Day 3 - API Integration Report [Ecommerce]

E-Commerce Marketplace with Sanity CMS and API Integration:

Introduction

This project demonstrates the integration of APIs with Sanity CMS to build a dynamic e-commerce marketplace. Products are fetched from the CMS and displayed on the frontend with dynamic routing for detail pages.

API Integration Process

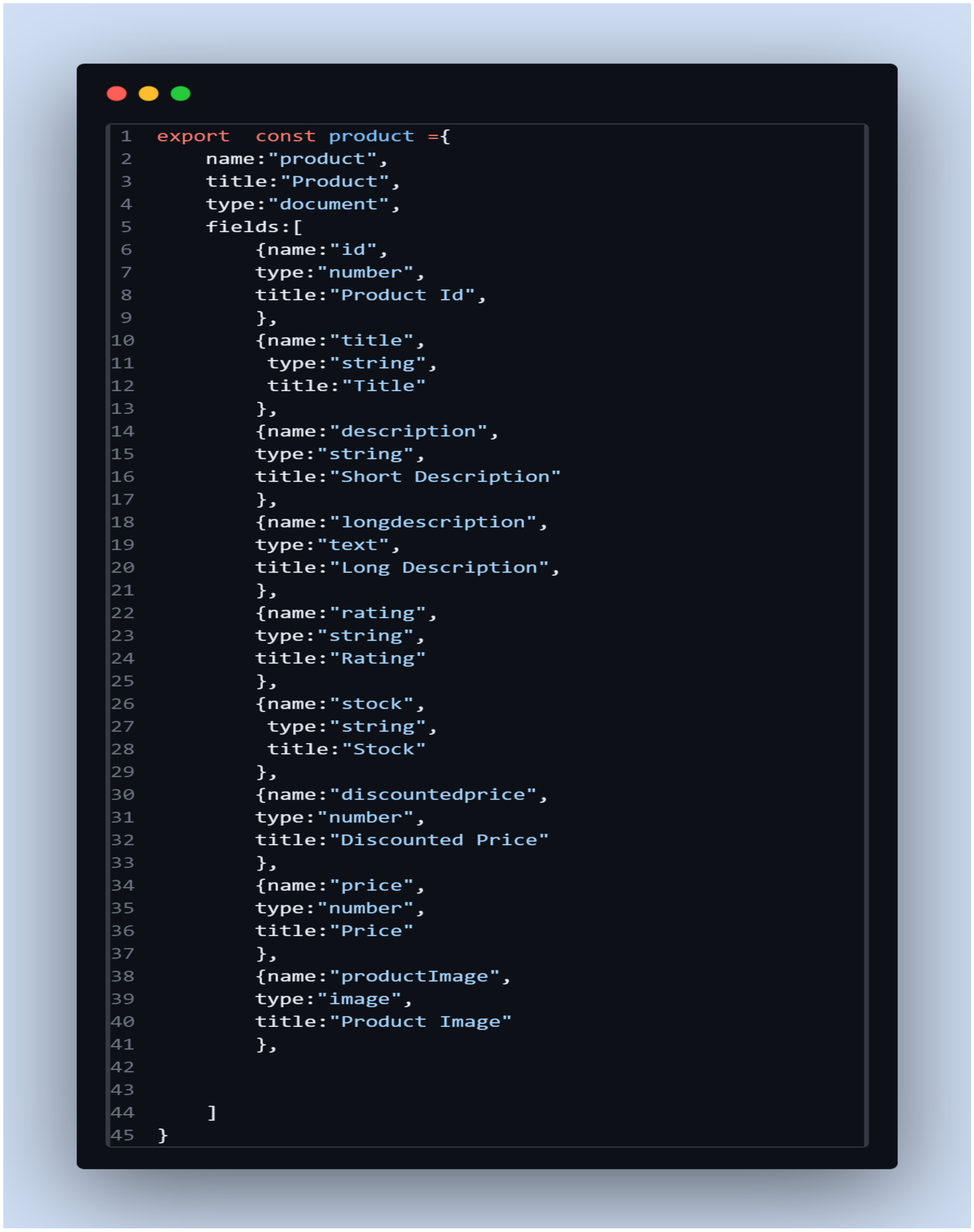
Overview:

On Day 3, the main focus was on connecting the frontend, backend, and Sanity CMS through API integration. This ensured that data could be retrieved and updated dynamically, improving the app's functionality while keeping it fast and reliable.

