**RETAIL-APP**

This **React.js** project is an **electronic store web application** with **user authentication** and a **product catalog.** The system enables users to **sign up, log in, and browse products** while managing authentication using **Local Storage.**

LEVEL 00 : CONTEXT DIAGRAM

* User: Requests signup/login.
* System(Retail App): Processes authentication and retrieves products.
* DataStore (Local Storage/ API Database): Stores user credentials and product details.

+------------------+

| User |

+------------------+

|

v

+------------------------------+

| Retail Application | (Process: 0)

| - Handles authentication |

| - Manages products |

+-------------------------------+

|

v

+--------------------------+

| Data Store (LocalStorage / API DB) |

+--------------------------+

LEVEL 1 : DECOMPOSITION OF PROCESS

* User Authentication(1.1): Handles login and signup.
* Product Management(1.2): Retrieves product details.

+------------------+ +--------------------+

| User | | Admin (Future) |

+------------------+ +--------------------+

| |

| |

v v

+---------------------------+ +-------------------------+

| Process: 1.1 - Auth | | Process: 1.2 - Products |

| - Login / Signup | | - Fetch product data |

+-------------------------+ +------------------------+

| |

v v

+-----------------------+ +------------------------+

| Data Store: Users | | Data Store: Products |

| (Local Storage) | | (Product API) |

+-------------------------+ +--------------------------+

**Process 1.1 - Login Authentication**

* The user enters credentials.
* The system checks LocalStorage for valid credentials.
* If correct, the user is redirected to the **Product Page**.
* If incorrect, an error message is displayed.

**Process 1.2 - User Signup**

* The user enters a new username and password.
* The system checks if the username already exists.
* If unique, credentials are saved in **LocalStorage**.

**Process 1.3 - Handle Invalid URL**

* If the user enters an incorrect URL, they are redirected to a **404 page**.

**Process 1.4 - Product Page Access Control**

* If the user is **authenticated**, they can access the **Product Page**.
* If not logged in, they are redirected to the **Login Page**.

**Data Flow**

1. The **user** logs in or signs up.
2. The system **validates credentials** from **LocalStorage**.
3. If **login is successful**, the user is redirected to the **Product Page**.
4. If the user enters an **invalid URL**, they see a **404 error page**.