

## XXXX Engineering Test:

Your solution will be evaluated on object oriented design, testability, extensibility, and solution organization. You can use any language and tooling you would like. Your solution should consist of:

- Source Code
- Tests
- Build Scripts that will allow the application to be run and tested locally from source
- Any dependencies should be detailed in a readme

You can return via zip file or send a link to a GitHub repository.

## Menu Ordering System:

Create a system that takes orders for breakfast, lunch, and dinner. Consider the following menus:

### Breakfast

| Main    | Side     | Drink     |
|---------|----------|-----------|
| 1: Eggs | 2: Toast | 3: Coffee |

### Lunch

| Main        | Side     | Drink   |
|-------------|----------|---------|
| 1: Sandwich | 2: Chips | 3: Soda |

### Dinner

| Main     | Side        | Drink   | Desert  |
|----------|-------------|---------|---------|
| 1: Steak | 2: Potatoes | 3: Wine | 4: Cake |

**Rules:**

1. An order consists of a meal and collection of comma separated item ids.
2. The system should return the name of the items ordered
3. The system should always return items in the following order: meal, side, drink
4. If multiple items are ordered, the number of items should be indicated
5. Each order must contain a main and a side
6. If no drink is ordered, water should be returned
7. At breakfast, multiple cups of coffee can be ordered
8. At lunch, multiple sides can be ordered
9. At dinner, dessert must be ordered
10. At dinner, water is always provided

**Sample Input/Output**

**In:** Breakfast 1,2,3

**Out:** Eggs, Toast, Coffee

**In:** Breakfast 2,3,1

**Out:** Eggs, Toast, Coffee

**In:** Breakfast 1,2,3,3,3

**Out:** Eggs, Toast, Coffee(3)

**In:** Breakfast 1

**Out:** Unable to process: Side is missing

**In:** Lunch 1,2,3

**Out:** Sandwich, Chips, Soda

**In:** Lunch 1,2

**Out:** Sandwich, Chips, Water

**In:** Lunch 1,1,2, 3

**Out:** Unable to process: Sandwich cannot be ordered more than once

**In:** Lunch 1,2,2

**Out:** Sandwich, Chips(2), Water

**In:** Lunch

**Out:** Unable to process: Main is missing, side is missing

**In:** Dinner 1,2,3,4

**Out:** Steak, Potatoes, Wine, Water, Cake

**In:** Dinner 1,2,3

**Out:** Unable to process: Dessert is missing