

DAY 4 - BUILDING DYNAMIC FRONTEND COMPONENTS FOR MY FURNITURE E-COMMERCE WEBSITE

Objective: On Day 4, I focused on designing and developing dynamic frontend components to display furniture products fetched from Sanity CMS or APIs. This step emphasizes modular, reusable component design and real-world practices for building scalable and responsive web applications.

Key Learning Outcomes:

1. Build dynamic frontend components to display furniture product data from Sanity CMS or APIs.
2. Implement reusable and modular components.
3. Understand and apply state management techniques.
4. Learn the importance of responsive design and UX/UI best practices.
5. Prepare for real-world client projects by replicating professional workflows.

Key Components Built:

1. **Product Listing Component:**
 - Dynamically render furniture products in a grid layout.
 - Include fields like Product Name, Price, Image, and Stock Status.
 - Example layout: cards displaying product details.
2. **Product Detail Component:**
 - Create individual product detail pages using dynamic routing in Next.js.
 - Include detailed fields such as Product Description, Price, and Available Sizes or Colors.
3. **Category Component:**
 - Display dynamically fetched categories.
 - Enable filtering of products by selected categories.
4. **Search Bar:**
 - Implement search functionality to filter furniture products by name or tags.
5. **Cart Component:**
 - Display added items, quantity, and total price.
 - Use state management for tracking cart items.
6. **Wishlist Component:**
 - Allow users to save furniture items for future reference.
 - Use local storage or a global state management tool to persist data.
7. **Checkout Flow Component:**
 - Create a multi-step form for checkout, including fields for:
 - Billing and shipping address
 - Payment details (mock implementation)
8. **User Profile Component:**
 - Display user-specific details like:
 - Name, email, and saved addresses.
 - Order history with links to individual orders.

9. **Reviews and Ratings Component:**

- Allow users to view and submit reviews for furniture products.
- Display average ratings and individual reviews dynamically.

10. **Pagination Component:**

- Break down large product lists into manageable pages.
- Implement previous and next buttons or numbered pagination.

11. **Filter Panel Component:**

- Provide advanced filtering options, such as:
 - Price range sliders
 - Brand selection
 - Availability toggles (e.g., "In Stock" only)

12. **Related Products Component:**

- Suggest similar or complementary furniture items on the product detail page.
- Fetch data based on tags, categories, or customer behaviors.

13. **Footer and Header Components:**

- Build consistent navigation and branding elements.
- Include links to key pages (e.g., Home, About, Contact).
- Ensure responsiveness and accessibility.

14. **Notifications Component:**

- Show real-time alerts for actions like adding to cart, errors, or successful transactions.

Performance Optimization:

- Use modern styling libraries like Tailwind CSS or styled-components.
- Ensure designs are responsive for mobile and desktop views.
- Implement lazy loading for images.
- Use pagination or infinite scrolling for large datasets.

Steps for Implementation:

1. **Setup:**

- Ensure the Next.js project is connected to Sanity CMS or the chosen API.
- Test data fetching to confirm availability.

2. **Build Components:**

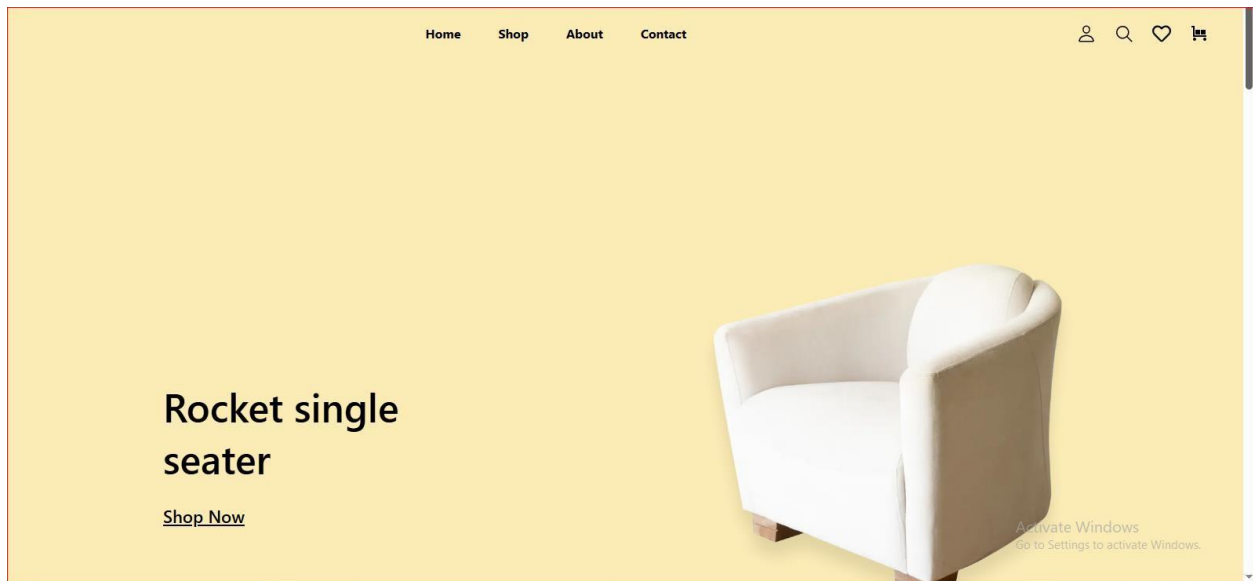
- Develop and integrate all the key components mentioned above.
- Ensure modular and reusable structures for future scalability.

