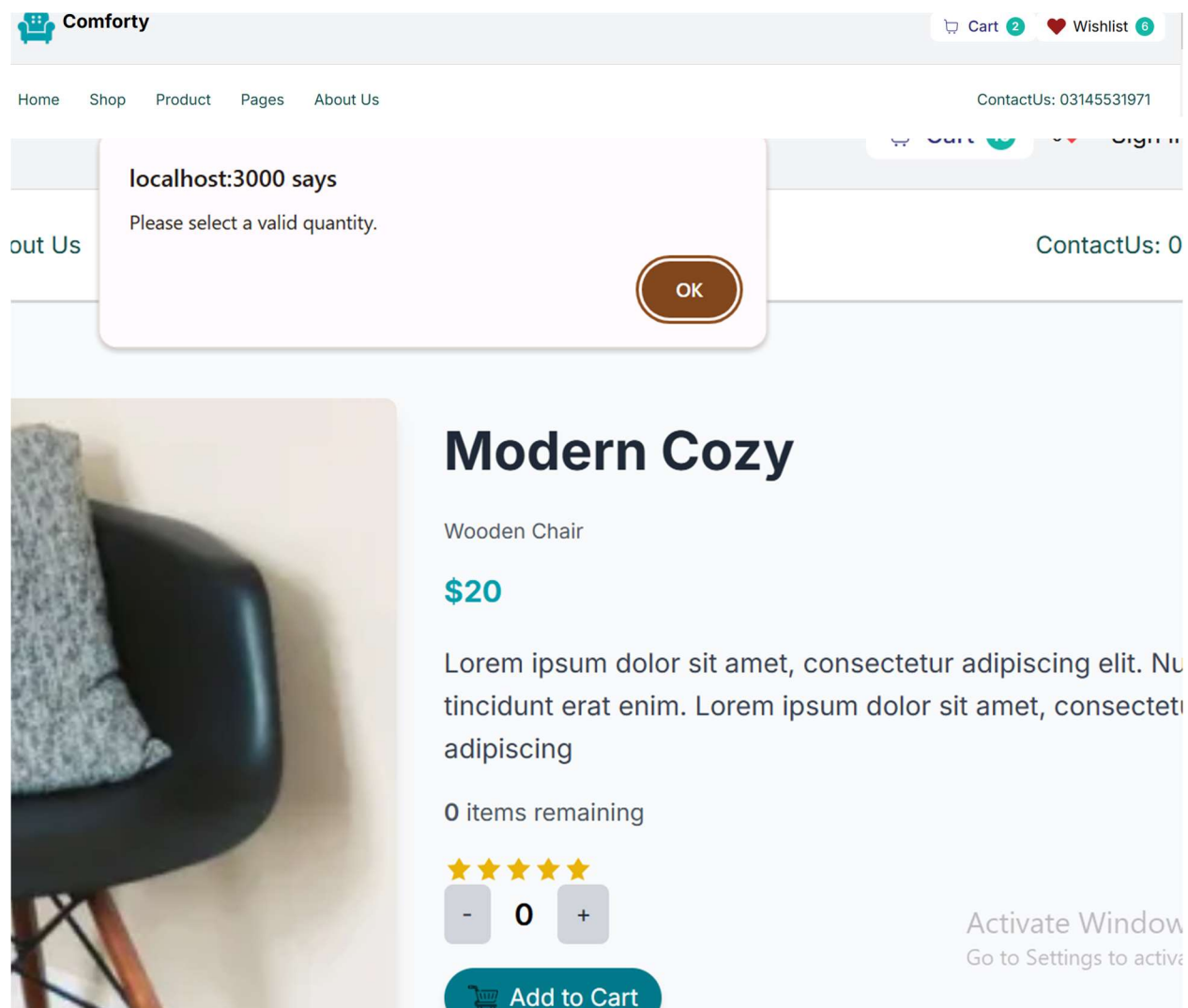
## HACKATHON DAY 5

### TESTING, ERROR HANDLING, AND BACKEND INTEGRATION REFINEMENT

## GENERAL E-COMMERCE COMFORTY WEBSITE

#### 4. Notifications

- **Overview:** Provides users with real-time feedback on their actions.
- **Benefits:**
  - Increases engagement and clarity.
  - Confirms successful actions like adding to cart or completing a purchase.
- **Implementation:**
  - Uses `react-toastify` for toast messages and modal notifications.



# Governor House Sindh Initiative AI Course

Name: Mehwish Sheikh

Roll number: 223558

## HACKATHON DAY 5

### TESTING, ERROR HANDLING, AND BACKEND INTEGRATION REFINEMENT

## GENERAL E-COMMERCE COMFORTY WEBSITE

#### 5. Product Ratings

- **Overview:** Enables users to rate and review products.
- **Benefits:**
  - Builds trust and transparency.
  - Helps users make informed decisions.
- **Implementation:**
  - A star-based rating system integrated into product pages.
  - Average ratings displayed alongside reviews.

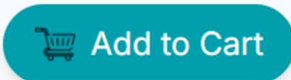
## Modern Cozy

Wooden Chair

\$20

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nullam tincidunt erat enim. Lorem ipsum dolor sit amet, consectetur adipiscing

10 items remaining



#### 6. Search and Filters

- **Overview:** Simplifies product discovery with advanced search and filtering.
- **Benefits:**
  - Users can quickly find products by category, price, or ratings.
  - Enhances user satisfaction and reduces search time.

# Governor House Sindh Initiative AI Course

Name:Mehwish Sheikh  
Roll number:223558

## HACKATHON DAY 5

### TESTING, ERROR HANDLING, AND BACKEND INTEGRATION REFINEMENT

### GENERAL E-COMMERCE COMFORTY WEBSITE

- Implementation:
  - A search bar with auto-complete suggestions.
  - Filters for price range, categories, and customer ratings.

#### All Products

lib

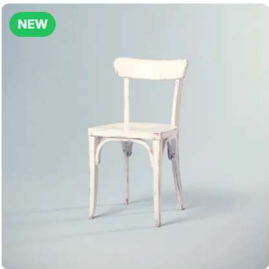
Wing Chair

Wooden Chair

Desk Chair

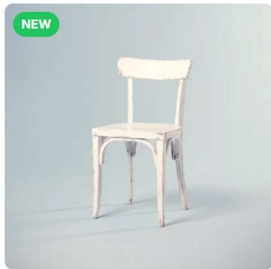
Show All Products

NEW



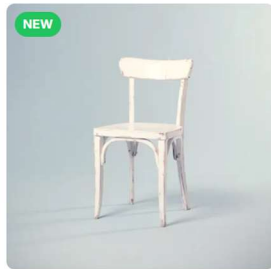
**Library Stool Chair**  
\$20  
Category: Wooden Chair

NEW



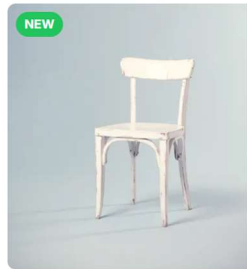
**Library Stool Chair**  
\$20  
Category: Wooden Chair

NEW



**Library Stool Chair**  
\$20  
Category: Wooden Chair

NEW




**Library Stool Chair**  
\$20  
Category: Wooden Chair

Wing Chair

Wooden Chair


Desk Chair

Show All Products




**Citrus Edge**  
\$20  
Category: Desk Chair  
Inventory: 20  

Add to Cart




**Citrus Edge**  
\$20  
Category: Desk Chair  
Inventory: 20  

Add to Cart



**SleekSpin**  
\$20  
Category: Desk Chair  
Inventory: 10  

Add to Cart



**Citrus Edge**  
\$20  
Category: Desk Chair  
Inventory: 20  

Add to Cart

# Governor House Sindh Initiative AI Course

Name: Mehwish Sheikh

Roll number: 223558

## HACKATHON DAY 5

### TESTING, ERROR HANDLING, AND BACKEND INTEGRATION REFINEMENT

## GENERAL E-COMMERCE COMFORTY WEBSITE

#### 7. Authentication

- **Overview:** Secure and seamless user authentication powered by Clerk.
- **Benefits:**
  - Simplifies account management for users.
  - Ensures secure login and session handling.
- **Implementation:**
  - Integration of Clerk's sign-up, login, and logout features.
  - Persistent user sessions and role-based access control.



# Governor House Sindh Initiative AI Course

Name: Mehwish Sheikh

Roll number: 223558

## HACKATHON DAY 5

TESTING, ERROR HANDLING, AND BACKEND INTEGRATION REFINEMENT

## GENERAL E-COMMERCE COMFORTY WEBSITE

Rectangular Snip

### Sign in to Comforty

Welcome back! Please sign in to continue



Continue with Google


or

Email address

Enter your email address

Continue ▶

Don't have an account? [Sign up](#)

Secured by  clerk

Development mode

Clerk is in development mode. Sign up or sign in to continue.

# Governor House Sindh Initiative AI Course

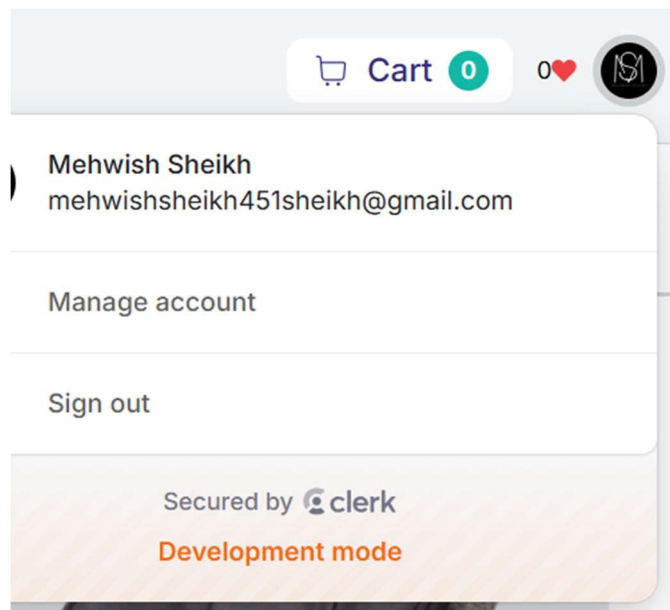
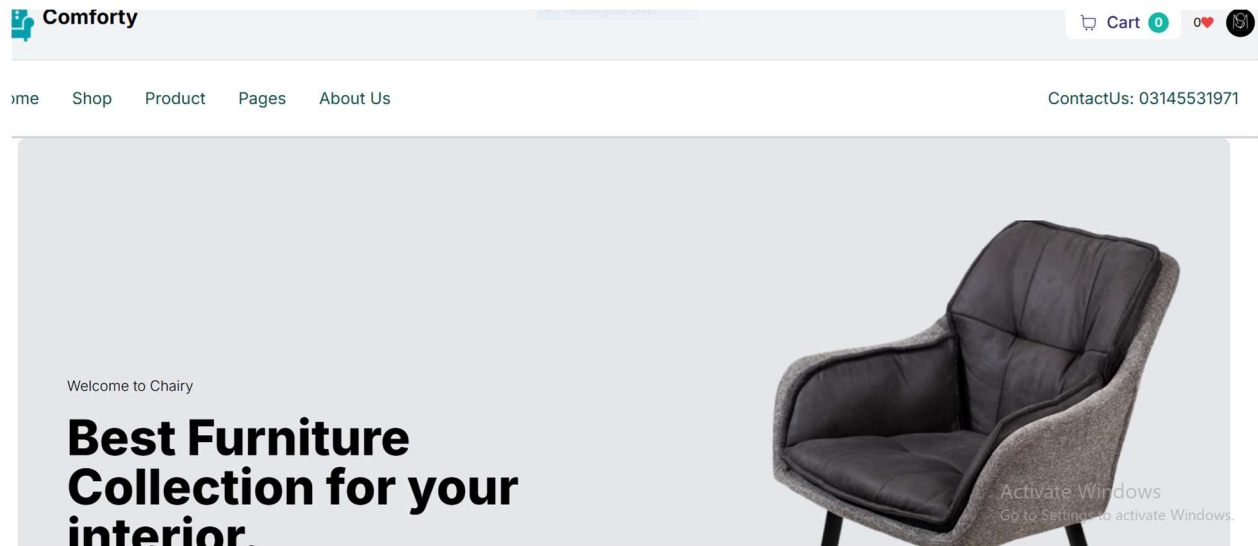
Name:Mehwish Sheikh