Steps Taken

1. **Identify API Endpoints**:
   - Listed all the required API endpoints to manage data, such as retrieving products, handling orders, and accessing user details.
2. **Setup API Routes**:
   - Configured Next.js API routes to link with Sanity CMS for smooth communication.
3. **Debugging and Testing**:
   - Tested each API call to confirm the data flows correctly between different parts of the application.

Schema:



```
export  const product ={
    name:"product",
    title:"Product",
    type:"document",
    fields:[
        {name:"id",
        type:"number",
        title:"Product Id",
        },
        {name:"title",
         type:"string",
         title:"Title"
        },
        {name:"description",
        type:"string",
        title:"Short Description"
        },
        {name:"longdescription",
        type:"text",
        title:"Long Description",
        },
        {name:"rating",
        type:"string",
        title:"Rating"
        },
        {name:"stock",
         type:"string",
         title:"Stock"
        },
        {name:"discountedprice",
        type:"number",
        title:"Discounted Price"
        },
        {name:"price",
        type:"number",
        title:"Price"
        },
        {name:"productImage",
        type:"image",
        title:"Product Image"
        },


    ]
}
```

Migration Steps and Tools Used

Steps for Migration

1. **Clone the Repository**:
   - Downloaded the repository containing the migration script.
2. **Set Up Sanity Project**:
   - Created a new Sanity project for the website.
3. **Generate Authentication Token**:
   - Created a unique token to securely connect to the Sanity project.
4. **Update Script Configurations**:
   - Replaced the placeholder token and project ID in the script with the actual details from the Sanity project.
5. **Run Migration Script**:
   - Compiled the Typescript migration file and executed it to update the database.
6. **Verify Completion**:
   - Checked the system to ensure that all data and schemas were migrated successfully.

Tools Utilized

- **Sanity CLI**:
  - Used to update schemas and manage the Sanity environment.
- **Custom Migration Script**:
  - Simplified the process of transferring and updating data.

