**Data Flow Diagram (DFD) for eCommerce Store**

**Project Description**

The eCommerce Store is a React-based web application that allows users to browse products, add items to a shopping cart, and complete a purchase using a payment system. The system manages user authentication, product data, cart state, and order processing.

**Level 0 DFD (Context Diagram)**

The Level 0 DFD provides a high-level overview of the system, illustrating how the User interacts with the eCommerce Store and how data flows between the system and its components.

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 | External Entities |   
 | - User |   
 +-----------------------+   
 |   
 v   
 +---------------------------+   
 | eCommerce Store |   
 | (Process: 1.0) |   
 +---------------------------+   
 |   
 v   
 +---------------------------+   
 | Data Stores: |   
 | - Product Database |   
 | - Cart State |   
 | - Order Database |   
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**Explanation:**

• **External Entity (User):** The user interacts with the eCommerce Store by browsing, adding products to the cart, and making payments.

• **Process (eCommerce Store):** The system processes user requests, updates the cart state, and handles checkout.

• **Data Stores:** Stores product details, cart items, and order history.

**Level 1 DFD (Detailed Breakdown)**

The Level 1 DFD further decomposes the eCommerce Store process into sub-processes, showing how user interactions trigger state updates and order management.

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 | External Entity: User |  
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 | Process 1.1: Browse Products |  
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 v   
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 | Data Store: Product Database |  
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 |   
 v   
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 | Process 1.2: Add to Cart |  
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 v   
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 | Data Store: Cart State |  
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 v   
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 | Process 1.3: Checkout & Payment |  
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 |   
 v   
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 | Data Store: Order Database |  
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 |   
 v   
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 | Process 1.4: Order Confirmation |  
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**Explanation:**

1. **Process 1.1 (Browse Products):** User views products, and the system fetches data from the Product Database.

2**. Process 1.2 (Add to Cart):** User selects products, and they are stored in the Cart State.

3**. Process 1.3 (Checkout & Payment):** User proceeds to payment, and the system processes the order.

4. **Process 1.4 (Order Confirmation):** The order is saved, and a confirmation message is displayed.

**Data Flow**

• The User browses products and adds items to the cart.

• The system stores cart items in the Cart State.

• The user proceeds to checkout and completes payment.

• The system stores order details in the Order Database and confirms the order.