

## **Graduation Project Documentation**

**Project Title: E-commerce Storefront with React**

Instructor: Eng.Khaled Sedky

Team Members:

- Amr Khaled Fayez
- Abdelhamid Mohamed Abdallah
- Osama Mohamed Mohsen Elsharkawy
- Karim Mohamed Ramadan Ali
- Islam Khaled Sabry Abdelmawgoud

## 1. Project Planning

The goal of this project is to design and develop a modern, responsive, and dynamic e-commerce storefront using React.

The system allows users to browse products, view product details, manage a shopping cart, and simulate a checkout process.

The frontend will integrate with a third-party API to fetch product data dynamically and use Redux for state management.

Scope: The project includes building a complete frontend solution with modern design principles, proper routing, API integration, and responsive UI/UX.

Timeline:

- - Week 1: Project Setup and Static Layouts
- - Week 2: Product Catalog and API Integration
- - Week 3: Shopping Cart and State Management
- - Week 4: Checkout, Final Touches, and Deployment

Team Roles:

- - Amr Khaled Fayez: Frontend Architect
- - Abdelhamid Mohamed Abdallah: Project Leader /API Integration & Product Catalog Development
- - Osama Mohamed Mohsen Elsharkawy: Routing and Redux State Management
- - Karim Mohamed Ramadan Ali: UI/UX and Component Design
- - Islam Khaled Sabry Abdelmawgoud: Testing, Optimization, and Documentation

## 2. Stakeholder Analysis

Stakeholder	Role	Interest / Expectations	Influence
Project Leader	Lead and guide the development process	Ensure timely and high-quality delivery	High
Team Members	Develop and test components	Achieve a functional and polished product	Medium
Instructor (Eng. Khaled Sedky)	Supervise and evaluate project	Ensure academic quality	High
End Users / Clients	Use the storefront	Expect responsive and intuitive interface	High

### 3. Database Design

Although this project focuses primarily on frontend development, the system interacts with a third-party API that provides product and user data. The logical database design below represents how data is structured conceptually within the API.

- Product (ProductID, Name, Description, Price, ImageURL, Category)
- User (UserID, Name, Email, Address)
- Cart (CartID, UserID, ProductID, Quantity, TotalPrice)
- Order (OrderID, UserID, CartID, PaymentStatus, Date)

### 4. UI/UX Design

The user interface is designed using React components to ensure modularity and reusability. The focus is on providing a clean, responsive, and interactive experience. Pages include the homepage, product listing, product details, shopping cart, and checkout form.

Key UI/UX principles followed:

- Responsive design for mobile and desktop devices.
- Consistent color palette and typography for a modern look.
- Clear navigation and intuitive layout for better user experience.
- Feedback on user actions (e.g., adding to cart, form validation).