Expected Output:

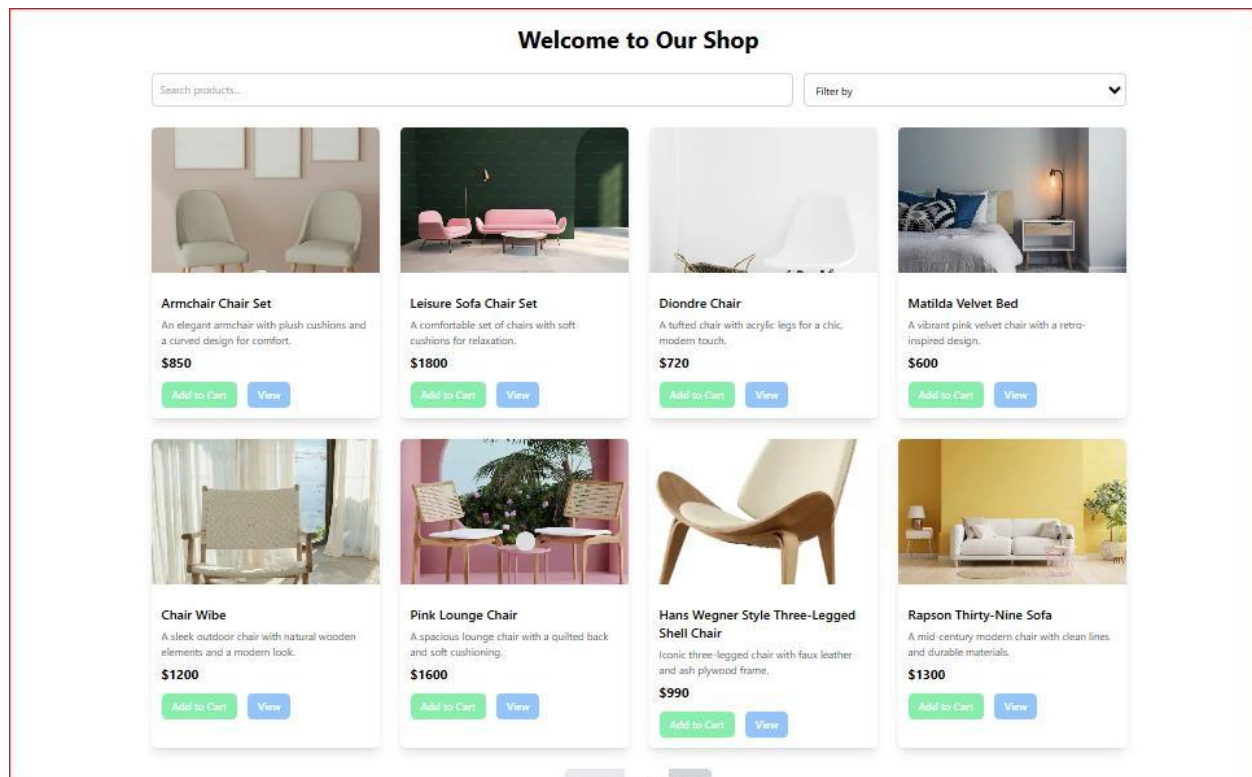
By the end of Day 4, my furniture e-commerce website has:

1. A fully functional product listing page displaying dynamic data from Sanity CMS or APIs.
2. Individual product detail pages implemented using dynamic routing.
3. Advanced category filters to refine and segment product views dynamically.
4. A search bar that effectively filters products by name or tags.
5. Additional features like pagination and related products on detail pages.
6. Components styled to ensure responsiveness and a professional look across devices.
7. Modular and reusable components for future scalability.

