**Data Flow Diagram (DFD) for Routing Example App**

**Routing Example App** allows users to navigate between the **Home** and **About** pages using React Router. Below is the **DFD representation**:

**Level 0 (Context Diagram)**

At the highest level, the system consists of:

1. **External Entity: User** → Clicks on navigation links (**Home** or **About**).
2. **Process: Routing System** → Handles navigation and displays the correct page.
3. **Data Store: React Router State** → Manages active routes and renders the correct component.

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| External Entity: |

| User |

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| Routing System | (Process 1.0)

| (React Router) |

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| React Components | (Home, About Pages)

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**Level 1 DFD (Decomposed Processes)**

Breaking down **Process 1.0 (Routing System)** into detailed steps:

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| External Entity: | | Process 1.1 - Click |

| User | -----> | (Nav Link Selection) |

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| Process 1.2 - | | Process 1.3 - Render |

| Route Matching | <-----> | (Display Page) |

| (React Router) | | (Home/About) |

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| React State | (Manages Active Route)

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**Explanation of Level 1 DFD Processes**

1. **Process 1.1 - User Clicks Navigation Link**
   * The user selects a link (**Home** or **About**).
   * The browser updates the URL accordingly.
2. **Process 1.2 - Route Matching (React Router)**
   * The system checks which route (/ or /about) was selected.
   * It finds and matches the corresponding **React Component**.
3. **Process 1.3 - Page Rendering**
   * The matched component (Home.js or About.js) is displayed dynamically.
   * React updates the UI based on the selected route.
4. **React Router State**
   * Keeps track of which page is active and ensures smooth navigation without refreshing the page.

**Data Flow Summary**

✔ **User clicks a link → React Router processes the route → Loads and displays the corresponding page**  
✔ Uses **React Router (<Routes> and <Route> components)** to handle navigation.  
✔ **No backend or database**—only front-end state management with React.