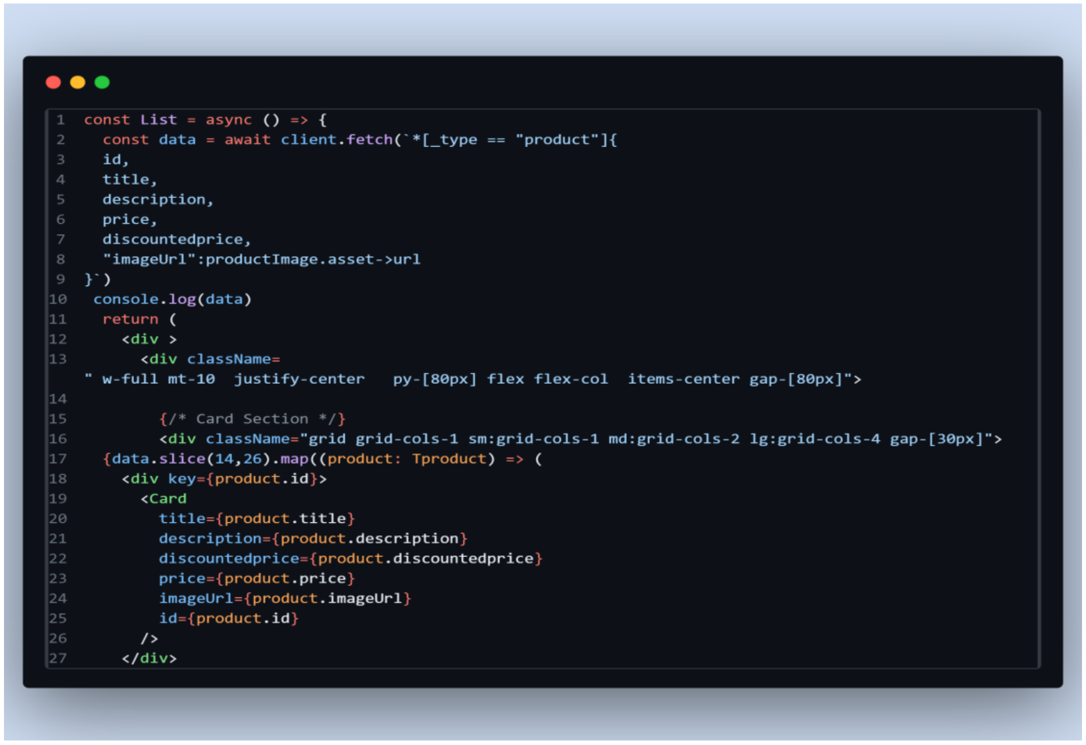
Achievements and Key Takeaways

1. The API integration process successfully connected all parts of the application, making data exchange seamless.
2. Schema updates provided better structure and enhanced functionality, such as advanced filtering and order management.
3. The migration process was executed smoothly using well-defined tools and steps, ensuring no data was lost or corrupted.

By completing Day 3 tasks, we have laid a strong foundation for a scalable and dynamic application that meets user needs effectively.

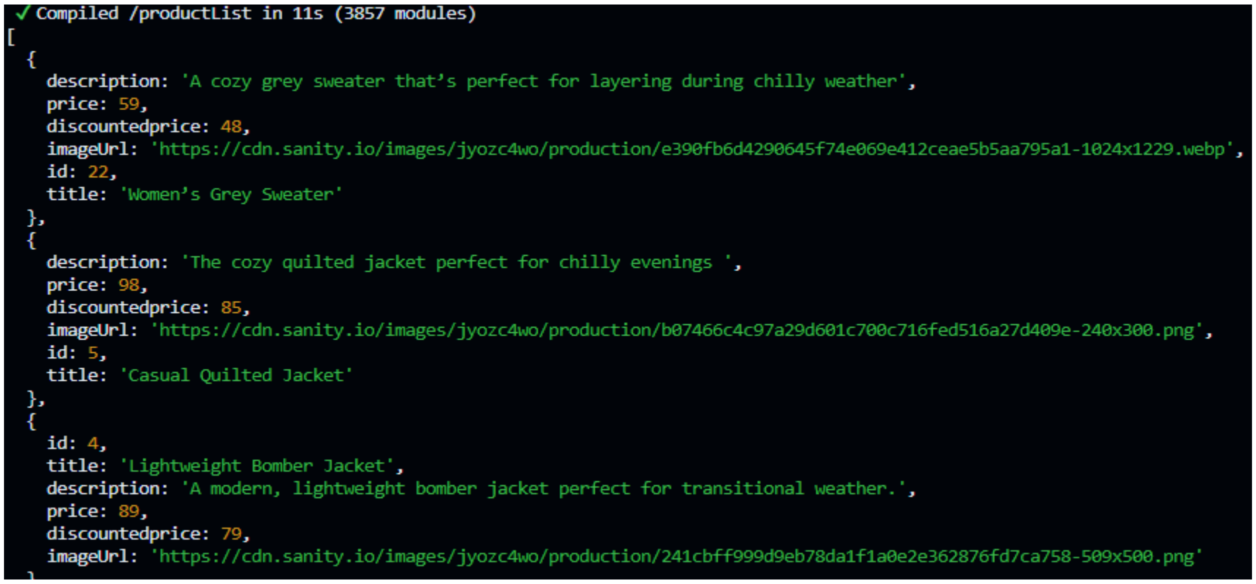
Screenshots:

Fetching Data with GROQ Query



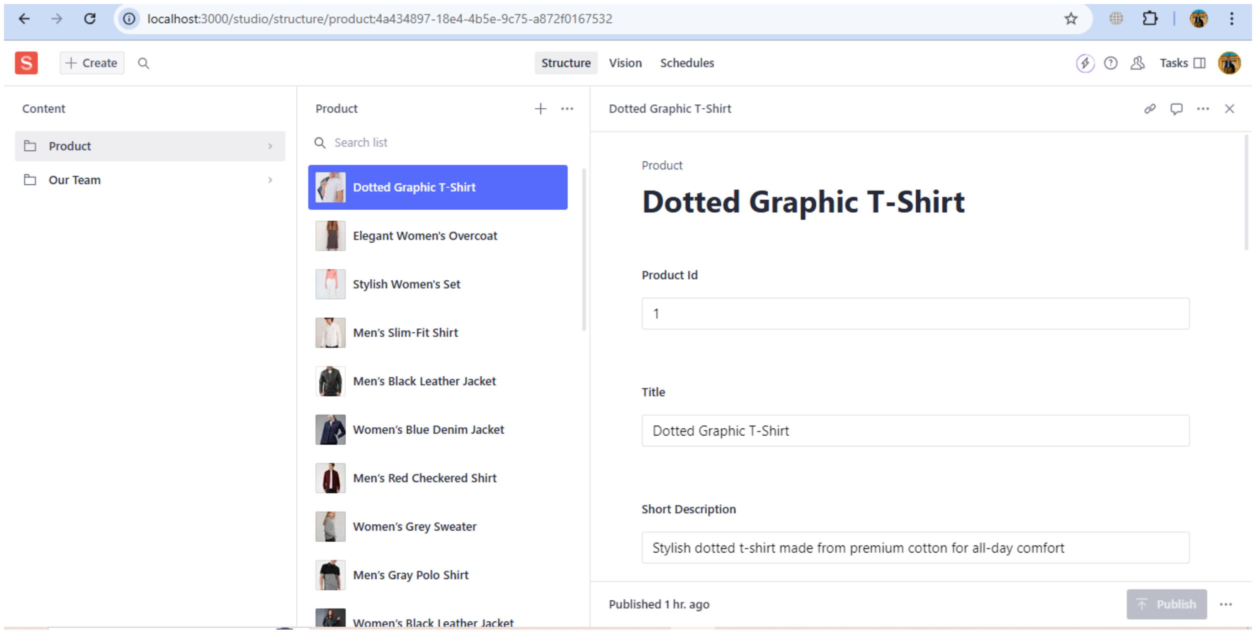
```
const List = async () => {
  const data = await client.fetch(`*[_type == "product"]{
  id,
  title,
  description,
  price,
  discountedprice,
  "imageUrl":productImage.asset->url
}`)
 console.log(data)
  return (
    <div >
      <div className=
" w-full mt-10  justify-center   py-[80px] flex flex-col  items-center gap-[80px]">

        {/* Card Section */}
        <div className="grid grid-cols-1 sm:grid-cols-1 md:grid-cols-2 lg:grid-cols-4 gap-[30px]">
  {data.slice(14,26).map((product: Tproduct) => (
    <div key={product.id}>
      <Card
        title={product.title}
        description={product.description}
        discountedprice={product.discountedprice}
        price={product.price}
        imageUrl={product.imageUrl}
        id={product.id}
      />
    </div>
```

Checking in the terminal to confirm that data is properly fetched and ready for use



```
✓ Compiled /productList in 11s (3857 modules)
[
  {
    description: 'A cozy grey sweater that’s perfect for layering during chilly weather',
    price: 59,
    discountedprice: 48,
    imageUrl: 'https://cdn.sanity.io/images/jyozc4wo/production/e390fb6d4290645f74e069e412ceae5b5aa795a1-1024x1229.webp',
    id: 22,
    title: 'Women’s Grey Sweater'
  },
  {
    description: 'The cozy quilted jacket perfect for chilly evenings ',
    price: 98,
    discountedprice: 85,
    imageUrl: 'https://cdn.sanity.io/images/jyozc4wo/production/b07466c4c97a29d601c700c716fed516a27d409e-240x300.png',
    id: 5,
    title: 'Casual Quilted Jacket'
  },
  {
    id: 4,
    title: 'Lightweight Bomber Jacket',
    description: 'A modern, lightweight bomber jacket perfect for transitional weather.',
    price: 89,
    discountedprice: 79,
    imageUrl: 'https://cdn.sanity.io/images/jyozc4wo/production/241cbff999d9eb78da1f1a0e2e362876fd7ca758-509x500.png'
```

Populated Fields in Sanity CMS:



localhost:3000/studio/structure/product;4a434897-18e4-4b5e-9c75-a872f0167532

Content

- Product
- Our Team

Product

Search list

- Dotted Graphic T-Shirt
- Elegant Women's Overcoat
- Stylish Women's Set
- Men's Slim-Fit Shirt
- Men's Black Leather Jacket
- Women's Blue Denim Jacket
- Men's Red Checkered Shirt
- Women's Grey Sweater
- Men's Gray Polo Shirt
- Women's Black Leather Jacket

Dotted Graphic T-Shirt

Product

Dotted Graphic T-Shirt

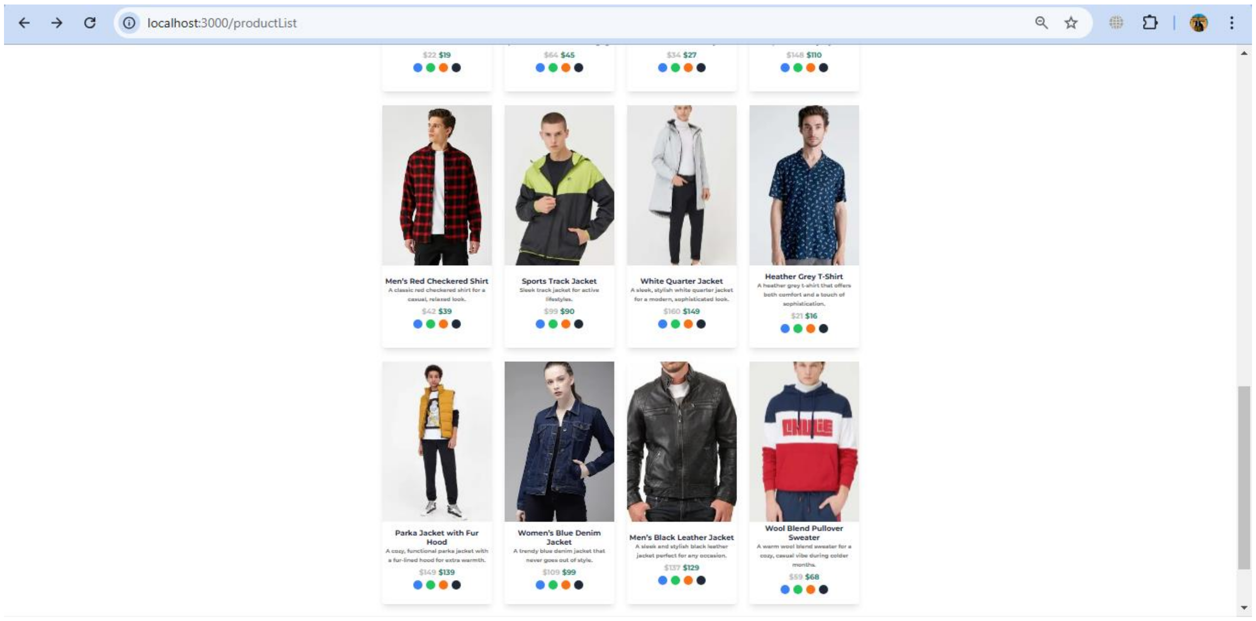
Product Id: 1

Title: Dotted Graphic T-Shirt

Short Description: Stylish dotted t-shirt made from premium cotton for all-day comfort

Published 1 hr. ago

Displays product listing on browser:



localhost:3000/productList

$22 $19 ● ● ● ●

$64 $45 ● ● ● ●

$34 $27 ● ● ● ●

$148 $110 ● ● ● ●

Men's Red Checkered Shirt
A classic red checkered shirt for a casual, relaxed look.
$42 $39 ● ● ● ●

