Requirements

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| ID | Module | Functional / Non-Functional | Description | Priority | Risk | Status |
| 1 | transport | functional | The system will keep the following information for each transport: unique ID, date, departure hour, truck license number, driver ID, source, destinations, uniquely identifiable list of items for each destination, truck weight | HP | LR | done |
| 2 | transport | functional | The system will keep the following information for each site: transport zone, address, phone number, contact person name, site type | HP | LR | done |
| 3 | transport | functional | The system will keep the following information for each truck: license number, model, base weight, maximum weight, cooling capacity | HP | LR | done |
| 4 | transport | functional | The system will keep the following information for each driver: unique ID, name, driving license type | HP | LR | done |
| 5 | transport | functional | The system will allow adding new transports, drivers, trucks, sites, item lists | HP | LR | done |
| 6 | transport | functional | The system will allow editing transports, drivers, trucks, sites and item lists. | HP | LR | done |
| 7 | transport | functional | The system will allow deleting transports, drivers, trucks, sites and item lists. | HP | LR | done |
| 8 | transport | non-functional | The truck's cooling capacities are: 1:"none",2:"cold",3:"frozen" | HP | LR | done |
| 9 | transport | non-functional | The site types are the following: Logistical center, branch, supplier | HP | LR | done |

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| ID | Module | Functional / Non-Functional | Description | Priority | Risk | Status |
| 10 | transport | non-function | The types of driving licenses are defined as pairs of letter and number as such: 1-3 for cooling capacity and A-C for max weight.  A : 0 - 10,000kg  B : 0 - 20,000kg  C : no limit  1 : no cooling  2 : cold  3 : frozen  for example: C1, B3, B1 etc | HP | LR | done |
| 11 | transport | non-function | The driver's license adequacy is ordered as such:  A1<B1<C1<C2<C3  A2<B2<C2<C3  A3<B3<C3  which means that drivers can drive trucks that require a weaker license | HP | LR | done |
| 12 | transport | functional | The system will reject the transport if the weight is higher than the maximum weight of the truck. | HP | LR | done |
| 13 | transport | functional | If a transport is rejected, the system will allow choosing between: changing or removing a destination, changing the truck, or changing the item list | HP | HR | done |
| 14 | transport | functional | The system will enforce that the driver of the transport has the adequate license type for the truck according to the cooling capacity and the weight of the truck | HP | HR | done |
| 15 | transport | functional | The system will not allow a truck to be assigned to two overlapping transports | LP | HR | backlog |
| 16 | transport | functional | The system will not allow a driver to be assigned to two overlapping transports | LP | HR | backlog |

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| ID | Module | Functional / Non-Functional | Description | Priority | Risk | Status |
| 17 | transport | functional | The system will document every transport in the transport history database | HP | HR | done |
| 18 | transport | functional | The system will document the list of items in the item history database | HP | HR | done |
| 19 | transport | functional | The system will validate that a store keeper is available in every branch at the requested date and time | HP | HR | done |
| 20 | transport | functional | The system will validate that the driver is available at the requested date and time | HP | HR | done |
| 21 | transport | functional | The system will calculated a predicted time of arrival for every destination in the transport | HP | high | done |
| 22 | Employees | Functional | The system will enable decision of required roles (Cashier, Storekeeper, GeneralEmployee, ShiftManager, SecurityGuard, Stweard, Cleaner) and quantity of each in every branch in anytime. | MH | High | Done |
| 23 | Employees | Non-Functional | The system will enforce requirements on all branches of the company. | MH | Low | Done |
| 24 | Employees | Functional | The system will enable scheduling morning and evening shifts to every branch separately by the user's input | MH | High | Done |
| 25 | Employees | Non-Functional | The system will enable each employee to work at several branches in separate days. | MH | Low | Done |
| 26 | Employees | Functional | The system will Identify illegal shift scheduling and will notify the HR manager about that. Illegal shift scheduling is when the schedule contradicts constraints. | MH | High | Done |
| 27 | Employees | Non-Functional | The system will Identify the following as illegal shift scheduling: an employee working more than two shifts a day, an employee working more than 6 days a week, an employee signed up for a shift on a day that the branch is closed,\_\_\_. | MH | High | Done |
| 28 | Employees | Functional | The system will register users with a username and password for each user, with a unique username to each.(Inferred) | MH | Low | Done |
| 29 | Employees | Non-Functional | The system will Identify each user as a certain employee in the company.(Inferred) | NTH | Low | Done |

