אוניברסיטת בן-גוריון בנגב
Ben-Gurion University of the Negev

הפקולטה למדעי ההנדסה
המחלקה להנדסת מערכות מידע

Faculty of Engineering Sciences
Dept. of Information Systems Engineering

“Super – li”

Supplier-module Requirements specification

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1. Table 1: Functional Requirements

ID	Module	Description	Priority	Risk	Status
1.	Suppliers	The system **MUST** manage all of its suppliers' details, including: supplier ID, Bank account, Payment agreement and contact information.	MH	L	Done
2.	Suppliers	The system **MUST** be able to save the fixed supplying days of a supplier (or none if it doesn't have any).	MH	L	Done
3.	Suppliers	The system **MUST** manage the items supplied by each of its suppliers, including price and item ID (as specified by the supplier).	MH	L	Done
4.	Suppliers	The system **MUST** be able to save a "Quantity Agreement" for each supplier, which describes special discounts according to total price of an order and per quantity of an item.	MH	H	Done
5.	Suppliers	The system **MUST** save whether a supplier sends a shipment or the company has to collect the order from the supplier.	MH	L	Done
6.	Suppliers	The system **MUST** allow to update supplier's shipping conditions (fixed days, self shipment).	MH	L	Done
7.	Suppliers	The system **MUST** support managing orders: each order will include items, quantity of each item, total price , date of order and delivery status.	MH	H	Done
8.	Suppliers	The system **SHOULD** save what categories of products the company orders from each supplier.	NTH	L	Done
9.	Suppliers	The system **SHOULD** save the manufacturers names that a supplier works with.	NTH	L	Done
10.	Suppliers	The system **SHOULD** support fixed orders (recurring orders).	NTH	H	Done

Table 2: Open questions that don’t affect the implementation

Table 1: Terms

#	Topic	Issue
1.	Supplier’s contracts	Do different branches have different contracts with a given supplier? (Regarding quantity agreements)

Table 3: Open questions that affect the implementation

Table 2: Terms

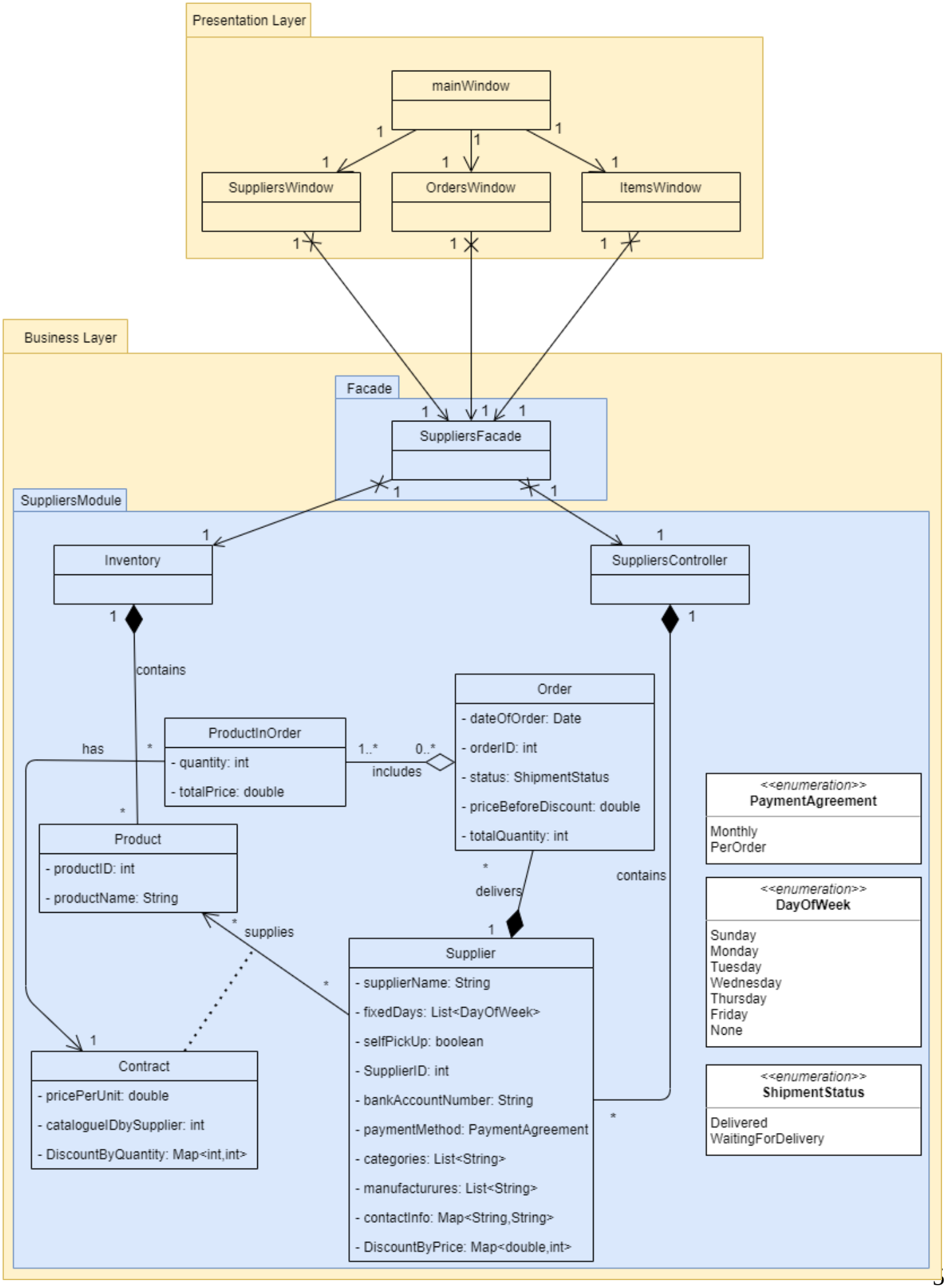
#	Topic	Issue	Client's answer (assumptions/as answered in forum)
1	Supplier's contacts details	Who is considered a contact?	A supplier's manger (assumption).
2	Supplier's contacts details	What details should be saved for each contact?	First and last name, phone number (assumption).
3	Quantity agreement	How to determine if a purchase is large?	There are some fixed scales that the company receives discounts (elaborated in forum)
4	Quantity agreement	What is the relationship between the discount and the number of products in an order?	Each supplier can give a discount as it wishes (elaborated in forum).
5	Payment agreement	What kinds of payment agreement there are?	Payment for each order or Payment once a month (assumption).
6	Quantity agreement	How is a discount calculated?	First, the discount of item quantity is calculated, and only then, the final discount (if it exceeds a total of a certain price) for all of the order. (assumption).
7	Quantity agreement	Can the agreement be changed? (discounts).	Yes, in any time (assumption).
8	Supplying days	Are items supplied on Saturday?	No (assumption).
9	Quantity agreement	What types of discounts can a supplier provide?	1. Discount per quantity of an item 2. Discount per total price of an order (assumption).

Note regarding the following class diagram:

1. We've included an "Inventory" class, which holds all the products in the store (product's id in the store, description) although this might not be relevant to the module, this is the point of integration between the suppliers module and the inventory module so we decided to include it for convenience in the next steps of the project.

2. There are some classes in the implementation that don't appear in the diagram: utilities class in the presentation layer and the DTOs, we haven't included those as the DTOs are simply struct objects, used for printing values in the presentation layer and its implementation is trivial, as well as the utilities class.
   (We were instructed to omit those in the second part of the assignment – to create a higher level of abstraction)

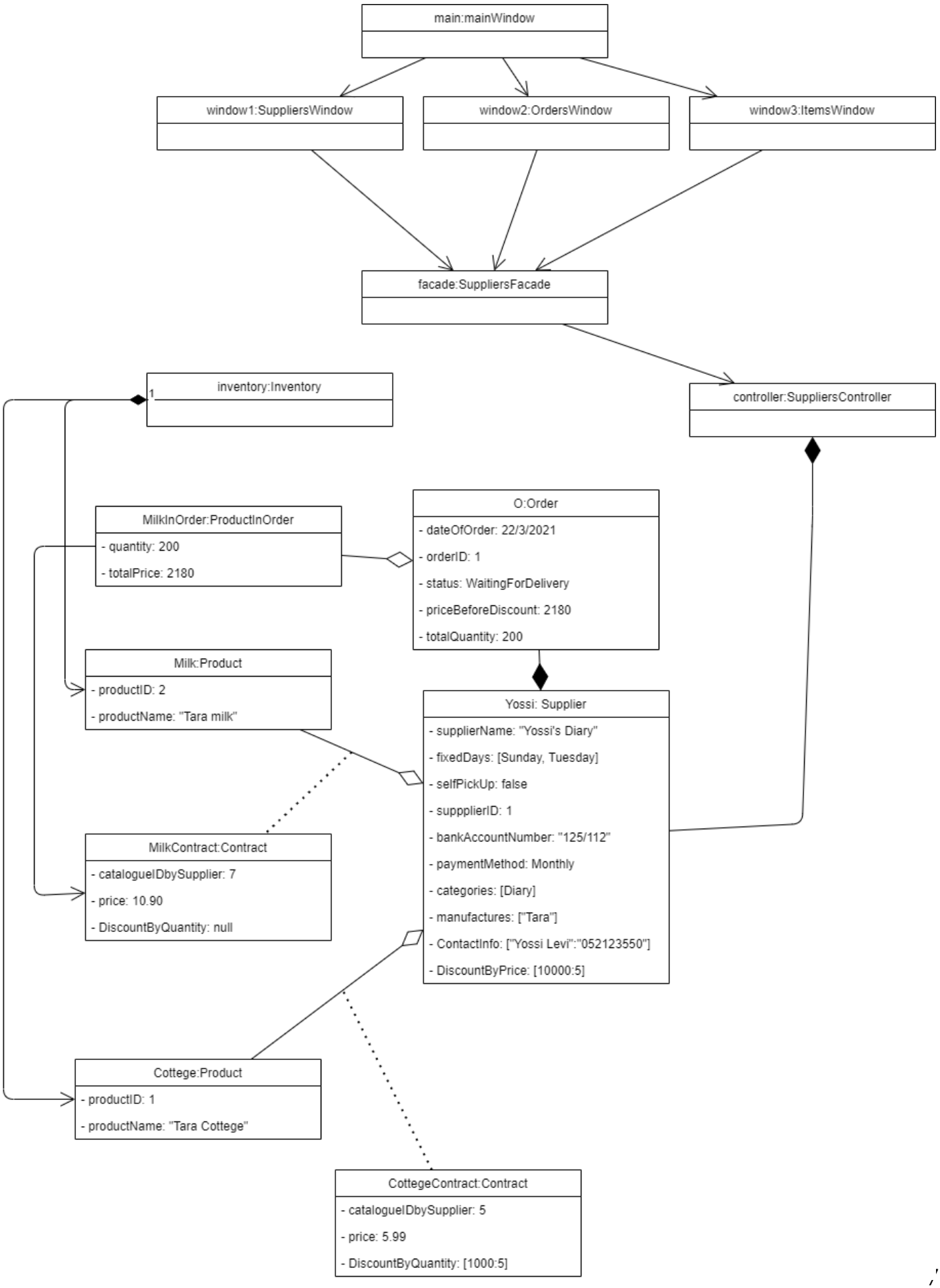
Class Diagram:



Object Diagram:

Scenario	Description
#1	There's one supplier in the system, called "Yossi's Diary" (its details are elaborated in the object diagram below). The company is wishing to make an order from Yossi. The products that Yossi can suppy (according to the contract) are: 1. "Tara Cottege": The item id as the store identifies it is **1** and as the supplier identifies it is **5** the price that Yossi sells this product to the company is **5.99 nis,** and it supplies a discount of 5% when ordering over 1000 items. 2. "Tara Milk": The item id as the store identifies it is **2** and as the supplier identifies it is **7** the price that Yossi sells this product to the company is **10.90 nis,** and it doesn't have any discounts for this product. Yossi provides 1 type of "Quantity agreement": A. For orders above total price of 10,000 nis the company receives a discount of 5%. The order details are as follows: - Order date: 22/3/2021, Order ID:1, Status: Waiting for delivery, Products: "Tara Milk" × 200, Price before discount: 2180 nis, Total quantity: 200 **This scenario demonstrates a special feature that may strongly help the business process of the company : Placing orders.** Below, is an object diagram to the class diagram provided above, which is "strongly satisfiable" and satisfies all the constraints of the class diagram provided above.
#2	There are 2 different suppliers in the system. 1. "Danny's meat" 2. "The butcher" (more details are elaborated in the following object diagram below). Both of them are supplying to the company the same item: "Zoglobeck Salami" (identified by id 3 in the company). However, with a minor **important** difference: the price. The first supplier sells it for **10.50** nis per item and the second supplier sells it for **15.50** nis per item. The following object diagram represents this scenario. **This scenario demonstrates a special feature of the system, the company can better decide which supplier to buy from a certain item (according to a given price) and in that way, that supports the business-process (gain more profit).**

Object diagram Scenario #1: (Strongly satisfiable)



Object diagram scenario #2: