Workflow:

The workflow starts with a customer placing an order over the phone. Cashier then starts a new order and types in the customer’s identification. If the customer is found in the system, the sale is created and items are packed and sent to the customer.

There are two types of payment. The customer can either pay upfront and receive an invoice at the time or pay for the all the things bought at the end of the month. A customer would then be sent an invoice to be reminded of it and to know how much exactly they have to pay.

Customers who have bought upfront also receive an invoice at the end of the month but theirs say that they have nothing to pay for this month.

Use Case Diagram:

The system consists of three levels.

The highest one is for managers. They have access to generate statistics to gain information about profits and what is being sold. Also they can make purchases from suppliers when items are out of stocks and edit information about suppliers, most often add or update whether they’re active or not. Furthermore managers can edit customer and item information along with cashiers.

Cashiers, the second level, are able to adjust information about items and customers, but their main priority lies in making sales and registering payments after they’re done at the end of the month. Send invoice use case is also connected to cashier, however, they do not send it themselves. The system does it automatically and the cashier can only find invoices to check on them.

The third level is meant for the workers. They are able to get item locations to find them quickly and efficiently. Then mark when items are packed and loaded into a truck and sent.

Prioritisation List:

Out prioritization list consists of two criteria complexity and business importance. Both of these are rewarded with six points each for maximum significance and going lower the less easy or crucial the use case is. After that the numbers are multiplied and the score is received which decides the use cases place in the prioritization list. If there are use cases with the same score, they are put in the order that is best for implementation.

Domain Model:

In Employee there is a person\_id which represents a personal identification number which each person in Lithuania has. It is similar to Denmark’s cpr number, however, there it is called Personal Code.

The Customer has no such field because Entafarma deals with other companies. That is why the name attribute there also works as a unique identifier.

In the Sale class we have an attribute called discount. It is used to give customers who have spent a certain amount of money at Entafarma, a discount. The other fields in the Sale class, besides the saleNr, are set to null on the creation and only when the actions attributed to them are made, these fields are updated by a worker.

Multiplicity between Sale and Invoice is zero to one because the sale is created first and then the invoice.

SaleLine contains the quantity of items and the price of one. This is required to know at what price the products were sold since the amount in the Item class can be changed a couple of times through the year.

Items have a unique identifier barcode. They also have stock to know when there’s a need to resupply. itemType is to show whether the item is liquid or pills while category describes the purpose of the medicine - vitamins, antibiotics, etc.

The company has one huge warehouse hence the need for a Location class to find products prior to getting them from the warehouse thus minimizing time spent searching. To make this as efficient as possible the company made it that on one shelf, only one type of item is stored even if it isn’t filled up. However, if there are more items of the same type than the shelf can hold, they are reserved on another one. This is shown in the multiplicity.

PurchaseLine is similar to SaleLine just for buying items instead of selling them.

Purchase has the dates of when the order was placed and when received to be able to tell how quickly the items are delivered.

In the Suppliers there is a field called active. It can be TRUE or FALSE depending whether the company still orders from that particular place or no.