My home page



Product listing



```

1  "use client";
2
3  import { useRouter } from "next/navigation";
4  import { useState, useEffect } from "react";
5  import { client } from "@sanity/lib/client";
6
7  import Image from "next/image";
8  import { useCart } from "@app/context/CartContext";
9  import { FontAwesomeIcon } from "@fortawesome/react-fontawesome";
10 import { faCheckCircle } from "@fortawesome/free-solid-svg-icons";
11
12 interface Product {
13   _id: string;
14   name: string;
15   price: number;
16   description: string;
17   image: { asset: { url: string } }; // Assuming Sanity image structure
18   slug: { current: string };
19 }
20
21 const ShopPage = () => {
22   const router = useRouter();
23   const { addToCart } = useCart();
24
25   const query = `*[ _type == "product" && defined(slug.current) ] {
26     _id,
27     name,
28     price,
29     description,
30     image { asset -> { url } },
31     slug
32   }`;
33
34   const [products, setProducts] = useState<Product[]>([]);
35   const [filteredProducts, setFilteredProducts] = useState<Product[]>([]);
36   const [searchQuery, setSearchQuery] = useState("");
37   const [selectedFilter, setSelectedFilter] = useState("");
38   const [loading, setLoading] = useState(true);
39   const [notification, setNotification] = useState<string | null>(null);
40   const [isVisible, setIsVisible] = useState(false);
41
42   const [currentPage, setCurrentPage] = useState(1);
43   const productsPerPage = 8;
44
45   useEffect(() => {
46     const fetchProducts = async () => {
47       try {
48         const products = await client.fetch(query);
49         setProducts(products);
50         setFilteredProducts(products);
51       } catch (error) {
52         console.error("Failed to fetch products:", error);
53       } finally {
54         setLoading(false);
55       }
56     };
57     fetchProducts();
58   }, [query]);
59
60   const handleSearch = (e: React.ChangeEvent<HTMLInputElement>) => {
61     const query = e.target.value.toLowerCase();
62     setSearchQuery(query);
63
64     const filtered = products.filter(
65       (product) =>
66         product.name.toLowerCase().includes(query) ||
67         (product.description &&
68           product.description.toLowerCase().includes(query))
69     );
70     setFilteredProducts(filtered);
71   };
72
73   const handleFilterChange = (e: React.ChangeEvent<HTMLSelectElement>) => {
74     const selected = e.target.value;
75     setSelectedFilter(selected);
76
77     if (selected === "price-low-high") {
78       setFilteredProducts([...products].sort((a, b) => a.price - b.price));
79     } else if (selected === "price-high-low") {
80       setFilteredProducts([...products].sort((a, b) => b.price - a.price));
81     } else {
82       setFilteredProducts(products);
83     }
84   };
85
86   const handleAddToCart = (product: Product) => {
87     const item = {
88       id: product._id,

```

Shopping cart


Home

Shop

About

Contact

Shopping Cart



White Bed right


\$120

-

3

+

Remove



Red Bed


\$320

-

3

+

Remove



Leisure Sofa Chair Set


\$1800

-

1

+

Remove



Armchair Chair Set


\$850

-

1

+

Remove



Pink Lounge Chair

\$1600

-

1





+

Remove

Total: \$5570

Proceed to Checkout

Proccesd chekout




[Home](#) [Shop](#) [About](#) [Contact](#)    

Checkout

User Details





Name: sajida
Email: sajidahaidr889@gmail.com
Address: A-23 rahman villas

Order Summary

	Hans Wegner Style Three-Legged Shell Chair \$990	1
	Pink Lounge Chair \$1600	1
	Chair Wibe \$1200	1
Total: \$3790		

Pay Now

Order conformation

[Home](#) [Shop](#) [About](#) [Contact](#)    


Order Confirmation

Name: sajida
Email: sajidahaidr889@gmail.com
Address: A-23 rahman villas

Total Paid: \$0

Thank you for your purchase!

Sign up form

[Home](#) [Shop](#) [About](#) [Contact](#) 

My Account

Log In

Username or email address

Password

☐ Remember me

[Log In](#)

[Lost Your Password?](#)

Register


Email address

[Register](#)

A link to set a new password will be sent to your email address.

Add cart notification

Home

 Red Bed has been added to your cart!

Contact page



Contact

[Home](#) / [Contact](#)

Get In Touch With Us

For more information about our products & services, please feel free to drop us an email. Our staff is always here to help you out. Do not hesitate!



+92 300 1234567



123 Main Street, Karachi



info@example.com



Working Time: 9:00 AM - 6:00 PM

Your Name

Your name

Your Email

name@domain.com

Subject

Let us know how we can help you

Your Message

Leave a comment...

♥ Your Wishlist

Available Items



Armchair Chair Set
\$850

Add to Wishlist



High Quality Modern Sofa
\$150

Add to Wishlist



Replica Table
\$750

Add to Wishlist



Leisure Sofa Chair Set
\$1800

Add to Wishlist



Diondre Chair
\$720

Add to Wishlist



Matilda Velvet Bed
\$600

Add to Wishlist



Chair Wibe
\$1200

Add to Wishlist



Pink Lounge Chair
\$1600

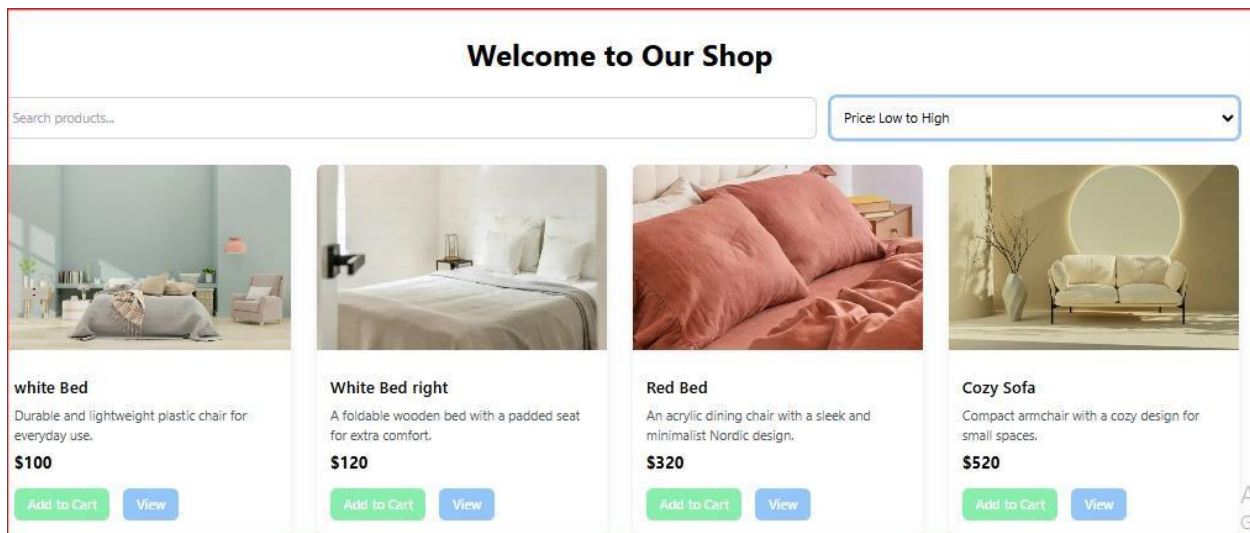
Add to Wishlist

```

1
2 "use client";
3
4 import { useState, useEffect } from "react";
5 import { FaHeart } from "react-icons/fa";
6 import { client } from "@sanity/lib/client"; // Sanity client import
7 import { urlFor } from "@sanity/lib/image"; // Sanity image helper
8 import Image from "next/image";
9 interface ImageAsset {
10   _type: string;
11   asset: {
12     _ref: string;
13     _type: string;
14   };
15 }
16
17 interface WishlistItem {
18   _id: string; // Sanity document ID
19   name: string;
20   price: number;
21   image: ImageAsset; // More specific type for Sanity image reference
22 }
23
24 const WishlistPage = () => {
25   const [wishlist, setWishlist] = useState<WishlistItem[]>([]); // Initial empty wishlist state
26   const [items, setItems] = useState<WishlistItem[]>([]);
27
28   // Load available items from Sanity and wishlist from localStorage
29   useEffect(() => {
30     // Fetch items from Sanity
31     client.fetch<WishlistItem[]>('*[_type == "product"]').then((data: WishlistItem[]) => {
32       setItems(data); // Set fetched items for selection
33     }).catch((err: Error) => {
34       console.error("Error fetching items: ", err);
35     });
36
37     // Load wishlist from localStorage only if there are items
38     const storedWishlist = localStorage.getItem("wishlist");
39     if (storedWishlist) {
40       setWishlist(JSON.parse(storedWishlist)); // Update state with items in localStorage
41     }
42   }, []);
43
44   // Add item to wishlist
45   const addToWishlist = (item: WishlistItem) => {
46     const currentWishlist = JSON.parse(localStorage.getItem('wishlist') || '[]');
47
48     // Check if item already exists in wishlist
49     const isItemInWishlist = currentWishlist.some((wishlistItem: WishlistItem) => wishlistItem._id === item._id);
50
51     if (!isItemInWishlist) {
52       const updatedWishlist = [...currentWishlist, item];
53       localStorage.setItem('wishlist', JSON.stringify(updatedWishlist)); // Update localStorage
54       setWishlist(updatedWishlist); // Update state to re-render the wishlist
55     }
56   };
57
58   // Remove item from wishlist
59   const removeFromWishlist = (id: string) => {
60     const updatedWishlist = wishlist.filter(item => item._id !== id);
61     setWishlist(updatedWishlist);
62     localStorage.setItem("wishlist", JSON.stringify(updatedWishlist)); // Update localStorage
63   };
64
65   return (
66     <div className="max-w-6xl mx-auto p-6">
67       <h1 className="text-4xl font-bold text-gray-800 mb-6 flex items-center">
68         <FaHeart className="text-red-500 mr-3" />
69         Your Wishlist
70       </h1>
71
72       </* Item Selection Section */>
73       <h2 className="text-2xl font-semibold text-gray-700 mb-4">Available Items</h2>
74       <div className="grid grid-cols-2 sm:grid-cols-3 md:grid-cols-4 gap-6">
75         {items.map((item) => (
76           <div key={item._id} className="bg-white shadow-md rounded-md p-4">
77             <Image
78               src={urlFor(item.image)?.url() || "/placeholder.jpg"} // Use optimized Sanity image
79               alt={item.name}
80               width={200}
81               height={200}