Sports Track Jacket
Sleek track jacket for active lifestyles.
$99 $90 ● ● ● ●

White Quarter Jacket
A sleek, stylish white quarter jacket for a modern, sophisticated look.
$160 $149 ● ● ● ●

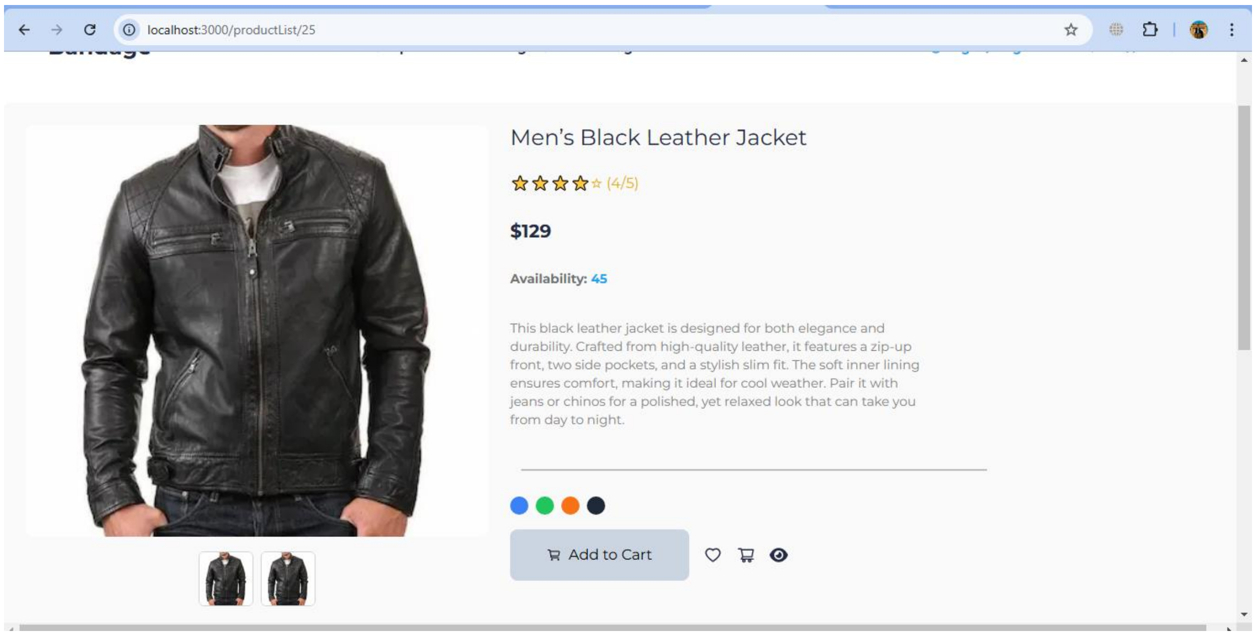
Heather Grey T-Shirt
A heather grey t-shirt that offers both comfort and a touch of sophistication.
$21 $16 ● ● ● ●

Parka Jacket with Fur Hood
A cozy, functional parka jacket with a fur-lined hood for extra warmth.
$149 $139 ● ● ● ●

Women's Blue Denim Jacket
A trendy blue denim jacket that never goes out of style.
$109 $99 ● ● ● ●

Men's Black Leather Jacket
A sleek and stylish black leather jacket perfect for any occasion.
$137 $129 ● ● ● ●

Wool Blend Pullover Sweater
A warm wool blend sweater for a cozy, casual vibe during colder months.
$59 $68 ● ● ● ●



localhost:3000/productList/25

Men’s Black Leather Jacket

(4/5)

$129

Availability: 45

This black leather jacket is designed for both elegance and durability. Crafted from high-quality leather, it features a zip-up front, two side pockets, and a stylish slim fit. The soft inner lining ensures comfort, making it ideal for cool weather. Pair it with jeans or chinos for a polished, yet relaxed look that can take you from day to night.