**THEME-APP DFD**

**Level 0 DFD (Context Diagram)**

At the highest level, the Theme App is represented as a single process that interacts with external entities.

**Diagram:**

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|  External Entities  |

|                       |

|   - User              |

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| Theme App   |

| (Process: 1.0)          |

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|Data Store: API |

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**Explanation:**

* **External Entity (User)**: The user interacts with the Theme App by navigating between pages and toggling the theme.
* **Process (Theme App)**: The app handles routing, theme management, and dynamic content rendering.
* **Data Store (API)**: The API provides dynamic data (e.g., post data) to the app.

**Level 1 DFD (Decomposition of Process)**

Now, let's break down the **Theme App** process (Process 1.0) into more detailed steps.

**Components:**

1. **External Entities**:
   * **User**: Interacts with the app by navigating between pages and toggling the theme.
   * **API (JSONPlaceholder)**: Provides dynamic data for the posts.
2. **Processes**:
   * **1.1 Handle Routing**: Manages navigation between pages (Home, About, Contact, Post, 404).
   * **1.2 Manage Theme**: Handles theme state (light/dark) and toggling.
   * **1.3 Fetch Data**: Fetches dynamic data (e.g., post data) from the API.
   * **1.4 Display Content**: Renders the appropriate content based on the route and fetched data.
3. **Data Stores**:
   * **API (JSONPlaceholder)**: Stores and provides post data.

**Diagram:**

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| External Entity | | External Entity |

| (User) | | (API) |

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| Process: 1.1 – | | Process: 1.2 - |

| Handle Routing | | Fetch Data |

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| Data Store: API | | Data Store: API |

| (JSONPlaceholder) | | (JSONPlaceholder) |

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| Process: 1.3 - |

| Display Content |

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| External Entity: User|

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**Explanation:**

1. **Process 1.1 (Handle Routing)**:
   * The user navigates between pages (e.g., Home, About, Contact, Post).
   * The app determines which component to render based on the route.
2. **Process 1.2 (Manage Theme)**:
   * The user toggles the theme (light/dark).
   * The app updates the theme state and applies the appropriate styles.
3. **Process 1.3 (Fetch Data)**:
   * For dynamic routes (e.g., /post/:id), the app fetches data from the API.
   * The fetched data (e.g., post title, body) is passed to the display process.
4. **Process 1.4 (Display Content)**:
   * The app renders the appropriate content based on the route and fetched data.
   * The rendered content is displayed to the user.

**Data Flows**

1. **User → 1.1 Handle Routing**:
   * Navigation requests (e.g., /, /about, /post/1).
2. **User → 1.2 Manage Theme**:
   * Theme toggle requests (e.g., switch between light and dark mode).
3. **1.1 Handle Routing → 1.3 Fetch Data**:
   * Route parameters (e.g., id from /post/:id).
4. **1.3 Fetch Data → API**:
   * Data requests (e.g., fetch post data for /post/:id).
5. **API → 1.3 Fetch Data**:
   * Post data (e.g., title, body for a specific post).
6. **1.3 Fetch Data → 1.4 Display Content**:
   * Fetched data (e.g., post title, body).
7. **1.4 Display Content → User**:
   * Rendered content (e.g., Home page, About page, Post page).