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| ID | Module | Functional / Non-Functional | Description | Priority | Risk | Status |
| 30 | Employees | Functional | The system will allow employee users to register themselves to shifts that hasn't happened yet (Inferred) only If they abide legal shift scheduling. | MH | High | Done |
| 31 | Employees | Functional | The system will enable HR manager user to verify each shift. | MH | High | Done |
| 32 | Employees | Non-Functional | The system will Identify some of its users as HR manager. (Inferred) | MH | Low | Done |
| 33 | Employees | Functional | The system should allow the HR manager to specify the work days and shift hours of each branch. | MH | High | Done |
| 34 | Employees | Functional | The system should note the different activities that occurred during each shift (such as the starting and end time of the shift, product cancellations at the register, etc.) | NTH | High | Done |
| 35 | Employees | Functional | The system should allow product cancellations at the register, and only to employees with a cancellation card. | MH | High | Done |
| 36 | Employees | Non-Functional | The system should enforce that there will always be a shift manager in every shift, the shift manager will be certified to use his cancellation card and manage the team. | MH | High | Done |
| 37 | Employees /Inventory | Functional | For every product cancellation at the register, the system should save the following cancellation details: cancelled product id, cancelling employee id, date and time of cancellation, in order to track the activity of the shift workers. | NTH | Medium | Done |
| 38 | Employees | Functional | The system should allow the HR manager to update each employee's details, as well as certify/remove different roles/certifications for each one. | MH | Medium | Done |
| 39 | Employees | Non-Functional | The system should save the following details for each employee: name, id, bank details, salary, employee conditions, employment date and other information if needed. | MH | Low | Done |
| 40 | Employees | Non-Functional | The system should support managing a number of different branches, each branch should have an HR manager and should be able to manage its employees and shifts independently. | MH | High | Done |

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| ID | Module | Functional / Non-Functional | Description | Priority | Risk | Status |
| 41 | Employees | Non-Functional | The system should enforce that each employee will only be able to work in certain shifts according to his certifications. | MH | High | Done |
| 42 | Employees | Functional | The system should calculate the employee's salary automatically, and allow modifying it (for example, by giving a bonus) | NTH | High | Done |
| 43 | Employees | Non-Functional | The system will only allow the following possible roles for the employees: Shift Manager, Cashier, Storekeeper, Security Guard, Cleaner, Steward, General Employee and Driver. It won't be possible to add new roles. | MH | Low | Done |
| 44 | Employees | Non-Functional | The system should allow for different employee roles to exist in each branch, but all branches will always have the following roles: Shift Manager, Cashier, Storekeeper and General Employee. | MH | Low | Done |
| 45 | Employees | Non-Functional | The system will enforce that there will be a valid shift schedule at least 24 hours before the shift, otherwise, the system will notify the HR manager about that. | NTF | High | Backlog |
| 46 | Inventory | Functional | The system should notify the client when products from the supply are shortage and order from the supplier | NTH | high | finished |
| 47 | Inventory | Functional | The system should enable to add the minimume amount for each product | NTH | low | finished |
| 48 | Inventory | Functional | The system should enable to add detailes about each product:  - location  - supplier  - manufacturer  - amount(in store and in the warehouse)  - store price | MH | low | finished |
| 49 | Inventory | Functional | The system should calculate and save for each product the finall supplier price and the selling price considering the discounts | MH | low | finished |
| 50 | Inventory | Functional | The system should save all the discounts that each product had from the supplier or the store | MH | low | finished |

