0 DESCRIPTION OF THE PROBLEM

The "FGPrenotazioni" application, is a sales and rental management tool for an Italian AV/Lights store or company. All ancillary elements, all of them of crucial importance, such as store customers, warehouse, and any summary of invoices, must be handled.

It is required that the application be developed as a Windows Form Application.

1 DOCUMENT FOR REQUIREMENTS

The application must keep track of the availability of each product in the warehouse, and the employee must be able to filter the products.

Each product is identified by a unique three-letter and five-digit code format (eg API00001) indicating product type (audio, video, lights), brand (eg PI = Pioneer) and serial number. There is also a literal product description and two prices, one rental (as a daily rental price) and one for sale.
For each item, two attributes are required, indicating respectively whether the product is new or used and whether it is available / unavailable for rental or sale (if "available" is set to false means the product is still rented).
It should be noted that you can add or remove products from the warehouse, but in the latter case the operation is only possible if the product is not related to a rental that has not yet been returned.

The company's customers are divided into two categories, distinct from the "Id" field: Private Customers (which as ID use the CF – Fiscal Code) and Companies (which instead use the VAT). Both types of clients, as common fields have the name (name and surname or company name), a phone number and an e-mail, a valid credit card and a billing address.

There is also a field that indicates whether the client in question is trusted (reliable) or not: if this field is set to false it means that you will not be able to offer rental or sale services.

It is useful to use a virtual shopping cart inside the program (put aside the display of the products in the warehouse), which allows you to have the list of products to be rented / sold to the customer before they are actually removed from the warehouse. This can make possible to add or remove products to your cart dynamically, without starting over the order.

Each sale is characterized by the list of products purchased and by the date of execution, and the related invoice is automatically generated at the time of purchase. There is no need to keep a sales history, only a sales invoices one.

Each rental is identified by a unique code of up to five numeric characters. Each one also needs to keep the start and end date of the rental, the customer who made it and the list of the rented products, each with his own detailed description.

The related invoice will be issued at the time of return of the goods, and an historical record must be kept, both for rental bills (aggregates to sales' ones) and for active rents.

If a product is hired, it must be branded in the warehouse as "unavailable", unless returned at the time of delivery of the goods.

Bills issued by the company must include a progressive number, the issue date, the list of products sold or leased (each with its own detailed description), the amount actually paid and any discount applied to it. In the case of a rental invoice, it is also necessary to maintain an applicable fee if the goods are returned in delay by the date stated in the rental.

It is also necessary to keep track of the employee who made the sale or the rent (just his code) and the customer who made the order.

Finally, each store employee is kept in the system using his / her username and password, with which you can login at the start of the application. Each employee is also identified by a unique code assigned outside the program itself.

You do not need to maintain or manage a database of employees.