Roll number:223558

## HACKATHON DAY 5

TESTING, ERROR HANDLING, AND BACKEND INTEGRATION REFINEMENT

## GENERAL E-COMMERCE COMFORTY WEBSITE



# Governor House Sindh Initiative AI Course

Name: Mehwish Sheikh

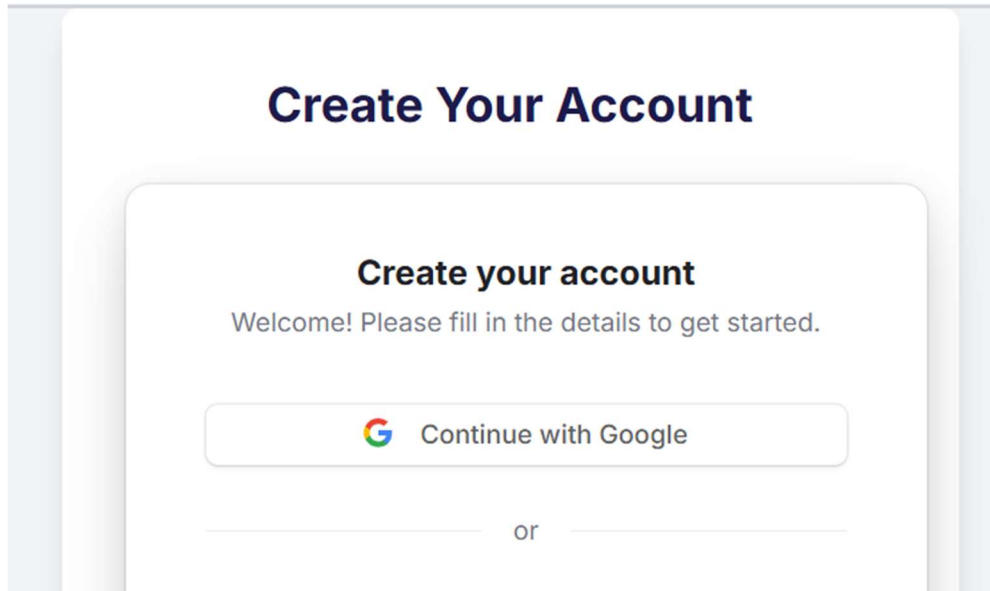
Roll number: 223558

## HACKATHON DAY 5

TESTING, ERROR HANDLING, AND BACKEND INTEGRATION REFINEMENT

## GENERAL E-COMMERCE COMFORTY WEBSITE

Us



### 8. Chatbot Support

- **Overview:** AI-powered chatbot to assist users with common queries and support.
- **Benefits:**
  - Provides 24/7 support for customers.
  - Reduces the workload on human support teams.
- **Implementation:**
  - Chatbot widget integrated into the platform.
  - Pre-trained on FAQs and product-related queries.
  - Escalates complex issues to human support if needed.