```


Filtration



```
1  const filtered = products.filter(  
2    (product) =>  
3      product.name.toLowerCase().includes(query) ||  
4      (product.description &&  
5        product.description.toLowerCase().includes(query))  
6    );  
7    setFilteredProducts(filtered);  
8  };  
9  
10 const handleFilterChange = (e: React.ChangeEvent<HTMLSelectElement>) => {  
11   const selected = e.target.value;  
12   setSelectedFilter(selected);  
13  
14   if (selected === "price-low-high") {  
15     setFilteredProducts([...products].sort((a, b) => a.price - b.price));  
16   } else if (selected === "price-high-low") {  
17     setFilteredProducts([...products].sort((a, b) => b.price - a.price));  
18   } else {  
19     setFilteredProducts(products);  
20   }  
21 };
```



Search products...

Price: High to Low




Luxury Flower Bed
A luxurious shell-shaped chair with gold brass metal legs.
\$2500

Add to CartView




Sleek Modern Table
A modern chair with a carbon fiber frame and bold red accents.
\$2000

Add to CartView



Leisure Sofa Chair Set
A comfortable set of chairs with soft cushions for relaxation.
\$1800

Add to CartView




Pink Lounge Chair
A spacious lounge chair with a quilted back and soft cushioning.
\$1600

Add to CartView

Welcome to Our Shop


table

Price: Low to High




Leisure Sofa Chair Set
A comfortable set of chairs with soft cushions for relaxation.
\$1800

Add to CartView



Sleek Modern Table
A modern chair with a carbon fiber frame and bold red accents.
\$2000

Add to CartView



Alpha Table
A sturdy oak chair with a sleek and minimalist design.
\$900

Add to CartView

Products

1 / 1

Page

Search bar

Welcome to Our Shop

Filter by

Welcome to Our Shop

Price: Low to High



Leisure Sofa Chair Set

A comfortable set of chairs with soft cushions for relaxation.

