Challenge description

A restaurant has decided to hold a food donation day for Thanksgiving Day, with the only condition that the dish the diners will receive will be random. The restaurant manager urgently requires a system to request dishes from the kitchen.

The restaurant manager should make an order to the kitchen to prepare a dish. The kitchen will randomly select a dish to prepare from a list and request the necessary ingredients from the food storage. If the storage has the ingredients available, it will deliver them to the kitchen; otherwise, they must be purchased from the market. When the kitchen receives the ingredients, it prepares the dish and delivers the prepared dish.

How does it work?

1. The restaurant manager presses a button that sends an order to the kitchen to prepare a new dish.
2. The kitchen has a list of recipes, which should use only the available ingredients (see the list of ingredients at the end of the text). All ingredients must be used in at least one recipe. Each recipe contains the ingredients it comprises and the required quantity of each.
3. When the kitchen receives an order for a dish, it must randomly select from the list of available recipes the dish to prepare.
4. The kitchen must request the ingredients needed to prepare the selected dish from the food storage. It must wait for the ingredients to be delivered before continuing with the dish preparation.
5. Food storage starts with a quantity of 5 units per ingredient. When it receives a request for ingredients, it must check if they are available. If not, it must buy the remaining ingredients from the market, which may or may not have the ingredients available. If the ingredients are not available at the market, the food storage must wait until they become available.
6. The market is located at the address https://recruitment.alegra.com/api/farmers-market/buy. It receives the parameter ingredient with the name of the ingredient to be purchased. Valid options for this are indicated in the list of ingredients at the end of the text. It returns a JSON object with an attribute indicating the quantities

sold (quantitySold) of the ingredient at the market. There is a possibility that the ingredient may not be available (returning quantitySold as 0). A purchase is considered successful when the market response is a non-zero integer indicating the quantities purchased.

7. The kitchen can deliver the dish only when all the ingredients are available. Upon preparing the dish, the used ingredients are decreased from the food storage.

The user interface should include at least the following elements:

- **Button to Request a Dish:** Since this is a free dish donation day, the system should be designed to handle high volumes of requests, as we anticipate a successful event with increasing numbers of dishes being prepared.
- **View Orders in Preparation:** The system should display the current orders being prepared in the kitchen.
- **Display Ingredients and Quantities Available in the Food Storage:** Show the available ingredients and their quantities.
- **Show Purchase History from the Market:** Display the history of ingredient purchases from the market when an ingredient runs out.
- **View Order History:** Show the history of orders made to the kitchen.
- **Display Recipes with Ingredients and Quantities:** The screen should show the recipes with their ingredients and the required quantities.

Available Ingredients for Recipes:

- Tomato
- Lemon
- Potato
- Rice
- Ketchup
- Lettuce
- Onion

- Cheese
- Meat
- Chicken