**ROUTER-EXAMPLE DFD**

The React Routing App is a simple web application that utilizes React Router for navigation. Users can switch between different pages (Home and About) using navigation links. The system processes user input, updates the URL, and dynamically renders the selected page.

**Level 0 DFD (Context Diagram)**

**Description**

The Level 0 DFD provides a high-level overview of the system, illustrating how users interact with the Routing App and how data flows between various components.

**Diagram:**

+-----------------------+  
| External Entities |  
| |  
| - User |  
+-----------------------+  
 |  
 v  
+---------------------------+  
| React Routing App |  
| (Process: 1.0) |  
+---------------------------+  
 |  
 v  
+----------------------------------+  
| Data Store: URL & State |  
| (Current Page Location) |  
+----------------------------------+

**Explanation**

1. **External Entity (User)**: The user interacts with the Routing App by clicking navigation links.
2. **Process (Routing App)**: The system updates the URL state and renders the correct page.
3. **Data Store (Page DB)**: Stores the current route and updates dynamically.

**Level 1 DFD (Detailed Breakdown)**

The Level 1 DFD further decomposes the React Routing App process into sub-processes, showing how user interactions trigger different functionalities.

**Diagram:**

+-----------------------+  
| External Entity |  
| (User) |  
+-----------------------+  
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+---------------------------------+  
| Process: 1.1 - Click Link |  
| (Select Page Navigation)|  
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+-----------------------------------+  
| Process: 1.2 - Update URL |  
| (Modify Route State) |  
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 |  
 v  
+------------------------------------+  
| Process: 1.3 - Render Page |  
| (Display Selected Page) |  
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 |  
 v  
+----------------------------------+  
| Data Store: URL & State |  
| (Current Page Location) |  
+----------------------------------+

**Explanation:**

1**. Process 1.1 (Click Link - Select Page Navigation):** The user clicks a navigation link to switch pages.

2**. Process 1.2 (Update URL - Modify Route State):** The React Router updates the URL based on user selection.

3. **Process 1.3 (Render Page - Display Selected Page):** The application dynamically loads and displays the corresponding page.

**Data Flow**

• The User clicks a navigation link (Home or About).

• The System updates the URL state and renders the correct page.

• The UI dynamically updates to display the selected page content.