# Governor House Sindh Initiative AI Course

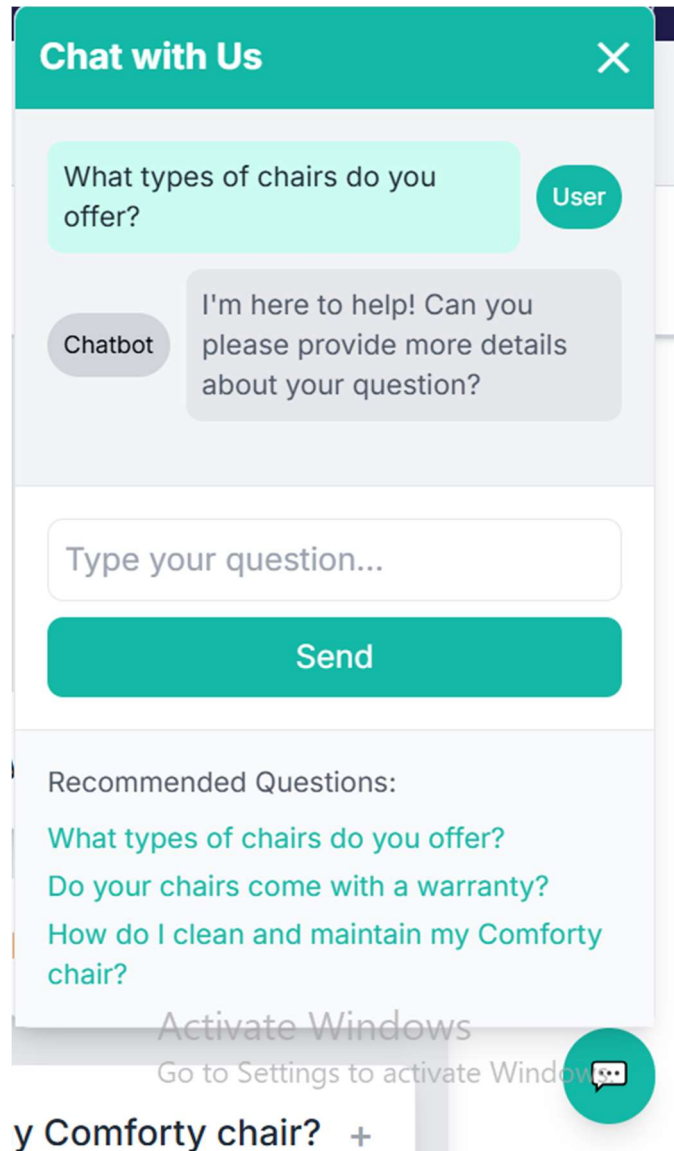
Name: Mehwish Sheikh

Roll number: 223558

## HACKATHON DAY 5

TESTING, ERROR HANDLING, AND BACKEND INTEGRATION REFINEMENT

## GENERAL E-COMMERCE COMFORTY WEBSITE



### 9. Pagination

**Overview:** Efficient navigation for large product catalogs.

**Benefits:**

- Enhances user experience by reducing load times.
- Allows users to easily navigate through product listings.

**Implementation:**

- Pagination controls for navigating through product pages.