\$1800

Add to Cart

View



Sleek Modern Table

A modern chair with a carbon fiber frame and bold red accents.

\$2000

Add to Cart

View



Alpha Table

A sturdy oak chair with a sleek and minimalist design.

\$900

Add to Cart

View

Previous 1 / 1 Next

Welcome to Our Shop

Filter by



Leisure Sofa Chair Set

A comfortable set of chairs with soft cushions for relaxation.

\$1800

Add to Cart

View



Rapson Thirty-Nine Sofa

A mid-century modern chair with clean lines and durable materials.

\$1300

Add to Cart

View



Cozy Sofa

Compact armchair with a cozy design for small spaces.

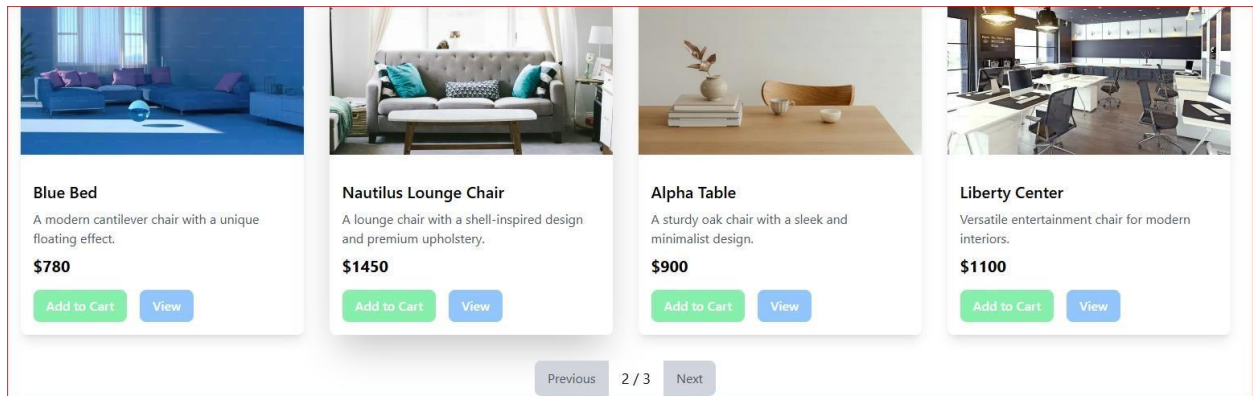
\$520

Add to Cart

View

Previous 1 / 1 Next

Pagination



Daynamic Routing

Product 1



Pink Lounge Chair

A spacious lounge chair with a quilted back and soft cushioning.

\$1600

[Add to Cart](#)

[View](#)



Pink Lounge Chair

A spacious lounge chair with a quilted back and soft cushioning.

Size: medium

Color: pink

Price: \$1600

[Buy Now](#)

Customer Reviews

Product 2



Cozy Sofa

Compact armchair with a cozy design for small spaces.

\$520

Add to Cart

View

Home

Shop

About

Contact



Cozy Sofa

Compact armchair with a cozy design for small spaces.

Size:

Color:

Price: \$520

Buy Now

Customer Reviews

No reviews yet.



Nautilus Lounge Chair

A lounge chair with a shell-inspired design and premium upholstery.

Size: Medium

Color:

Price: \$1450

[Buy Now](#)

Customer Reviews

No reviews yet.



Nautilus Lounge Chair

A lounge chair with a shell-inspired design and premium upholstery.

\$1450

[Add to Cart](#)

[View](#)

Footer

400 University Drive Suite 200 Coral Gables, FL 33134 USA	Links Home Shop About Contact	Help Payment Options Returns Privacy Policies
Newsletter		
<input type="text" value="Enter Your Email Address"/>		<input type="button" value="SUBSCRIBE"/>
<div>Thank you for subscribing!</div>		

Activate Windows

✔ Self-Validation Checklist for Day 4

Frontend Component Development:



Styling and Responsiveness:



Code Quality:



Documentation and Submission:



