

FURNIAURA E-COMMERCE MARKETPLACE

(DAYS 1–6)

OVERVIEW

This is a specialized e-commerce platform dedicated to the online sale of Furniture. The project's mission is to provide a seamless shopping experience for customers while empowering small furniture businesses with tools to expand their reach. Over six days, the project advanced

from conceptualization to a functional staging environment, focusing on dynamic components, secure payment integrations, and comprehensive testing.

DAY 1: CONCEPTUALIZATION AND MARKETPLACE DESIGN

KEY ACHIEVEMENTS:

MARKETPLACE DEFINITION:

- Furniture Website as a niche marketplace focusing exclusively on chairs and sofas, tables and bed
- Designed the platform to cater to both direct customers and small furniture retailers.

BUSINESS GOALS:

- Provide an intuitive online shopping experience for chairs, sofas, table and bed.
- Enable small furniture businesses to list, manage, and sell their products effortlessly.

DATA SCHEMA DESIGN:

ENTITIES:

- Products: Details about chairs, sofas and tables and bed, including design, price, dimensions, and material.

- Orders: Information on purchases, customer details, and delivery status.
- Delivery Zones: Assigned to drivers or logistics for order fulfillment.

RELATIONSHIPS:

- Customers place orders that reference available products.
 - Delivery zones are assigned based on customer addresses.
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DAY 2: TECHNICAL PLANNING

KEY ACHIEVEMENTS:

TECH STACK SELECTION:

FRONTEND:

- Next.js for fast page loads, SEO-friendly design, and server-side rendering.
- Tailwind CSS for a modern, responsive user interface.

BACKEND:

- Sanity CMS for dynamic management of furniture listings.

APIS:

- Stripe for secure and user-friendly payment processing.
- ShipEngine for real-time order tracking and shipping management.

API ENDPOINTS DESIGN:

USER MANAGEMENT:

- `/login`: Authenticate existing users.
- `/verify-route`: Ensure valid user sessions.

PRODUCT MANAGEMENT:

- `/Shop`: Fetch all listed furniture items.
- `/Shop/[slug]`: Retrieve details of a specific product.

ORDERS MANAGEMENT:

- `/orders` (POST): Create new orders.
- `/order/:id` (GET): View order details and status.

DEPLOYMENT PLAN:

- Hosted the frontend on Vercel for scalability and rapid deployments.
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DAY 3: DATA MIGRATION

KEY ACHIEVEMENTS:

CUSTOM MIGRATION CODE:

- Extracted data from Sanity CMS using GROQ queries to populate the product database dynamically.

- Example Query: `*[_type == "product"] {title, description, price, image, dimensions}`.

SCHEMA DEFINITION:

CREATED SCHEMAS FOR:

- **Products:** Fields included title, slug, description, dimensions, price, material, and images.
 - **Orders:** Captured customer information, order details, and shipping status.
- Structured data to allow scalability and easy integration with the frontend.

CLIENT INTEGRATION:

- Integrated APIs to dynamically fetch and display furniture listings on the homepage and product detail pages.

DAY 4: BUILDING DYNAMIC FRONTEND COMPONENTS

KEY ACHIEVEMENTS:

DYNAMIC PRODUCT LISTINGS:

- Built the ProductList component to display chairs and sofas fetched dynamically from the Sanity CMS backend.

- Optimized image loading with lazy loading to improve page performance.

FILTERS AND SORTING:

- Designed intuitive filters:
 - Filter by price range, material (e.g., leather, fabric), and type (chair or sofa).
- Sorting options included:
 - By price (low to high or high to low), popularity, and newest additions.

REUSABLE COMPONENTS:

PRODUCTCARD:

- Displays essential details like product image, name, price, stock level, sizes, quantity, and colors.

FILTERSIDEBAR:

- Allows users to refine search results using multiple filters.

PAGINATIONCONTROLS:

- Implements smooth navigation across large product catalogs.
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DAY 5: TESTING AND BACKEND REFINEMENT

KEY ACHIEVEMENTS:

TESTING TYPES:

FUNCTIONAL TESTING:

- Validated workflows like product browsing, filtering, checkout process, and API integrations.

PERFORMANCE TESTING:

- Used Lighthouse to analyze and optimize page load times and responsiveness.

SECURITY TESTING:

- Ensured compliance with HTTPS protocols and validated secure API key usage.

CSV-BASED TESTING REPORT:

Test Case ID	Description	Steps	Expected Result	Actual Result	Status
TC001	Verify homepage loads correctly	1. Open homepage	Homepage should load with all elements visible	Homepage loaded with all elements visible	Pass
TC002	Verify navigation to 'Chairs' category	1. Click 'Chairs' category	Chairs category page should	Chairs page displayed correctly	Pass

			display chair products		
TC003	Verify navigation to 'Sofas' category	1. Click 'Sofas' category	Sofas category page should display sofa products	Sofas page displayed correctly	Pass
TC004	Verify search functionality	1. Enter 'recliner' in search bar	Search results should display recliner chairs	Recliner chairs displayed in search results	Pending
TC005	Verify add-to-cart functionality	1. Select a product and click 'Add to Cart'	Selected product should be added to the cart	Product successfully added to the cart	Pass
TC006	Verify cart functionality	1. View cart	Cart should display the added product with correct details	Cart displays the product correctly	Pass
TC007	Verify checkout process	1. Proceed to checkout	Checkout page should display	Checkout page displays options correctly	Pass

			shipping and payment options		
TCoo8	Verify order confirmation	1. Complete checkout	Order confirmation page should display order details	Order confirmation page displays details correctly	Pass
TCoo9	Verify product filtering	1. Apply filters (e.g., price, material)	Filtered results should display products matching the criteria	Filtered results display correctly	Pass
TCo10	Verify user login/registration	1. Create or log in to an account	User should be able to create or log in to an account	User account created/logged in successfully	Pass

KEY TEST CASES:

- Verified navigation links work correctly.
- Checked accurate display of product details and images.

- Tested shopping cart operations, including adding, updating, and removing items.
- Validated form submissions for contact and order details.

RESULTS:

- All major workflows passed successfully with minor improvements implemented.

DAY 6: DEPLOYMENT PREPARATION AND STAGING ENVIRONMENT SETUP

KEY ACHIEVEMENTS:

DEPLOYMENT STRATEGY:

- Hosted the frontend on Vercel to ensure fast and reliable delivery.
- Integrated GitHub for CI/CD workflows to automate builds and deploy staging versions.

ENVIRONMENT VARIABLES:

- Secured sensitive credentials like API keys in an .env file.
- Example:
- `NEXT_PUBLIC_SANITY_PROJECT_ID=your_project_id`

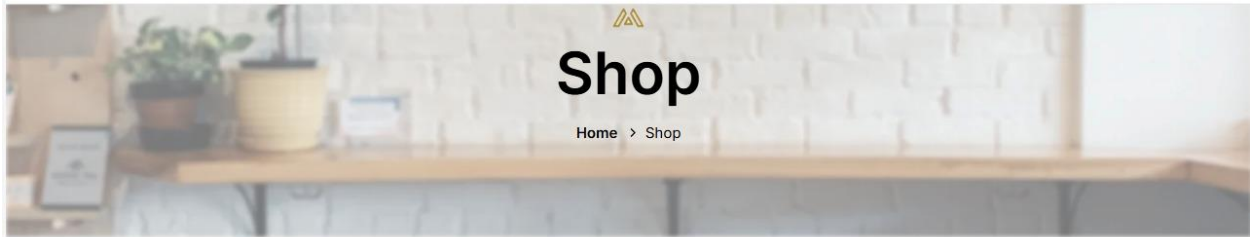
- NEXT_PUBLIC_SANITY_DATASET=production
- STRIPE_API_KEY=your_stripe_key

STAGING ENVIRONMENT TESTING:

- Conducted a thorough testing cycle in a production-like environment:
 - Verified product listing, filtering, checkout, and payment workflows.
 - Optimized load times using GTmetrix and addressed minor issues.
 - Ensured robust security by validating input fields and securing API calls.

DOCUMENTATION:

- Prepared a README.md summarizing:
 - Project structure.
 - Development milestones.
 - Deployment instructions.



Shop

[Home](#) > [Shop](#)



Showing 1-12 of 21 results

Show 16

Sort by Default



Chair Wibe
\$1,200.00



Stylish Armchair
\$780.00



Hans Wegner Style Three-Legged
Shell Chair
\$990.00



Liberty Center
\$1,100.00



Leisure Sofa Chair Set
\$1,800.00



Solid Bed
\$100.00



Luxury Flower Bed
\$2,500.00



Pink Lounge Chair
\$1,600.00

GITHUB REPOSITORY STRUCTURE

FurniAura /

└── src/

| └── components/

| | └── ProductCard.js

| | └── FilterSidebar.js

```
| | | └── PaginationControls.tsx
| | | └── Helpcentre.tsx
| | | └── wishlist.tsx
| | └── pages/
| |   └── index.tsx
| |   └── product/
| |     └── [slug].tsx
| └── public/
|   └── images/
|   └── documents/
|   └── Day_1_Conceptualization.pdf
|   └── Day_2_Technical_Planning.pdf
|   └── Day_3_Data_Migration.pdf
|   └── Day_4_Dynamic_Components.pdf
|   └── Day_5_Testing_Report.csv
|   └── Day_6_Deployment.pdf
|   └── .env
|   └── README.md
```

CONCLUSION

FurniAura Marketplace is a robust and feature-rich platform designed to enhance the online shopping experience for chairs, sofas, bed and Table. With a modern tech stack, rigorous testing, and dynamic features, it's ready for deployment. The next steps involve:

1. Monitoring the live platform for user feedback and addressing potential issues.
2. Scaling the platform to include advanced features like augmented reality previews and multi-language support.
3. Enhancing customer engagement with loyalty programs and personalized recommendations.

This marks the successful completion of the Furniture Marketplace project, setting a strong foundation for future growth and success!