# Governor House Sindh Initiative AI Course

Name: Mehwish Sheikh

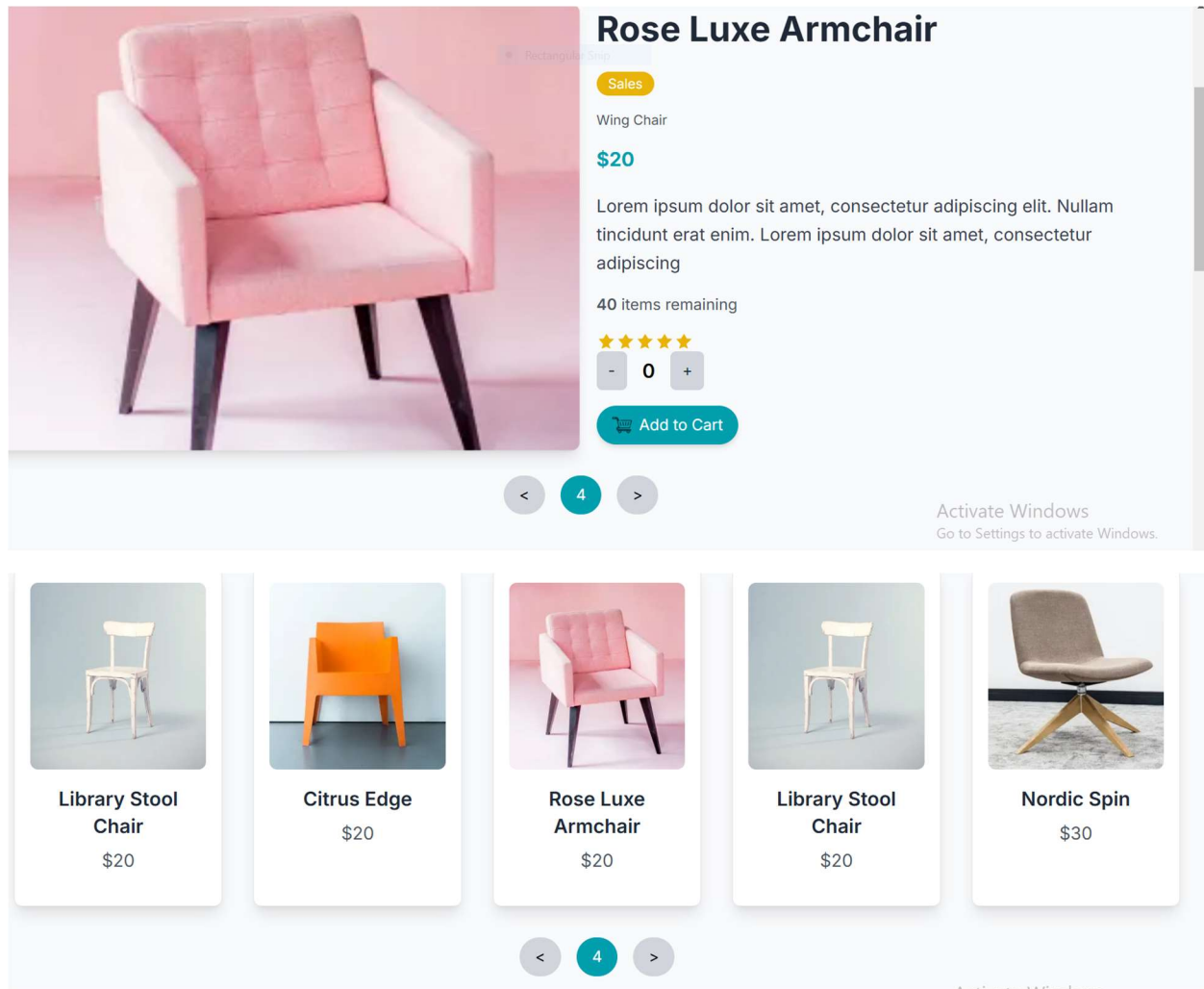
Roll number: 223558

## HACKATHON DAY 5

### TESTING, ERROR HANDLING, AND BACKEND INTEGRATION REFINEMENT

## GENERAL E-COMMERCE COMFORTY WEBSITE

- Dynamically loads content to improve performance.



## 10. Sanity Studio

**Overview:** A content management system (CMS) for managing products, categories, and other data.

### Benefits:

- Allows real-time updates to the product catalog.
- Simplifies management for non-technical users.

### Implementation:

- Integrated with Sanity Studio to fetch and update product data.
- Supports custom schemas for tailored content needs.

# Governor House Sindh Initiative AI Course

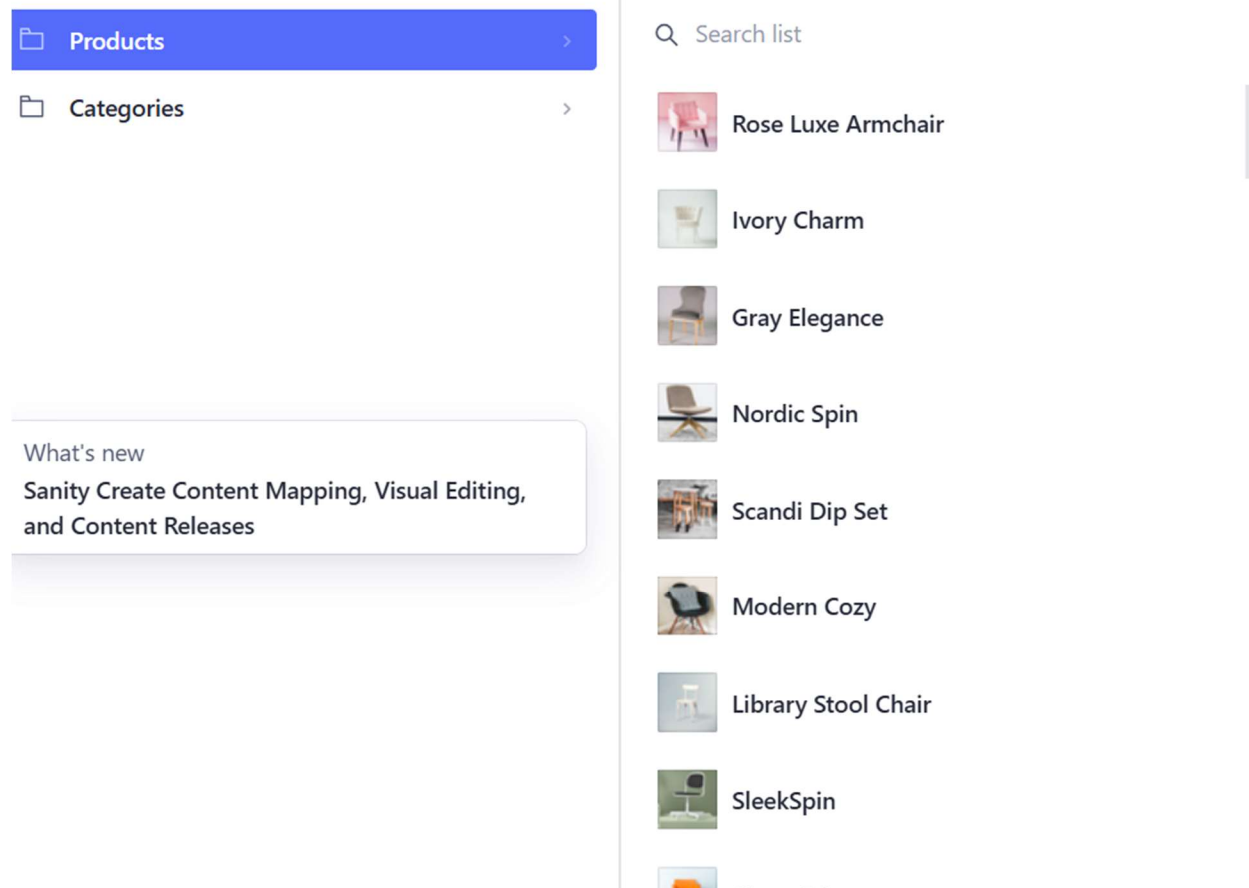
Name:Mehwish Sheikh

Roll number:223558

## HACKATHON DAY 5

TESTING, ERROR HANDLING, AND BACKEND INTEGRATION REFINEMENT

## GENERAL E-COMMERCE COMFORTY WEBSITE



# Governor House Sindh Initiative AI Course

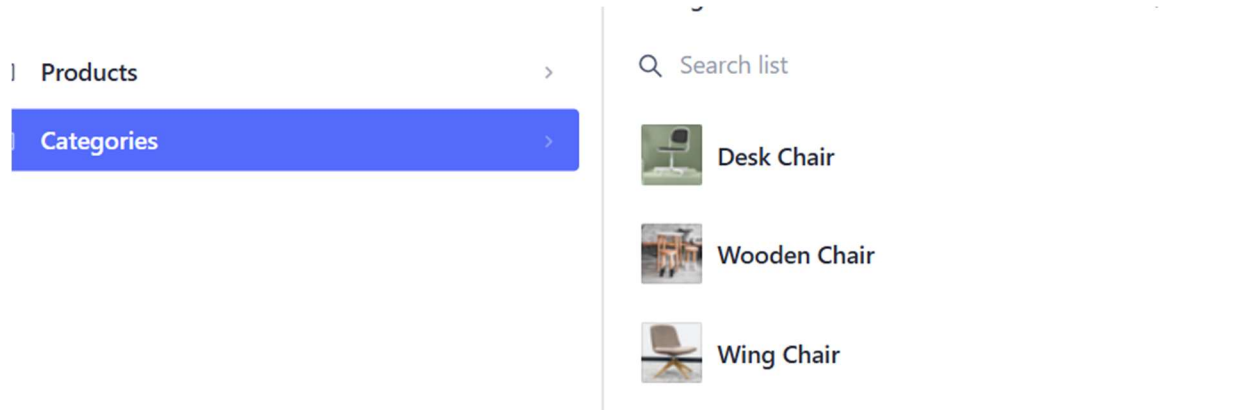
Name: Mehwish Sheikh

Roll number: 223558

## HACKATHON DAY 5

### TESTING, ERROR HANDLING, AND BACKEND INTEGRATION REFINEMENT

## GENERAL E-COMMERCE COMFORTY WEBSITE



### 11. Shipment

**Overview:** Tracks and displays shipment status, including tracking numbers and delivery estimates.

**Benefits:**

- Provides users with up-to-date shipping information.
- Enhances user confidence in the purchase process.

**Implementation:**

- Integration with shipment tracking APIs.
- Display tracking numbers and delivery dates on the order confirmation page.

First and Last Name	Address
Country	City
ZIP Code	Select Payment Method
Finalize Order	

# Governor House Sindh Initiative AI Course

Name: Mehwish Sheikh

Roll number: 223558

## HACKATHON DAY 5

### TESTING, ERROR HANDLING, AND BACKEND INTEGRATION REFINEMENT

### GENERAL E-COMMERCE COMFORTY WEBSITE

## Technical Architecture

### Frontend

- **Framework:** React with Next.js for server-side rendering and better SEO.
- **Styling:** Tailwind CSS for a responsive and modern design.
- **State Management:** React Context API for managing cart, wishlist, and user sessions.

### Backend

- **CMS:** Sanity Studio for managing and fetching product data.
- **API:** Next.js API routes for cart updates, ratings, and order processing.
- **Notifications:** Real-time notifications using `react-toastify`.
- **Authentication:** Provider: Clerk for secure and user-friendly authentication.

### Chatbot

**Features:** Pre-trained on marketplace-related queries, provides instant responses to FAQs, and escalates complex issues to human support if needed.

## Conclusion

The **Marketplace Builder** is a robust platform designed for modern e-commerce needs. With features like **Sanity Studio** for CMS, **Clerk** for authentication, **chatbot support**, **advanced search and filtering**, **pagination** for large catalogs, and **shipment tracking**, this platform ensures a seamless and efficient shopping experience. Its modular architecture and powerful tools make it an ideal choice for businesses aiming to scale and succeed in the competitive online marketplace.



# Governor House Sindh Initiative AI Course

Name:Mehwish Sheikh  
Roll number:223558

## HACKATHON DAY 5

TESTING, ERROR HANDLING, AND BACKEND INTEGRATION REFINEMENT

## GENERAL E-COMMERCE COMFORTY WEBSITE

### Checkout

Mehwish Sheikh

House no.227,Block M,Street no.7, Sector 11½,Iqt

Pakistan

Karachi

75800

Cash on Delivery

Finalize Order