ProductHub – Modern Product Application

Project Overview

ProductHub is a modern web application that shows products in a simple and clean way. It is a single page application, which means the page does not reload when we move between sections. The product data is taken from the FakeStore API. The application works smoothly on mobile, tablet, and desktop devices.

Live Demo

This project can be viewed by hosting the file on any web server or opening it directly in a browser.

Features

Core Features

- The application works on a single page without refreshing.

- Product data is fetched from an external API in real time.

- The layout adjusts automatically for different screen sizes.

- Users can switch between dark mode and light mode, and the choice is saved.

Pages

- Home Page: Shows a short introduction about the application.

- Products Page: Displays all products with images, names, and prices.

- Product Details Page: Shows complete information about a selected product.

User Interface

- Uses cards to display product information clearly.

- Shows a loading indicator while data is being fetched.

- Displays simple error messages if data fails to load.

- Smooth animations improve user experience.

- Clean design with consistent colors and fonts.

Technologies Used

Frontend

- HTML is used to build the page structure.

- CSS is used to design the layout and appearance.

- JavaScript controls the application logic and navigation.

- jQuery is used to make API calls and update the page easily.

- Font Awesome provides icons used in the interface.

API

- FakeStore API provides product data such as title, price, image, and description.

Project Files

The project contains the following files:

- index.html – Main application file

- bak.html – Backup file with a basic version

- README.md – Documentation file

How to Run the Project

Method 1: Open Directly

1. Download the index.html file.

2. Open it in any modern web browser.

3. The application will run without any setup.

Method 2: Using a Web Server

1. Place the index.html file in a server directory.

2. Access it using the server URL.

Method 3: For Development

1. Open the file in a code editor.

2. Make changes as needed.

3. Refresh the browser to see updates.

API Usage

The application uses two API calls:

- One API call to fetch all products.

- One API call to fetch details of a single product.

Each product contains an id, title, price, description, category, image, and rating.

Responsive Design

- On mobile devices, products appear in a single column.

- On tablets, products are shown in two columns.

- On desktops, multiple products are shown in a grid layout.

Routing

The application uses hash-based routing.

- Home page opens at the main URL.

- Products page opens when products are selected.

- Product details page opens when a product is clicked.

The router handles navigation, page content, and invalid URLs.

Performance

- Images load only when needed.

- Minimal external libraries are used.

- Page updates are efficient and fast.

Testing

The application was manually tested for:

- Page navigation

- Product loading

- Product detail view

- Dark and light mode switching

- Responsive behavior

- Error handling

Browser Support

The application works properly on modern browsers like Chrome, Firefox, Safari, Edge, and mobile browsers.

Limitations

- Search and filter options are not included.

- All products are shown on one page.

- Cart and wishlist features are not available.

- Hash-based routing may affect search engine visibility.

Future Improvements

- Add product search functionality.

- Add filtering and sorting options.

- Add pagination for better performance.

- Implement shopping cart and wishlist.

- Add user login and authentication.

- Convert the project to React or similar frameworks.

Development Notes

The project started as a simple version and was later improved with better design, dark mode, and error handling. The goal was to keep the project simple and easy to use.