**COMPUTATIONAL SCIENCES ASOOCIATION**

**HACKATHAN ‘25**

**Introduction:**

This project aims to address these issues by developing a Disaster Relief Supply Chain and Inventory Management System.

**How It Works:**

**1. Home Page:**

* The user is greeted with a simple interface asking for:
  + **Type of Disaster**: Example: earthquake, flood, hurricane.
  + **Affected Area**: Example: city or region name.
* Once the user submits this information, the system proceeds to analyze the inventory.

**2. Inventory Analysis:**

* The system displays the current inventory, including:
  + Meals
  + Water
  + Medicine
  + Canned foods
  + Blankets
* If any item is below 10% of its total capacity, the system shows a low-supply alert to notify the user.

**3. Adding Items:**

* The user can add more items to the inventory if needed.
* The system asks for:
  + Item name
  + Item type
  + Quantity
  + Expiry date
* The user can continue adding items until they choose to stop.

**4. Allocation Strategies:**

* The system asks for additional details to determine the best allocation strategy:
  + Number of people in the camp.
  + Number of heavily affected individuals.
  + Type of area: Low, mid, or high sea level.
* Based on this information, the system recommends one of the following strategies:
  + **First-Come-First-Serve**: Distributes items to people in the camp efficiently for at least a week.
  + **Priority-Based**: Prioritizes heavily affected individuals before allocating to others.
  + **Location-Based**: Allocates resources based on the area's sea level and population density.

**5. Strategy Execution:**

* The system analyzes the situation and provides a step-by-step plan for resource allocation.
* It ensures that resources are distributed fairly and efficiently, prioritizing those in greatest need.