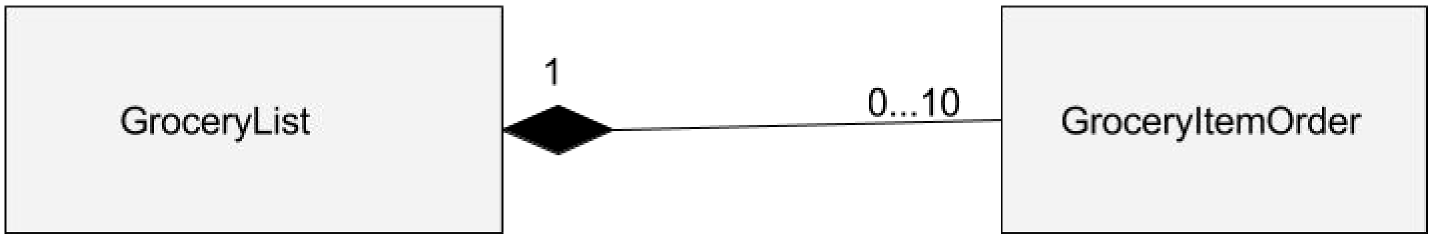
1. Semester Repetition Assignment: Grocery List

In this exercise you are supposed to make a class named GroceryList that represents a list of items to buy from the supermarket. The items in the list should be of type GroceryItemOrder. A GroceryItemOrder represents a request to purchase a particular item in a given quantity (example: four boxes of cookies).



1. First, write the class GroceryItemOrder. The GroceryItemOrder class should have fields for item name, quantity, and price per unit. It should have one constructor setting all these values, and another constructor only setting the name (the default quantity in this case should be one, and the price should be zero). It should have a getCost-method returning the total cost of the item in its given quantity, and a toString-method returning a String with the name, quantity, and total cost. All fields should have getter and setter methods.

2. Then write the class GroceryList. The GroceryList class should use an array to store the GroceryItemOrders. Assume that a GroceryList will have no more than 10 GroceryItemOrders. The GroceryList class should have an add-method that will add a given item order to the list if the list has fewer than 10 items. If the list is full you should throw an Exception. The GroceryList should have a getTotalCost-method that will return the total sum cost of all GroceryItemOrders in this list. It should also have a toString()-method, returning a String with everything that is in the list.

3. Make a test class with a main-method that instantiates a GroceryList. Fill it with different numbers of GroceryItemOrder-objects, and print it. Remember to handle exceptions.Test what happens if you try to add a GroceryItemOrder when the list is full.

4. Instead of writing the names of the items when instantiating them in the test class, try to read them from a file. Make a .txt file with a number of grocery names in it, and test it.