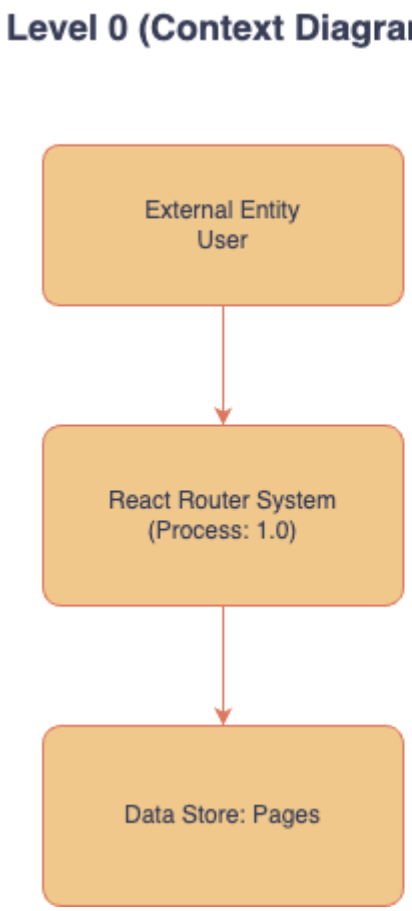
React Router-Based Application

Level 0 (Context Diagram)

At the highest level, the application acts as a single process that handles navigation and renders the requested pages.

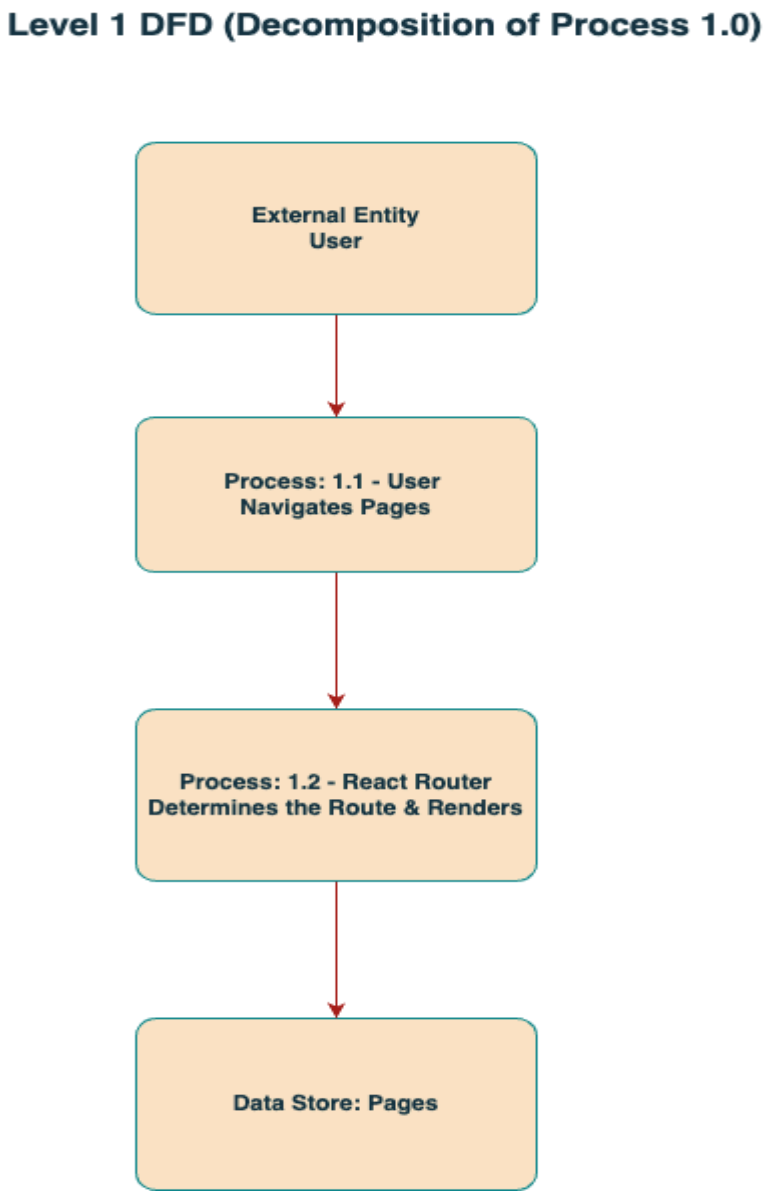


Explanation:

- **User**: The user interacts with the application by navigating between pages.
- **React Router System**: The core system that processes navigation and renders the appropriate components.
- **Data Store (Pages)**: The different pages (Home, About, Contact, Post, NotFound) are stored as React components.

Level 1 DFD (Decomposition of Process 1.0)

Breaking down the navigation system further:



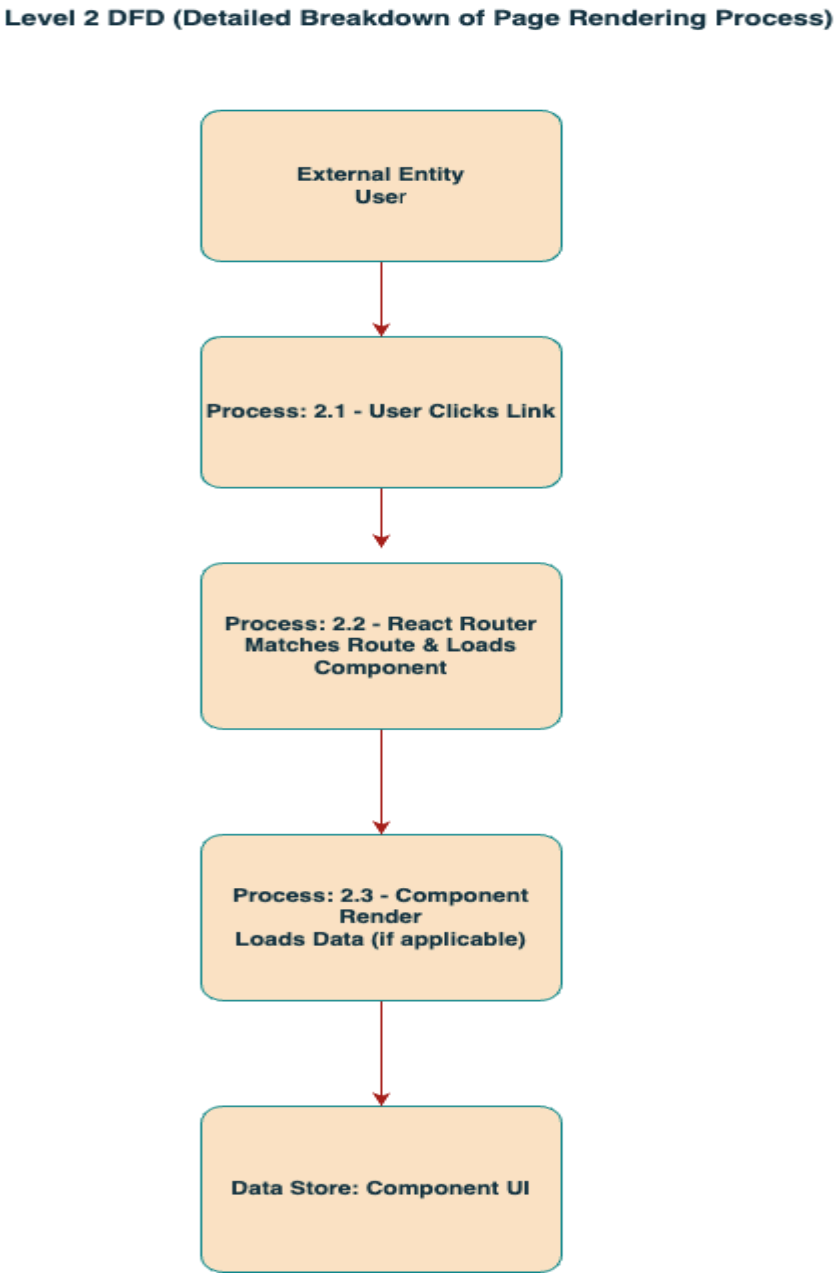
Explanation:

- **Process 1.1 (User Navigates Pages)**: The user clicks on a link or enters a URL in the browser.

- **Process 1.2 (React Router Determines the Route & Renders)**: React Router matches the route and loads the correct component.
- **Data Store (Pages)**: The stored components are accessed and displayed as per the request.

Level 2 DFD (Detailed Breakdown of Page Rendering Process)

If we further break down how React Router loads a page:



Explanation:

- **Process 2.1 (User Clicks Link)**: User selects a link or types a URL.
- **Process 2.2 (React Router Matches Route & Loads Component)**: The application determines the correct component to display.
- **Process 2.3 (Component Render Loads Data, if applicable)**: If required, data is loaded (e.g., fetching post details for the `Post` component).
- **Data Store (Component UI)**: The visual elements of the requested page are displayed.

This DFD represents the basic data flow of a React Router-based application. It highlights:

- How users interact with the system.
- How navigation is processed.
- How pages are rendered based on user actions.

This structure can be further expanded to include API calls (for fetching posts), authentication, or database interactions if needed.