**# Data Flow Diagram (DFD) for Lazy Loader**

## **Level 0: Context Diagram**

### **Overview:**

The **Lazy Loader** system dynamically loads content only when required, reducing initial load time and improving performance.

**Entities & Processes:**

* **User:** Requests content.
* **Lazy Loader System (Process 1.0):** Handles the content loading process.
* **Web Server/Database (Data Store):** Stores and provides content dynamically.

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| User |

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| Lazy Loader System |

| (Process: 1.0) |

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| Web Server / Database|

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## **Level 1: Detailed Breakdown**

### **Processes Breakdown:**

1. **Process 1.1 - User Requests Content:** The user scrolls or interacts with the webpage, triggering a request for new content.
2. **Process 1.2 - Lazy Loader Checks Cache:** The system first checks if the requested content is already cached.
3. **Process 1.3 - Fetch Content from Server:** If not cached, the system fetches content from the database or web server.
4. **Process 1.4 - Render Content:** The dynamically loaded content is displayed to the user.

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| User |

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| Process: 1.1 - User Request|

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| Process: 1.2 - Check Cache |

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| Process: 1.3 - Fetch Content|

| (Web Server / DB) |

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| Process: 1.4 - Render Content |

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### **Data Flow:**

1. The **User** interacts with the page (scrolling or navigating), triggering a **content request**.
2. The **Lazy Loader System** checks if the content is already available in **cache**.
3. If content is not cached, the system fetches it from the **Web Server/Database**.
4. The loaded content is **rendered** and displayed on the page.

**Benefits:** Improves page load speed. Reduces bandwidth usage. Enhances user experience.