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| ID | Module | Functional / Non-Functional | Description | Priority | Risk | Status |
| 51 | Inventory | Functional | The sysytem should enable to add for each product it's catgory and sub-categories | MH | low | finished |
| 52 | Inventory | Functional | The system should enable produce reports of all products in stock according to a chosen category and sub-catagories | NTH | high | finished |
| 53 | Inventory | Functional | The system should enable to save whether a product is damaged or expired | MH | low | finished |
| 54 | Inventory | Functional | The system should enable to produce a report of all products that are gonna run out | NTH | high | finished |
| 55 | Inventory | Functional | The system should enable to produce a report of all damaged products, it's details and where their location | NTH | high | finished |
| 56 | Inventory | Functional | The system should enable to add a discount for a catagory | MH | low | finished |
| 57 | Inventory | Functional | The system should supply product details | MH | high | finished |
| 58 | Inventory | Functional | The system should verify that the amount of the new supplie is higher that the minmume | MH | low | finished |
| 59 | Suppliers | Functional | The system must keep suppliers details, such as: name, bn number, bank account, payment method, fields of products, contact's names and their contact information | MH | Low | Finished |
| 60 | Suppliers | Functional | The system must not allow an order to be ordered if it can’t be fully ordered | MH | Low | finished |
| 61 | Suppliers | Functional | The system must allow product to be supplied by different suppliers | MH | Low | finished |
| 62 | Suppliers | Functional | The system must allow the user to change every detail on the agreement | MH | Low | finished |
| 63 | Suppliers | Functional | The system must give the option to see the history of orders from every supplier | MH | Low | finished |
| 64 | Suppliers | Functional | The system must support getting an inventory report that includes products to be ordered, and to automatically order the products | MH | Low | finished |
| 65 | Suppliers | Functional | The system must keep agreements for every supplier with the following details:  payment method, whether he arrives in fixed days or only by invitation. if by invitation, the system should also keep the number of days it takes the order to arrive. In addition, it should keep whether he have transport, or he needs us to send him one.  Also needs to keep details on every product included in the agreement such as: the product's catalog number according to the supplier, its price and also the number of units that are available from that product. optional - Bill of quantities, which defines for every product what discount it have, the size of the discount changes by the quantity ordered. | MH | Low | finished |

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| ID | Module | Functional / Non-Functional | Description | Priority | Risk | Status |
| 66 | Suppliers | Functional | The system must alert the user by a message if his order couldn’t be ordered | MH | Low | finished |
| 67 | Suppliers | Functional | The system should support multiple discounts (כפל הנחות) on order | MH | Low | finished |
| 68 | Suppliers | Functional | The system must support periodic order from supplier – order that happens every week | MH | Low | Unfinished |
| 69 | Suppliers | Functional | The system must not allow to edit a periodic order if left less than a day to the order-day | MH | Low | Unfinished |
| 70 | Suppliers | Functional | The system must prioritize the suppliers that will supply an order due to shortage in that order: 1. Time – the supplier that comes in the shortest time.  2. The supplier that can supply the biggest amount of products – divide the order to smallest amount of suppliers.  3. The supplier that is the cheapest. | MH | Low | Unfinished |
| 71 | Suppliers | Functional | The system should ensure the day of periodic order such that: If its supplier with fixed days – than the order-day must be one of those days.  Else, it can be in every day of the week. | MH | Low | Unfinished |
| 72 | Suppliers | Functional | The system must ensure that in the day that the periodic order arrives, the inventory level of every product in the order, will be higher than the minimum inventory amount of the product | MH | Low | Unfinished |
| 73 | Suppliers | Functional | The system should automatically schedule a transport for a supplier that has an order for “super li” and don’t have transport of his own. | MH | Low | Unfinished |

\*\*תנאי תשלום: שוטף, שוטף +30, שוטף +60

\*\*תנאים עסקיים: תנאי תשלום וכתב כמויות

\*\*כל הדרישות ימומשו באיטרציה הנוכחית, חוץ מהדרישה על הוצאת הובלה – הדרישה האחרונה.

**Definition of concepts:**

1) Supplier – a company/person from whom you can order products.

2) Order due to shortage - an order created for certain products when a shortage of their stock is discovered

3) Periodic order - an order of products that is defined on a fixed day of the week, coordinated with a single supplier

4) Agreement with a supplier - contains the list of products that the supplier can supply to the supermarket, the supplier's contact details, his bank account details, and sometimes also contains \* quantity sheet.

5) Quantity sheet - contains products' discounts: bulk based discounts, price threshold discounts and global order discounts.

6) Discount – either percentage based or absolute, determined by the supplier.

7) Transport – suppliers that can't deliver, super-li's transport system will ship the delivery from the supplier to the appropriate branch

8) Branch – one of super-li's branches

9) product – a product in super-li's inventory. has a catalog number and a serial that is unique per branch

10) category – there are various categories and sub-categories that are ordered as a category tree. every product can be a part of some category.

11) inventory discounts – every product can have a branch discount and a category discount

**Changes made:**

1. Change of the requirement of the preference of the suppliers in an order due to a shortage (requirement from the forums)
2. Added a requirement to support a recurring periodic order
3. Added a requirement that you can change a recurring periodic order up to one day before its due date
4. Added a requirement that the stock of products will be above the minimum after a shipment has arrived to a branch
5. Added a requirement that the system will automatically order a transport for a supplier that has an order but cannot ship it.
6. Added requirements for verifying that drivers and store keepers are available during the scheduled date and time of the transport
7. Added requirement for verifying that the system will calculate a predicted time of arrival for every destination in the transport.
8. The system now disallows approval of a shift by the HR Manager, if it is not a fully valid shift, with assigned workers to every single one of the needed roles specified by the HR Manager himself.
9. The system now supports the role of a Driver and allows the HR Manager or the Transport Module to add new drivers to the system.
10. The system now integrates the Branches a type of Site, every Branch in the Employees module corresponds to a Site in the Transport Module.

**System assumptions** (things we don't know but we assumed)**:**

1. As of now, every truck is always available for a transport, regardless of whether they actually are. We are not enforcing this requirement because we currently don't have the information to verify when a truck is back to availability
2. We're assuming 9 types of drivers' licenses exist, based on the max weight of the truck and the cooling capacity of the truck.

A: 0-10 Tons, B: 0-20 Tons, C: no limit

1: no cooling, 2: cold, 3: frozen

every combination of these letters and numbers are a type of license number.

for example: A1, B2, C3 etc.

1. When the transport weight exceeds the max weight of the truck, we're allowing to change both the truck and the driver if necessary to accommodate the heavier truck.
2. The employment conditions of each employee are given as a string.
3. A shift with more than the needed amount of employees, is also a valid shift construction.
4. We're assuming that orders occur automatically, meaning that when the time comes the stock updates accordingly. That's because we're not currently connected to the transport module.
5. We're assuming that a product has a catalog number and every branch has a serial number whose combination grants us the unique identification of a single product.
6. We're assuming that if a product has a discount by it self and has a discount by the sub-tree it is in, we're taking the largest discount among them.

**Open questions:**

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| no. | topic | question |
| 1 | transport validation | How do you know when a truck is available to be put in a transport? |
| 2 | Salary | How is the employee's salary calculated? Which information should the system save to calculate it? (Total worked hours, hourly rate for each role, base salary, bonuses, etc.) |
| 3 | Cancellation Card | How should we save the cancelled product details, and is it related to the Inventory Module? |
| 4 | Alert for minimum supply | How the users should get the notify? by email, popup window in the system.. |
| 5 | Alert for minimum supply | What is the trigger for sending the alert? what is the meaning of about to run out? |
| 6 | Item location | Should the system save the specific item location inside the store and warehouse  or mention if the item is in the store or warehouse? |
| 7 | Discount of a certein product | What if we have more than one discount on a certein product?  one from the product and others from it's catagories |
| 8 | Categories of items | Does every item must have a prime catagory? is it can be more than one? |
| 9 | Categories of items | Does every item must have a sub catagory? |
| 10 | Reports | For each report, what details are the users want to see about each product? |
| 11 | Product | Is it a requirement to see all the details about a certein product? |
| 12 | Product | Is it a requirement to save all the sold products? or do we  need to delete it from the system? |
| 13 | Contract vs. agreements | Does contract and agreements are the same or do they have different meaning? |
| 14 | Products | Does all the products you intend to buy from a supplier have to be in the agreement with the supplier? |
| 15 | Supplier visit date | Does in “Supplier visit date” you mean to the day that the order will arrive or to the day that the order will be ready for transport? |
| 16 | Discounts | What kind of discounts will you want us to support |
| 17 | Order of discount | You have three types of discounts, what order would you want us to apply the discounts? |
| 18 | Contact information | What Contact information would you want us to keep for contact |
| 19 | Periodic order frequency | What frequency of periodic order will you want us to allow? |

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| Topic | Answer |
| Contract vs. agreements | Yes, they are the same. Thank you from the bottom of my heart dear developer |
| Products | Yes! I can only order a product from a supplier if its written in the agreement |
| Discounts | Three types:   1. Discounts as we talked about in the system story 2. Discounts on total amount of products – when reached certain amount, apply discount. 3. Discounts on total payment – when reached payment higher than set in the agreement, apply discount.   The discounts are – discount by percentage and discount by fixed amount of money. |
| Order of discounts | You need to give me the option to decide the order – it will depend on the supplier’s policy. |
| Contact information | Email and phone number |
| Periodic order frequency | I want a week frequency, for example – “every Monday” |
| Supplier visit date | To the day that the order will arrive |