

Transports and Employees Module

Requirements specification

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# Functional Requirements

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| ID | Module | Description | Priority | Risk | Functional |
|  | Transport | The system **MUST** record every transportation. | MH | L | Done |
|  | Transport | The system **MUST** record every item contract per destination. | MH | L | Done |
|  | Transport | The system **MUST** record every site and save its properties. | MH | L | Done |
|  | Transport | If a truck exceeds its weight limit, the system **MUST** alarm the user. | MH | L | Done |
|  | Transport | The system **MUST** not allow a driver to be registered with a truck he doesn't have a license to. | MH | L | Done |
|  | Transport | The system **CAN** allow changes in past records. | NTH | M | Done |
|  | Transport | The system **MUST** show all the information about past records. | MH | L | Done |
|  | Registration | The system must support registration and deletion of employees. | MH | L | Done |
|  | Personal Details | The system will store the name, ID, bank account details, salary, working conditions, start working date and job role for each employee. | MH | L | Done |
|  | Personal Details | The system shall allow modification of employee’s personal details | MH | L | Done |
|  | Shifts | The system will store the shifts for each employee | MH | L | Done |
|  | Shifts | A shift can be a morning shift or an evening shift only | MH | L | Done |
|  | Shifts | A shift must contain the day of the week | MH | L | Done |
|  | Shifts | A shift must have (at least)? 1 shift manager | MH | L | Done |
|  | Shifts | A shift contains the number and type of employees that takes place in it | MH | L | Done |
|  | Shifts | The system will store all shifts history | MH | L | Done |
|  | Shifts | The system shall allow employee to read and modify its shift personal preferences | MH | L | Done |
|  | Shifts | The system shall allow modification of shift roles and number of employees by the HR manager only | MH | L | Done |
|  | Shifts | The system shall display all shift assignments on the “Assignment Screen” | MH | L | Done |
|  | Shifts | An employee cant be assigned to a job that isn’t his role | MH | L | Done |
|  | Shifts | The system will only allow the manager to assign employees to shifts and display the schedule for him | MH | L | Done |
|  | Shifts | The system will store all shifts history | NTH | L | Done |
|  | Shifts | The system will be able to display a weekly schedule of shifts for each employee | NTH | L | Done |
|  | Transport | The system must not allow a transportation to arrive without Storage Employee present in the shift | MH | L | Not done |
|  | Transport | The system must not allow a transportation to be executed if a driver isn’t present in the shift | MH | L | Not done |
|  | Suppliers | The system **MUST** manage all of its suppliers’ details including: supplier ID, Bank account, Payment agreement and contact information. | MH | L | Done |
|  | 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 |
|  | 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 |
|  | 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 |
|  | Suppliers | The system **MUST** save whether a supplier sends a transportation or the company has to collect the order from the supplier. | MH | L | Done |
|  | Suppliers | The system **MUST** allow to update supplier’s shipping conditions (fixed days, self-transportation). | MH | L | Done |
|  | 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 |
|  | Suppliers | The system **SHOULD** savewhat categories of products the company orders from each supplier. | NTH | L | Done |
|  | Suppliers | The system **SHOULD** savethe manufacturers names that a supplier works with. | NTH | L | Done |
|  | Suppliers | The system **SHOULD** support fixed orders (recurring orders). | NTH | H | Done |
|  | Suppliers | The system **MUST** automatically issue an order for low-quantity products | MH | H | Not done |
|  | Suppliers | The system **MUST** support updating a fixed order at least one day before shipment | MH | H | Not done |
|  | Suppliers | The system **MUST** choose the cheapest supplier when issuing an order for a product | MH | L | Not done |
|  | Suppliers + Inventory | The system **MUST** check that the inventory quantity is always higher than the minimal quantity when receiving orders | MH | H | Not done |
|  | Inventory | The system **MUST** manage items in the inventory | MH | L | Done |
|  | Inventory | The system **MUST** manage categories and sub-categories of the inventory | MH | L | Done |
|  | Inventory | The system MUST support adding discounts to products according to categories | MH | L | Done |
|  | Inventory | The system MUST support adding discounts to a specific product | MH | L | Done |
|  | Inventory | The system MUST display product’s details according to a given area in the store | MH | L | Done |
|  | Inventory | The system MUST record sales | MH | L | Done |
|  | Inventory | The system MUST be able to produce inventory-records according to categories/specific category | MH | H | Done |
|  | Inventory | The system MUST be able to display all expired products | MH | H | Done |
|  | Inventory | The system MUST be able to produce a record of low-quantity products in the inventory | MH | L | Done |
|  | Inventory | The system MUST be able to produce a record of all about-to expire products | MH | L | Done |
|  | Inventory | The system MUST store the alert-time before a product expires | MH | L | Done |

1. Terms

Table 1: Terms

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| --- | --- | --- |
| **#** | **Term** | **Description** |
|  | Item Contract | The contract a driver receives per destination in a transportation. An item contract has 1 destination site and the items that should be delivered there. |
|  | Destination | A site which appears in an item contract. |
|  | Suitable Driver | A driver with a license to drive a certain truck. |
|  | Appropriate Truck weight | A number larger than a certain truck's factory weight, and less than its weight limit. |
|  | Transportation | A shipment originating from a source site, completing various item contracts. A transport has 1 driver, 1 truck, 1 source site, and at least 1 item contract. |
|  | Site | A place with an address belonging to a section, each site has a contact and his phone number. |
|  | Employee | A worker in super-li, contains all his personal details and the shifts he prefers to work in. |
|  | Shift | Identified by Type (Morning or Evening) and date, contains its currents employees and constraints of how many employees of each type. |
|  | Daily Schedule | Identified by Id, contains all shift in the day. |

1. Open Questions

Table 2: Questions that have no impact on the current implementation

|  |  |  |
| --- | --- | --- |
| **#** | **Topic** | **Issue** |
|  | Persistence | Is the data going to be needed on different computers? (should the data be saved on a cloud for example?) |
|  | Persistence | Will the past documents be recorded in the new system? |
|  | Presentation | In what format should documents be represented? |
|  | Input restrictions | Can a transportation have multiple Transportation areas? |
|  | Presentation | What is the design for the assignment screen? |
|  | Personal details | What would the employee conditions contain? |

Table 3: Questions that impact the current implementation

|  |  |  |  |
| --- | --- | --- | --- |
| **#** | **Topic** | **Issue** | **Answer** |
|  | System Requirements | How should the change in a Contract be shown? | A new contract would be requested by the user and the old one would be marked. |
|  | System | Should our transportation module care about the details of item contracts? Or should it only know them by their identifiers? | In the current version of the program we will record as detailed as we can, and in the future after the merge with the other modules we will change it as necessary. |
|  | Transportations | Can an item contract be used in two different transportations? | No, an item contract should be only in one transportation. |
|  | Employees | What are the types of employees in the supermarket? | Cashier, Usher, Security, Storage, HR Manager, Branch Manager, Assistant Branch Manager, Shift Manager, Driver. |
|  | Employees | Can 1 employee man 2 roles in a shift? | Yes. |
|  | Shifts | Will the system allow the employee to work in 2 shifts of the same day? | No. |
|  | Shifts | What would be the types of the shifts? | 06:00-14:00, 14:00-22:00. |
|  | Employees | How will the payment of the employee will be calculated? | Global. |

1. Changes
2. Added new requirements and terms in order to satisfy the new needs.
3. Transferred the object driver from transports module to employees module, so driver extends employee object.
4. Added new functions to schedule controller.
5. United the facades to one facade that contains all the controllers.
6. Modified the UML and Object Diagrams to reflect the changes emerged from combining the modules.