System description

A picture containing table

Description automatically generatedThe provided file is a part of a larger database of a company that is the intermediate (reseller) shop between the supplier and the customer – in this case different stores. The items sold by this company are all traps against different animals – ants, mouses, bears, moose and elephants (although we can’t be sure that there are not more items sold in here).

Normalization of the database shows us that the database can be split into two parts.

The first one displays information about the order – who the customer is, how we packaged his order and the price he had to pay. The packaging has been split into a separate table with 2 columns to satisfy the normalization rules.

The second one corresponds to the ordered item, but it contains data that is not displayed to the client of this shop. Here we have the cost per single item, the supplier of the item, where the warehouse of this item is, the current quantity of the given item we have in stock and the minimum quantity that should always be available.

This system database could be used to track the orders in our shop. Whenever an order is made it connects with our system that processes the order. It could connect to another table which stores the information about the customer to automatically get all the data needed to perform the order (what the address is, whether he has any discount when ordering, etc.).

On the other side it should connect to a system that detects when each item’s quantity drops below its minimum quantity number and then automatically orders the set number of items from the given supplier. The quantity of each item should also update each time someone makes an order.

The database should be in the form of a relational database (SQL database). It should be in the form of a 2-tier architecture. The client orders the item from our application which updates our databases and triggers the processing of the order and if needed orders more of the item from the supplier..

Questions and concerns about the system?

* Does the order from a store consists of different widgets or just one?
* Is the customer with the same name the same shop?
* Customers should be identified by a specific key to them (example – NIP)
* Is warehouse related to the supplier or our store?
* What discounts are there for the different customers?
* Do the discounts depend on the amount of items ordered or other factors (how many times this customer made an order etc.)
* Are there more items in the database?
* What is the price of the packaging so we could calculate the profit?