**Suppliers + Inventory Module**

**Ali Abass : 212922553**

**Maged Natour : 212066260**

**Lana farraj : 324917293**

**Mohamd assi : 322715871**

**Requirements :**

**Suppliers + Inventory:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ID | Module | Functional/Non  Functional | Description | Priority | Risk | Status |
| 1 | Suppliers | Functional | The System must save an informational card for each supplier. | Must Have | Low risk | Done |
| 2 | Suppliers | Functional | The system must have the ability to establish clausible contract between Super\_lee and the suppliers. | Must have | Low risk | Done |
| 3 | Suppliers | Functional | When contacting a suppliers the system should give the option to choose the type of the supplier. | Must have | Low risk | Done |
| 4 | Suppliers | Functional | When contacting a suppliers the system must record information regarding items specified in the contract. | Must have | Low risk | Done |
| 5 | Suppliers | Functional | When contacting a suppliers the system **can** record the prices of each item in the contract. | Nice to have | Low risk | Done |
| 6 | Suppliers | Functional | In contracts the system can give a discount percentage for each item when bought in big numbers. | Nice to have | Low risk | Done |
| 7 | Suppliers | Functional | The system should record items bought from each supplier. | Must have | Low risk | Done |
| 8 | Suppliers | Functional | The system must save a “catalogue number” for each supplier for each item in order to make orders from supplier. | Must have | Low risk | Done |
| 9 | Inventory | Functional | המערכת צריכה לדעת את הפריטים הקיימים במלאי, היכן ממוקם כל פריט, מי היצרן של כל פריט, מהי הכמות הנוכחית לכל פריט, מהי הכמות במדפים אשר בחנות ומה הכמות במחסן. | Must have | Low risk | Done |
| 10 | Inventory | Functional | המערכת צריכה לשלוח התראות לעובדי החנות כאשר המלאי של מוצר יורד מתחת לכמות המינימלית הנדרשת. הכמות המינימלית עבור כל מוצר תלויה בביקוש וזמן המסירה. | Must have | high risk | Done |
| 11 | Inventory | Functional | המערכת מסוגלת לאתר ולהפיק דו"חות תקופתיים לפריטים פגומים או שפג תוקפם | Must have | Low risk | Done |
| 12 | Inventory | Functional | המערכת צריכה לעקוב אחרי מידע שיתקבל מהספקים על הנחות על הפריטים. וגם לעקוב אחר מבצעים שנותנים אחוזי הנחה שונים על מוצרים או קטגוריות ספציפיים בתאריכים מסוימים. | Must have | Low risk | Done |
| 13 | Inventory | Functional | המערכת צריכה לעקוב ולתעד את מחיר העלות לכל פריט ומחיר בו הוא נמכר | Must have | Low risk | Done |
| 14 | Inventory | Functional | המערכת תאפשר הוספת מוצרים למלאי. | Must have | Low risk | Done |
| 15 | Inventory | Functional | המערכת תאפשר הסרת מוצרים מהמלאי | Must have | Low risk | Done |
| 16 | Inventory | Functional | המערכת צריכה ליצור דו"ח של פריטים חסרים שיש להזמין. הדו"ח צריך להיות מופק בימי שני וחמישי על ידי אחד העובדים שבודק את מדפי החנות ואת המחסן האחורי | Must have | Low risk | Done |
| 17 | Inventory | Functional | המערכת צריכה לסווג פריטים לפי קטגוריות ותת קטגוריות שונות | Must have | Low risk | Done |
| 18 | Inventory | Functional | המערכת צריכה להפיק דוחות מלאי שונים אחת לשבוע או יותר לפי הצורך, ובכל פעם לבחור קטגוריה או קטגוריות אשר יפורטו בדוח | Must have | Low risk | Done |
| 19 | Inventory | Non- Functional | על המערכת להבטיח שכל הנתונים יהיו מאובטחים ונגישים רק למשתמשים מורשים. | Must have | Low risk | Done |
| 20 | Inventory | Functional | על המערכת לדווח על פריט פגוע. | Must have | Low risk | Done |
| 21 | Suppliers + Inventory | Functional | The system must handle periodic orders. | Must have | Low risk | Done |
| 22 | Suppliers + Inventory | Non-Functional | The system must use the old periodic order if not updated at least one day before . | Must have | Low risk | Done |
| 23 | Suppliers + Inventory | Functional | The system must handle shortage orders. | Must have | Low risk | Done |
| 24 | Suppliers + Inventory | Functional | The system should send orders automatically duo to shortage in the store. | Must have | Low risk | Done |
| 25 | Suppliers + Inventory | Functional | The store system must send an item details to create the order. | Must have | Low risk | Done |
| 26 | Suppliers + Inventory | Functional | The system has to make sure that the amount of item in the store has to be more that the declared minimum for each item in the order. | Must have | Low risk | Done |
| 27 | Suppliers + Inventory | Functional | The system must order from the cheapest supplier according to the quantity report. | Must have | Low risk | Done |
| 28 | Suppliers + Inventory | Functional | The system should allow updating a periodic order. | Must have | Low risk | Done |
| 29 | Suppliers + Inventory | Functional | The system allows ordering shortage orders from numbers of suppliers such that the price will be the cheapest. | Must have | Low risk | Done |
| 30 | Suppliers + Inventory | Non- Functional | The system must support a GUI and CLI for interacting purposes with the user. | Must have | Low risk | Done |
| 31 | Suppliers + Inventory | Non- Functional | The GUI should be implemented using SWING library . | Must have | Low risk | Done |
| 32 | Suppliers + Inventory | Functional | The system must limit the access to the functionality according to the employees roles. | Must have | Low risk | Done |

**Employe + Transportation:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ID | Module | Functional/non-Functional | Description | Priority | Risk | Status |
| 1 | HR | F | the system **must** support saving the history of working for each employee | MH | L | Done |
| 2 | HR | F | the system **must** support registration for new employees | MH | L | Done |
| 3 | HR | F | the system **must** support assigning employee to a specific position | MH | L | Done |
| 4 | HR | F | the system **must** support creating and updating employee work shift | MH | L | Done |
| 5 | HR | F | the system **must** support signing the days that each employee can work according to his constraints | MH | L | Done |
| 6 | HR | F | the system **can** insure bank account privacy for each employee | NTH | L | Done |
| 7 | HR | F | the system **can** limit the number of the employees | NTH | H | Done |
| 8 | HR | F | the system **can** allow employees to exchange shifts | NTH | H | Done |
| 9 | HR | F | the system **can** allow employees to delete shift by themselves | NTH | H | Done |
| 10 | HR | F | the system **can** let employee delete himself from the system | NTH | H | Done |
| 11 | HR | F | the system **must** save employee’s data | MH | H | Done |
| 12 | HR | F | each shift **must** have shift manager | MH | H | Done |
| 13 | T | F | The system **should** provide for each driver the required location from the beginning in order to distribute the delivery between providers. | MH | L | Done |
| 14 | T | F | The system has to **save** the relative information about all the deliveries that exit from logistic center in network (exit time, truck number, driver name, source, destination). | MH | L | Done |
| 15 | T | F | The system **should** save for each destination, file number and item's list which lead to destination. | MH | L | Done |
| 16 | T | F | The system **should** save the relative information for each location (address, phone number, contact name). | MH | L | Done |
| 17 | T | F | The system **should** give a warning sign if truck's weight exceeds the maximum weight. | MH | L | Done |
| 18 | T | F | The system **should** ensure that each delivery there is a driver with an appropriate license type for truck's delivery. | MH | L | Done |
| 19 | T | F | The system **should** save all the relative information for truck that aside to the fleet of trucks (licensing number, model, weight without goods, maximum weight can carry). | MH | L | Done |
| 20 | T | F | The system **should** prevent schedule driver to more than one truck from the logistic center in the network simultaneously. | MH | L | Done |
| 21 | T | F | The system **should** prevent schedule truck to delivery that already applied to another truck. | MH | L | Done |
| 22 | T | F | The system **should** present for the manager, options after warning of the maximum weight:  1. Plan the path again.  2.  Reduce destinations.  3. Switch of the destinations.  4. Switch truck.  5. Reduce some of the products from the truck. | MH | H | InProcess |
| 23 | T | F | The system **should** update the files after switch one or more of the destinations or changing the delivery. | MH | H | Done |
| 24 | T + HR | F | The system **should** display all the drivers working in each shift. | MH | L | Done |
| 25 | T + HR | NF | The system **should** register every driver as an employee. | MH | L | Done |
| 26 | T + HR | F | The system **should** check if the driver is available in shift schedule when assigned to a delivery. | MH | L | Done |
| 27 | T + HR | F | The system **must** prevent delivery departure if there are no available employees in the warehouse during that time range or shift to receive the delivery. | MH | L | Done |
| 28 | T | F | The system **must** keep track of the departure and return time of the delivery from and to the source. | MH | H | Done |

**Open questions:**

**Questions that doesn’t effect the implementation:**

|  |  |  |
| --- | --- | --- |
| ID | Topic | Issue |
| 1 | Payment terms | What is meant by payment terms? |
| 2 | Item price | Who determents the price of an item and what price should be saved? |
| 3 | Product categorization | How many categories can a product be classified under? |
| 4 | Inventory Management | How does a 'buy one, get one free' promotion impact the store? |
| 5 | Discount Management | Is it possible to have a seasonal sale that is repeated every year? |
| 6 | Reports Management | What is the frequency of notification delivery for products that fall below the minimum threshold in the inventory management system? |

**Questions that effect the implementation:**

|  |  |  |
| --- | --- | --- |
| ID | Question | Answer |
| 1 | What is meant by different business terms? | Terms of payment, quantities reports on the price of an item and the quantity of items ordered. |
| 2 | What is the item details that should be saved? | The catalog number and the price for this item provided by a specific supplier. |
| 3 | What is the criterion that decide the discount amount for each item ? | The discount amount for each item is given in the quantity report in the contract with the supplier. |
| 4 | What is meant by big quantities to get a discount? | It differ from supplier to another and its written in the contract with the supplier. |
| 5 | Should we save an order history for each supplier? | Yes. |
| 6 | Should we consider the weight for each item? | No. |
| 7 | Should the discount be a percentage or a numerical value? | The discount can be both. |
| 8 | What is the minimum quantity required for each product? | "The logistics manager determines an initial value and over time, things are updated according to the store's situation." |
| 9 | How can one select a sale for each product and what should be done if the product is already on sale? | The system allows only one discount per product, and the better discount will be applied. |

**Changes to 1:**

* Merging business layers in both modules into a single business layer and making the necessary changes along the way.
* To add DAO and DTO package in both modules.
* Made some changes to the class diagram.
* Made some changes and fixing the object diagram.
* Added some requirements .
* Made some changes on the open question table.

**Changes to 2:**

* Fixed the Erd so the order can have at least one item.
* Fixed the use cases and merged them to one use case.
* Added some requirements to the system.
* Added a GUI to the system.
* Fixed all the contracts.
* Added a contract for each scenario .

**Definition of terms :**

**Item:** A item contains information about a item that is in the supermarket's stock that can be sold and ordered.

**Category:** A category represents a group of products that share a similar definition. Categories can have subcategories, you can see all the products that a category has and that way it is more convenient to find products that meet the user's desire without knowing the product in advance.

**Discount:** You can give a discount to a product, which will lower the fixed price in the store for the product.

**Supplier:** A supplier is an external user of the system with whom Super-Li has an agreement.

As part of the agreement with the suppliers, there are suppliers who arrive only when there is an order, there are suppliers who arrive regularly every week according to the agreed upon order.

**Order:** There is Two types of orders, a periodic order and an on-demand order.

-Periodic order: an order that you make every week on the day defined in the order.

- Order on demand: an order that is made point by point according to the demand of the inventory workers in the store.

**Quantity\_Report:** When the Contract is created alongside the supplier an , a quantity report is established. The quantity report defines the items that the supplier can supply and the discounts of the items according to the order quantity of each item.