### **Data Flow Diagram (DFD) for Theme Switcher Application**

#### **Level 0 (Context Diagram)**

At the highest level, the Theme Switcher system involves:

* **External Entity (User)**: The user interacts with the UI to toggle the theme.
* **Process (Theme Switcher System)**: The system handles the theme change.
* **Data Store (Theme State)**: Stores the current theme state (light or dark).
* **Data Flow**:
  + The user clicks the toggle button.
  + The system updates the theme state.
  + The updated theme is applied to the UI.

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| External Entity |

| (User) |

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|

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| Process: Theme |

| Switcher |

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| Data Store: Theme |

| State |

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| Output: Updated UI |

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

This breaks down the theme switching process into more detailed steps:

1. **Process 1.1 (User Interaction)**
   * The user clicks the **Toggle Theme** button.
2. **Process 1.2 (Theme Update in Context)**
   * The setTheme function updates the theme state.
   * The system determines the new theme (light or dark).
3. **Process 1.3 (UI Re-render)**
   * The UI reflects the new theme based on the updated state.

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| External Entity | | External Entity |

| (User) | | (Theme System) |

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| Process: 1.1 User | | Process: 1.2 Update |

| Interaction | | Theme |

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| Process: 1.3 UI | | Data Store: Theme State |

| Re-render | | (light/dark mode) |

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### **Data Flow:**

1. The **User** clicks the button to change the theme.
2. The **Theme Switcher** updates the theme state in **Theme Context**.
3. The **UI updates** based on the new theme selection.