Retail Project

**Level 0: Context Diagram**

**Overview:**  
The Retail Application allows users to sign up, log in, browse products, and log out. The system ensures secure authentication, product display, and user session management.

**Entities & Processes:**

**User →** Interacts with the system (SignUp, Login, Browse Products, Logout).

**Retail System (Process 1.0) →** Manages authentication, product retrieval, and session handling.

**Database (Data Store) →** Stores user credentials and product details.

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| User |

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| Retail System (1.0) |

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| Database |

| - User Credentials |

| - Product Information |

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**Level 1: Detailed Breakdown**

1. **Process 1.1 - User SignUp (SignUp.js):**
   * Collects user details (username, email, password).
   * Stores credentials in the database.
2. **Process 1.2 - User Login (Login.js):**
   * Validates login credentials.
   * Displays error message if invalid.
   * Redirects to the product page on success.
3. **Process 1.3 - Fetch Products (ProductList.js):**
   * Retrieves product data from the database.
4. **Process 1.4 - Display Products (ProductPage.js):**
   * Shows products in a structured grid layout.
5. **Process 1.5 - Logout (Logout Button):**
   * Clears session data.
   * Redirects the user to the home page.

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| Process 1.1 - User SignUp (SignUp.js) |

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| Process 1.2 - User Login (Login.js) |

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| Process 1.3 - Fetch Products (ProductList.js) |

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| Process 1.4 - Display Products (ProductPage.js) |

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| Process 1.5 - Logout (Logout Button) |

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| Database (User DB) |

| Database (Product DB) |

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**Data Flow:**

**Step 1:** The user signs up and their details are stored in the database.  
**Step 2:** On login, credentials are verified. If valid, the user is redirected to the product page.  
**Step 3:** The system fetches product data from the database.  
**Step 4:** The product page displays available products in a structured UI.  
**Step 5:** If the user logs out, session data is cleared, and they are redirected to the home page.