Entity   **Interface**

Entity

Responsibilities
- Set the entities ID
- Get the entities ID

Collaborators
-

Entity   **Implements Entity**

GroceryList

Responsibilities
- Store ID of list
- Store name of list
- Stores User IDs associated with the list

Collaborators
- Entity

Entity	**Implements Entity**
User	

Responsibilities	Collaborators
● An ID Number for identification ● Stores name ● Stores a username and password	● Entity

Entity   **Implements Entity**

GroceryItem

Responsibilities
- Stores GroceryList IDs associated with the item
- Store User IDs associated with the item (for default items)
- Stores how many times it is used by each user for the RecommendationManager

Collaborators
- Entity

Use Case

GroceryListManager

Responsibilities
- Adding grocery list
- Removing grocery list
- Creates new GroceryLists
- Creates new GroceryItems

Collaborators
- GroceryList
- GroceryItem

Use Case

UserManager

Responsibilities
- Adds users (create new User)
- Deletes users
- Authenticate Users (check if given a valid username and password)

Collaborators
- User

Use Case

RecommendationManager

Responsibilities	Collaborators
- Generate recommendation based on user's GroceryLists - Generate recommendation based on everyone's GroceryLists	- User - GroceryItem

Controller

GroceryListSystem

Responsibilities
- Receive IO
    - Login → username, password
    - Logout → just method call (no parameters)
    - Create user → username, name, password
    - Create grocery list → name
    - Create grocery item → name
    - Recommendation → just method call (no parameters)
- With IO call use case methods with IO parameters
    - Login → get the user with given credentials
    - Create user → create a new user with given credentials
    - Create grocery list → create a new list with given name
    - Create grocery item → create a new item with given name
- Return use case data for UI to display
    - Login → return whether user was logged in
    - Create user → return whether user was created
    - Create grocery list → return whether list was created
    - Create grocery item → return whether item was created
    - Recommendation → return recommendations

Collaborators
- GroceryListManager
- UserManager
- RecommendationManager
- EntityRepository

Gateway

EntityRepository

<u>Responsibilities</u>
- Store all users, grocery lists, and grocery items
- Generate IDs when adding items
- Get grocery lists corresponding to users
- Get grocery items corresponding to a grocery list

<u>Collaborators</u>
- GroceryListSystem

UI

UI

Responsibilities
- Take in user input
    - User login/logout
    - Creating grocery list
    - Adding item to grocery list
    - Sharing list
    - Adding friends
- Display data
    - Display grocery lists
    - Display grocery items in a specific list
    - Display recommendations
- Navigate between functionalities

Collaborators
- GroceryListSystem