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* Full Stack PRACTICE 7.1
* CODE

Server.js :::

// backend-api/server.js

const express = require('express');

const cors = require('cors');

const app = express();

const PORT = 5000;

// Enable CORS for all routes and origins

app.use(cors());

// Product Data

const products = [

    { id: 1, name: 'Laptop', price: 1200 },

    { id: 2, name: 'Mouse', price: 25 },

    { id: 3, name: 'Keyboard', price: 45 },

];

// Product List Endpoint

app.get('/api/products', (req, res) => {

    // Simulate a network delay for better demonstration of loading state (optional)

    setTimeout(() => {

        res.json(products);

    }, 500);

});

// Start the server

app.listen(PORT, () => {

    console.log(`Express API is running on http://localhost:${PORT}`);

});

App.js ::::

// frontend-app/src/App.js

import React, { useState, useEffect } from 'react';

import axios from 'axios';

import './App.css'; // We'll add the CSS next

// Component to display a single product card

const ProductCard = ({ name, price }) => (

  <div className="product-card">

    <h3>{name}</h3>

    <p>Price: ${price}</p>

    <button className="buy-button">Buy Now</button>

  </div>

);

function App() {

  const [products, setProducts] = useState([]);

  const [loading, setLoading] = useState(true);

  const [error, setError] = useState(null);

  useEffect(() => {

    // Function to fetch data

    const fetchProducts = async () => {

      try {

        // 1. Use Axios to make a GET request to the Express API

        const response = await axios.get('http://localhost:5000/api/products');

        // 2. Update state with the fetched data

        setProducts(response.data);

        setError(null); // Clear any previous errors

      } catch (err) {

        // 3. Handle errors (e.g., API is down, network issue)

        console.error("Error fetching data:", err);

        setError('Failed to fetch products. Is the backend running on port 5000?');

      } finally {

        // 4. Update loading state

        setLoading(false);

      }

    };

    fetchProducts();

  }, []); // The empty dependency array ensures this runs only once on mount

  // --- Rendering Logic ---

  if (loading) {

    return (

      <div className="container">

        <h1 className="title">Product List</h1>

        <p className="loading-message">Loading products... ⏳</p>

      </div>

    );

  }

  if (error) {

    return (

      <div className="container">

        <h1 className="title">Product List</h1>

        <p className="error-message">Error: {error}</p>

      </div>

    );

  }

  return (

    <div className="container">

      <h1 className="title">Product List</h1>

      <div className="product-list-grid">

        {/\* Map over the fetched products to display them \*/}

        {products.map(product => (

          <ProductCard

            key={product.id}

            name={product.name}

            price={product.price}

          />

        ))}

      </div>

    </div>

  );

}

export default App;

App.css :::

/\* frontend-app/src/App.css \*/

/\* General Styling \*/

body {

  margin: 0;

  font-family: sans-serif;

  background-color: #222; /\* Dark background \*/

  color: white;

}

.container {

  padding: 20px;

  text-align: center;

}

.title {

  font-size: 2em;

  margin-bottom: 40px;

  color: white;

}

/\* Product Grid Layout \*/

.product-list-grid {

  display: flex;

  justify-content: center;

  gap: 30px; /\* Space between cards \*/

  flex-wrap: wrap; /\* Allows wrapping on smaller screens \*/

}

/\* Individual Product Card \*/

.product-card {

  background-color: #333;

  border: 1px solid #444;

  border-radius: 8px;

  padding: 30px 20px;

  width: 250px;

  min-height: 180px;

  display: flex;

  flex-direction: column;

  justify-content: space-between;

  box-shadow: 0 4px 8px rgba(0, 0, 0, 0.4);

  transition: transform 0.2s;

}

.product-card:hover {

  transform: translateY(-5px);

  border-color: #666;

}

h3 {

  margin-top: 0;

  font-size: 1.5em;

}

p {

  font-size: 1.2em;

  color: #aaa;

}

/\* Buy Button Styling \*/

.buy-button {

  background-color: #007bff; /\* Blue button \*/

  color: white;

  border: none;

  padding: 10px 20px;

  border-radius: 5px;

  cursor: pointer;

  font-size: 1em;

  font-weight: bold;

  transition: background-color 0.2s;

}

.buy-button:hover {

  background-color: #0056b3;

}

/\* Message Styles \*/

.loading-message, .error-message {

    padding: 20px;

    font-size: 1.2em;

    color: #f8d7da; /\* Light red for error \*/

}

.loading-message {

    color: #add8e6; /\* Light blue for loading \*/

}

OUTPUT:

