

דרישות

מלאי ת"ז ושמות : עידן חפץ 213633332 ניר אהרוני 213161953
 ספקים ת"ז ושמות : דנה פרידמן 213967599 אייל שפירו 213958804

Requirements(Supplier + stock)

ID	Module	Functional / Non-Functional	Description	Priority	Risk	Status
1	SP	Functional	The system MUST deploy each periodic order on the mentioned days every week.	MH	High	Done
2	ST	Functional	When viewing the shortages report, the stock manager MUST be able to order all the products, after choosing an extra amount for each product (not including the amount required for the minimum). The system MUST calculate the division of the shortage products to suppliers optimally (explained in the terms chapter).	MH	High	Done
3	SP	Functional	The client MUST be able to view a "supplier card" for each supplier. Each supplier card contains the supplier's ID, name, location, bank account and the deal with the supplier.	MH	Low	Done
4	SP	Functional	<p>The client MUST be able to view the following information about deliveries for each deal with a supplier:</p> <ul style="list-style-type: none"> - Does the supplier deliver products or requires pickup? - If the supplier delivers the products, the fixed delivery days (if there are any). 	MH	Low	Done

			<ul style="list-style-type: none"> - The amount of days the supplier takes to prepare (and deliver) the order. 			
5	SP	Functional	<p>The client MUST be able to view the supplier's business terms (תנאים עסקיים) for each deal, which include:</p> <ul style="list-style-type: none"> - payment method - quantities list (כתב כמויות) - the product in the deal and the supplier's catalogue number, price and supply amount. In addition, all discounts mentioned in the terms chapter. 	MH	Low	Done
6	SP	Functional	The system MUST support adding / removing suppliers (with their deal) or updating an existing supplier's information.	MH	Low	Done
7	SP	Functional	The system MUST support adding / updating products to a deal with a supplier.	MH	Low	Done
8	SP	Functional	The system MUST support removing products from a deal with a supplier. If the removed product is in a periodic order, it will be removed from it as well.	MH	Low	Done
9	SP	Functional	The system MUST support updating the information of a deal with a supplier.	MH	Low	Done
10	SP	Functional	The client MUST be able to view the discounts included in a deal with a supplier.	MH	Low	Done
11	SP	Functional	The system MUST support adding "amount of products" discounts to entire deals, by choosing the	MH	Low	Done

			minimal amount of products to get a discount, and the discount percentages.			
12	SP	Functional	The system MUST support updating / removing “amount of products” discounts from entire deals.	MH	Low	Done
13	SP	Functional	The system MUST support adding “price of products” discounts to entire deals, by choosing the minimal price of products to get a discount, and the discount percentages.	MH	Low	Done
14	SP	Functional	The system MUST support updating / removing “price of products” discounts from entire deals.	MH	Low	Done
15	SP	Functional	The system MUST support adding “amount of products” to specific products in a deal, by choosing the minimal amount of products to get a discount and the discount percentages..	MH	Low	Done
16	SP	Functional	The system MUST support removing / updating “amount of products” to specific products in a deal.	MH	Low	Done
17	SP	Functional	The supplier's manager MUST be able to add a periodic order agreement to a supplier, by choosing a supplier, a branch, a contact person from the supplier's contacts, the ordered products, and the products' amount.	MH	Low	Done
18	SP	Functional	The system MUST allow choosing the periodic order agreement's delivery days (if the supplier does not have fixed delivery days).	MH	Low	Done

19	SP	Functional	The client MUST be able to view contacts of suppliers. For each contact, the system must show all of the information described in the “Contact” term in the term chapter.	MH	Low	Done
20	SP	Functional	The system MUST support adding a new contact to a supplier, by entering the contact’s ID, name, phone number, address, email address.	MH	Low	Done
21	SP	Functional	The system MUST support adding an existing contact to a supplier, by entering the contact’s ID.	MH	Low	Done
22	SP	Functional	The system MUST support updating contact’s information or removing a contact from a supplier.	MH	Low	Done
23	SP	Functional	The client MUST be able to get a report of all products the company buys from suppliers and their respective catalogue numbers in each supplier.	MH	Low	Done
24	SP	Functional	The system MUST show the history of all orders that were made, ordered by date in descending order. For each order, the system must show the order’s ID, date and the price before and after discounts. In addition, the division of the order’s products to suppliers and each supplier’s contact.	MH	Low	Done
25	SP	Functional	The system MUST show the history of all orders that were made from a specific supplier, in the same format as mentioned above.	MH	Low	Done

26	SP	Functional	<p>When presenting an order, the system MUST show:</p> <ul style="list-style-type: none"> - The supplier's name, ID, address and contact. - The order's ID and date. - For each order product, the product's ID, name, original price, discount and final price. 	MH	Low	Done
27	SP	Functional	<p>The system MUST show an error message, if invalid data is inserted (assumptions about data validity are in table 3) or if a command returns no results (for example, no suppliers match a filter by supply area, or an order cannot be divided to suppliers).</p>	MH	Low	Done
26	STK	Functional	<p>The system MUST support adding a new product, by entering the product's name and manufacturer.</p>	MH	low	Done
29	STK	Functional	<p>The system MUST support updating / removing a product.</p>	MH	low	Done
30	STK		<p>A warehouse worker MUST be able to insert a new branch product instance in the system (to insert his instanceId, productId, expiry date, arrival date and his Buying price)</p>	MH	Low	Done
31	STK	Functional	<p>The system MUST support removing missing instances of products (a branch product that has been bought, stolen or disappeared) by entering the id of the missing instance.</p>	MH	Low	Done

32	STK	Functional	The warehouse worker must be able to report that a product instance is defected	MH	Low	Done
33	STK	Functional	A warehouse worker MUST be able to update the location of a product instance (in stock/ in store)	MH	Low	Done
34	STK	Functional	The system MUST support adding a new branch product, by entering the product Id, the branch, the price the product will be sold in Super Lee, the demand, the minimal amount the product should be in the store, the place in the store, and all of the categories this product belongs to.	MH	low	Done
35	STK	Functional	The system MUST support updating / removing a branch product.	MH	low	Done
36	STK	Functional	The system MUST support adding a new discount to a branch product, by entering the product id, start and finish dates of the discount and the discount percentages.	MH	low	Done
37	STK	Functional	The system MUST support adding a new discount to a category, by entering the category path (explained in terms), start and finish dates of the discount and the discount percentages.	MH	high	Done
38	STK	Functional	For each branch, the stock manager MUST be able to make an Inventory report. Inventory report contains the following information about each product: place in store, manufacturer, current amount in store and stock, final selling and buying prices, his demand, and the number of days until the arrival of the next shipment of this product.	MH	high	Done
39	STK	Functional	A manager MUST be able to make a categories report on specified categories. The report consists of	MH	high	Done

			categories the manager chose to see and for every category, will be presented the products in it.			
40	STK	Functional	The system MUST support producing defective instances reports. The Defective Instances report contains all of the defected and expired product instances in the system. (For every product instance in the report we will present his id, name, category path, and for defected product instances the description about the defectivity and for expired product instances the number of days since this instance is expired)	MH	high	Done
41	STK	Functional	The Stock Manager MUST be able to set a time Step, so that every couple of days that the manager decides (the time step is the number of days) he will receive defective instances report.	MH	Low	Done
42	STK	Functional	The system MUST support registration of new users to the system by name and password.	MH	Low	Done
43	STK	Functional	The system MUST support logout operation for connected users	MH	Low	Done
44	STK	Functional	The stock Manager MUST be able to view a report of all products in shortage.	MH	Low	Done
45	SP	Functional	The supplier manager MUST be able to delete or update a periodic order agreement, until a day before the order is deployed.	MH	Low	Done
46	SP + STK	Functional	When an order arrives, the system MUST insert all of the instances of the arriving products. (For each instance insert his instancelid, productid, expiry date, arrival date and the price this instance was purchased from a supplier.)	MH	Low	Done
47	SP	Functional	The client SHOULD be able to view free text about a deal.	NTH	Low	Done

48	SP	Functional	The system SHOULD filter and show all suppliers that supply a certain supply area.	NTH	Low	Done
49	SP	Functional	The system MUST allow creating a new order manually, by choosing a contact person from the supplier's contacts, and choosing products, their quantities and a supplier.	NTH	Low	Done
50	STK	Functional	The system SHOULD show how much of each product has been sold on each branch.	NTH	Low	in progress
51	STK	Functional	The Stock manager SHOULD be able to report defectivity of all the instances of a specified product. (for example: Salmonella in all dark-chocolate 70% of Elit)	NTH	Low	in progress
52	SP	Functional	The system MUST allow creating a new regular fastest order by choosing a contact person from the supplier's contacts, and choosing products and their quantities. The system must calculate the fastest division of the products to different suppliers (explained in the terms chapter).	NTH	High	Done
53	SP	Functional	The system MUST allow creating a new regular optimal order by choosing a contact person from the supplier's contacts, and choosing products and their quantities. The system must calculate the optimal division of the products to different suppliers (explained in the terms chapter).	NTH	High	Done
54	SP	Functional	Upon making an order, the client SHOULD be able to choose to update the order's contact via email using the system.	NTH	High	Done

55	SP	Functional	Upon updating a deal with a supplier, the client SHOULD be able to choose to update one or more of the supplier's contacts via email using the system.	NTH	High	Done
56	SP	Functional	The system MUST enable only a suppliers manager to access the Supplier's menu (described in term number 1 in the terms chapter).	MH	Low	Done
57	STK	Functional	The system MUST enable only a warehouse worker to access the Warehouse Worker menu (described in term number 2 in the terms chapter).	MH	Low	Done
58	SP + STK	Functional	The system MUST enable only a store manager to access the Store Manager menu (described in term number 3 in the terms chapter).	MH	Low	Done
59	SP + STK	Non Functional	The user interface MUST be a graphical user interface (GUI) and a command line interface (CLI).	-	-	Done

שינויים שעשינו

מלאי

*corrected the errors we got in previous hw

New: A warehouse worker must be able to update the location of an instance of product (in stock/in store)

Removed: The system must alert about a product that is about to run out of the stock, depending on the minimum amount, unique to each product.

Explanation: Duo to the update in requirement

Now (according to forum): The stock manager **MUST** be able to view a report of all products in shortage.

Removed: The system must save the product's data based on different categories, subcategories and sub subcategories.

New: The Stock Manager must be able to set a time Step, so that every couple of days that the manager decided he will receive defective instances

Removed : a report about the inventory will be produced at least once a week

Explanation: Not necessary

Removed: A manager must be able to look the final selling and buying prices of each product

Explanation: now it is part of the inventory report

Updated (because what inventory report is not mentiond):

From: A manager must be able to make an Inventory report.

To: For each branch, the stock manager **MUST** be able to make an Inventory report.

Inventory report contains the following information about each product: place in store, manufacturer, current amount in store and stock, final selling and buying prices, his demand, and the number of days until the arrival of the next shipment of this product.

Removed (because its included in the previous change) : A manager must be able to see the following information about each product : place in store, manufacturer, current amount in store and stock.

Removed: The system **MUST** be able to track expired or defective products.

Explanation: same as the requirement "A super lee's worker must be able to report on a defective product".

New: The supplier's manager **MUST** be able to add a periodic order, by choosing a supplier, a contact person from the supplier's contacts, the ordered products, the products' amount and the days of the order.

Explanation: according to the forum manager **must** be able to deploy a periodic order

New: The system **MUST** deploy each periodic order on the mentioned days every week.

Explanation:

New: The supplier manager **MUST** be able to delete or update a periodic order, until a day before the order is deployed.

Explanation: was asked by the forum

New: A stock manager **MUST** be able to give and change the minimum amount of a product.

Explanation: was asked by the forum

New: When an order arrives (the date of arrival is the data the order was deployed + the maximum between the days it takes each supplier to prepare the order), the system **MUST** insert all of the instances of the arriving products. (For each instance insert his instanceId, productId, expiry date, arrival date and the price this instance was purchased from a supplier.)

Explanation: was asked by the forum

פנקים

- 1) We enabled adding a periodic order agreement with a supplier, to support creating periodic orders weekly according to an agreement. In order to do that we added the requirements which mention creating / updating / removing an agreement and deploying periodic orders weekly. We also added the PeriodicOrderAgreement to the UML diagram.
- 2) We removed all requirements that are related to products (not DealProductInformation), since the information about the products themselves is more significant to the Stock Module, and can be accessed from there. We also removed the Product Class from the UML.
- 3) We removed all requirements and classes that are related to users registration / logging in, since the Stock Module already had them. We decided to keep it only in the Stock Module since they had different kinds of users in the system, while we also had one kind.
- 4) We added the persistence layer.
- 5) In order we saved a reference to a deal. We changed that to saving the supplier id. That way it is easier to get an order from the DB - Instead of getting all of the Suppliers associated with the order, we only need to get a string.
- 6) In dealProductInformation we saved a reference to a product. We changed that to saving the product id. It makes it easier to access the DB, like explained in (5).

שינויים שעשינו בדרישות עבור שני המודולים

- 1) We added to the requirement that the user interface of the system must be a CLI, that is must also have a GUI, to fill the requirements of the assignment.
- 2) We also added the requirements to restrict access to different parts of the system by different types of users. We removed the role of the cashier since it was no longer required in the assignment, and added the role of a store manager.

הנחות

#	Module	Question	Answer
1	SP	Can you have multiple payment conditions with a supplier?	No.
2	SP	Can one person be a contact of several suppliers?	Yes.
3	SP	Is the order date the day the order was entered into the system? Or is it determined in other ways (for example, the date the order should start to be prepared, or the day it should be delivered, etc.)	The day the order was entered into the system.
4	SP	Can a manufacturer have two products with the same name? *	No.
5	SP	Can two manufacturers have a product with the same name? *	Yes.
6	SP	Do you know all supply areas (Electronics, Dairy, Sauces...) that suppliers can have?	No. They can have any area.
7	SP	What is a valid id?	Any 9 digits between 0-9.
8	SP	What is a valid name?	Any combination of lower and upper case letters.
9	SP	What is a valid bank account number?	In the form ddd-ddddd/dd, where d is a digit between 0-9.
10	SP	What is a valid phone number?	In the form ddd-dddddd, where d is a digit between 0-9.
11	SP	What is a valid email address?	In the form _@_._ (the part after @ should have at least one dot).
12	SP	What is a valid supplier name / supplier location / product name / product manufacturer?	Any string in a length between 3-50.

13	SP	What is a valid product description / contact address?	Any string in a length between 3-100.
14	SP	How are periodic order's supply days determined?	By the supplier's fixed delivery days, if there are any. If not, they will be entered when creating the order.
15	SP	When does an order arrive?	The date of arrival is the data the order was deployed + the maximum between the days it takes each supplier to prepare the order.
16	STK	How many sub - categories can each category have?	There is no limit.
17	STK	Should each type of user have a different menu?	Yes.
18	STK	Where is a product instance stored when created?	In the stock.

* Conclusion from questions 4,5 - A product name is not unique in the system.
However, A product produced by a manufacturer is.

שאלות פתוחות

#	Module	Topic	Issue
1	STK	Alert	How should the system alert when needed ?

מושגים

1.	Suppliers menu	The suppliers menu includes all the information and actions about suppliers - viewing, adding, editing and deleting suppliers. For each supplier, viewing the order history from the supplier. In addition, adding, editing and deleting contacts, deal products, all kinds of discounts and periodic orders.
2.	Warehouse worker menu	The warehouse worker menu includes the product explorer (viewing, adding, editing and deleting products and discounts), making all kinds of orders, viewing the shortage report and making a shortage order of it, and handling inventory products (handling all the instances of products in the store, reporting missing of defective instances and more).
3.	Store manager menu	The store manager menu includes viewing the shortage report, orders history, defective items report, and setting a time step for the manager to get the defective reports. The store manager can also access the suppliers menu and the warehouse worker menu.
4.	Supplier	A company that supplies products to Super Lee. Each supplier includes a supplier id, the supplier's name, location, bank account, the supply fields, and the deal that Super Lee has with this supplier.
5.	Deal	Each supplier has a deal, which contains the payment method, the days it takes the supplier to prepare an order, does the supplier deliver the orders to Super Lee or requires pickup, and if so, the fixed days the order will be delivered (if there are any). In addition, the products this supplier can supply to Super Lee. A deal also includes the list of Deal Discounts.

6.	DealProductInformation	The information about a product from a specific supplier. It includes the price and catalogue number the supplier gives to the product, and the amount the supplier can supply of this product. It also includes a list of Product Discounts that apply to this product.
7.	Deal Discount	A discount that is applied to an entire deal. There are 2 types of deal discounts: Total Products Discount and Total Price Discount.
8.	Total Products Discount	A discount that is applied if there are more than a minimal amount of products in an order overall. It includes the minimal amount of products and the discount percentages.
9.	Total Price Discount	A discount that is applied if the total price of an order is higher than a minimal price. It includes the minimal price and the discount percentages.
10.	Product Discount	A discount that is applied to one product in a deal. There is one type of product discount: Product Amount Discount.
11.	Product Amount Discount	A discount that is applied to a product's price, if the product's amount in an order is bigger than a minimal amount. It includes the minimal amount and the percentages.
12.	Contact	A contact person which enables Super Lee to contact a supplying company. Each contact includes an id, name, phone number, email and address.
13.	Order	An order which includes an order id, the order date, the prices of all products before and after discount. In addition, for each product, the amount and from which supplier it is ordered.
14.	Regular Optimal Order	An order, where the division of products to suppliers is done according to the "Optimal Order Division Calculation".
15.	Optimal Order Division Calculation	If at least one supplier is able to supply all ordered products, the system must choose the cheapest one (with double discounts). If not, the system must divide the products into groups and assign each group to a different supplier. The groups should be as large as possible, and yet each supplier must be able to supply all the products. If there are a few possible divisions as mentioned, the system must

		choose the cheapest one. If there isn't a possible division, an error message must be shown.
16.	Regular Fastest Order	An order, where the division of products to suppliers is done according to the Fastest Order Division Calculation (term 13).
17.	Fastest Order Division Calculation	First, for each product, we will choose the supplier that is able to supply it the earliest. If there is a set of products that a few suppliers supply in the same day, we will divide it among them, according to the division described in "Optimal Order Division Calculation".
18.	Periodic order agreement	A part of a deal with a specific supplier that specifies, for each branch of Super Lee, what products to supply, the amount, on what days and a designated contact.
19.	Periodic Order	An order that is deployed weekly, according to the periodic order agreement.
20.	Shortage Order	An order that is created due to a shortage in the stock. After the Stock Manager views a shortage report, he can order the products in the report. The amount for each product will be the amount that is missing, and an extra amount if the manager chooses so. The order will be divided among suppliers according to the "Fastest Order Division Calculation".
21.	Category	Every product belongs to a category, category can be a subclass of another category
22.	Category path	the path is the names of the categories that the wanted product is in for example: if the path of a product is Dairy/Milk than the product is in category Milk and Milk is Category of Dairy
23.	Branch	A Branch is A branch of superLee.
24.	Product	A Product is not connected to any branch, its just an existing product
25.	Branch Product	A Product that exists in a specific branch.

26.	Instance product	Every branch holds an instances of a product. Instance is an example of a product (for example we have in store the product Milk and five instances of him)
27.	defected	A defected instance of a product is an instance that can't be sold by SuperLee and need to be replaced
28.	expired	An expired instance of a product is an instance that his expired date is before the current date

