

.Net Platform-based Sales Management System Software

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Abstract

The paper describes sales management software and the technologies of its development. There have been examined the modules and functions of the developed software. .

Keywords

Sales, System, Software, Sock management, Cash Flow Management, Revenue Service, Cash flow.

1. Introduction

The rapid development of information technology (IT) has led to its expanded use. All spheres of human activities: social, political, economic, cultural or others, cannot be imagined without the use of modern information technology. One of the key elements in the successful operation of any company or organization is whether they integrate information technology in their activities.

Improving the management of business processes by using modern information technology is one of the important directions both for the area of business administration and automation of business processes. The modern automated management systems are the complex human-machine systems, which are created on the basis of state-of-the-art computer and network technology, integrated software packages and the object-oriented, process-oriented and service-oriented methods [1,3,4].

At present, the use of modern information technology in such important sphere of human activities as sales, is of high relevance. The use of modern information technology in the sale process has a direct line to the effectiveness of the sale process.

Based on the above, the paper presents a simple and flexible software package for sales management.

2. basic part

The software comes from the client-server architecture, which provides the operation in the multi-user regime, which means that several operators (sellers) can work simultaneously together with the software, and more than that, by means of the software, it is possible to manage the network sales.

The developed software system contains:

1. A centralized database, which represents the system's information support;
2. A set of organizational and programming-technical tools, which are necessary for the operation of the system, and ensure the effectiveness of the system;
3. Desktop applications, which in turn contain the different functional modules.

The sales management software modules are shown in Fig. 1:

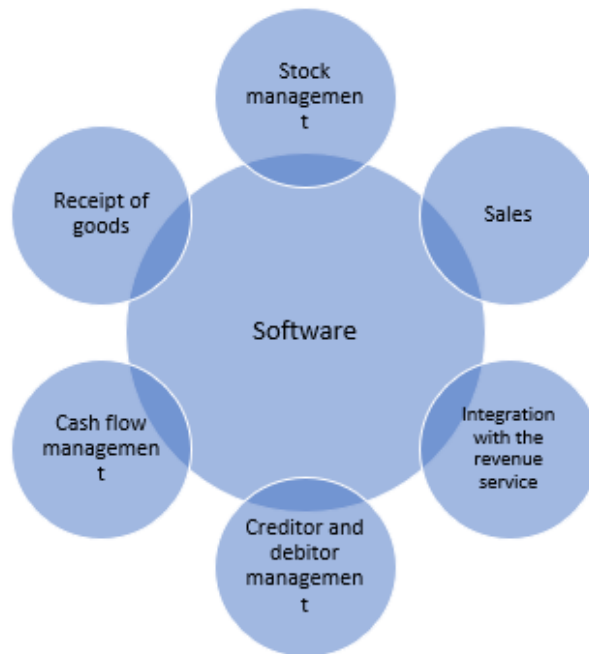


Fig. 1 sales management software modules

Let us consider the software modules shown in Fig. 1.

❖ **Receipt of goods.** This module presents all operations relating to receipt of goods: registration of received goods (Fig.2 - insertion of bar code by means of a barcode scanner, specifying the name of the item, unit of measure, of receiving goods, the value of the sale, quantity, etc.); vendor registration and the management of information on them; management of the payments of financial obligations caused by receipt of goods; editing or deleting the registered items. Loading from the revenue service web-portal in the program of the received invoices.

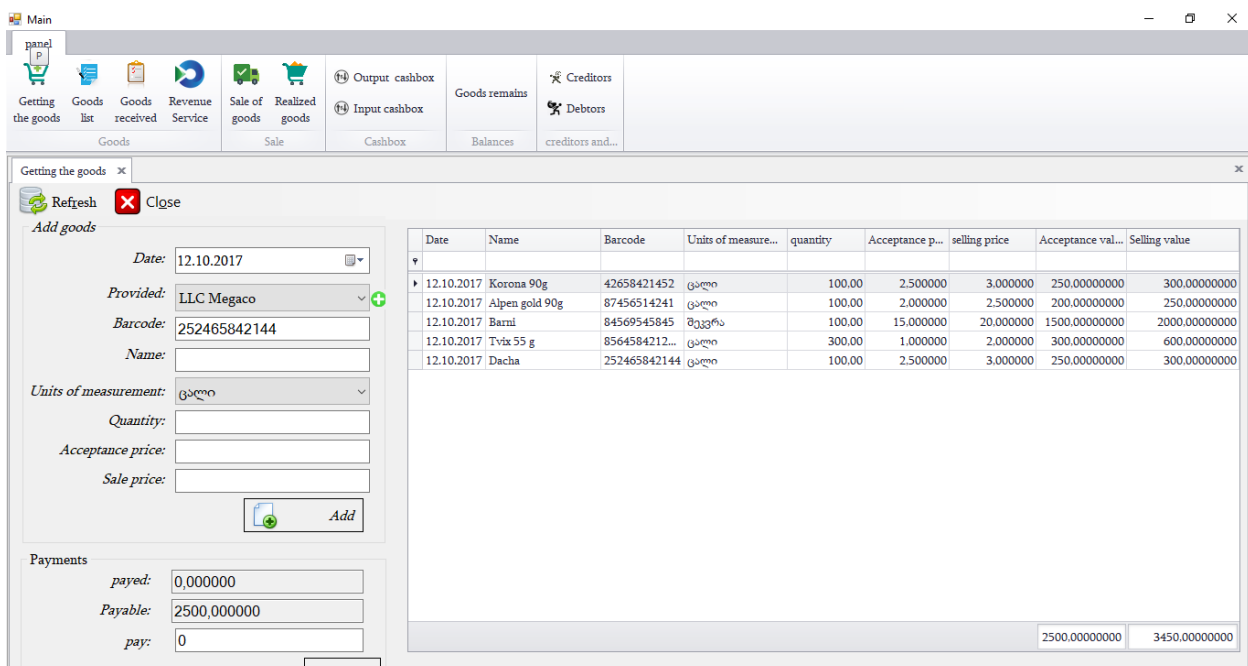


Fig. 2 Receipt of goods

The screenshot shows the 'Goods received' window with a table containing the following columns: Date, Name, Barcode, Units of measurement, quantity, Acceptance price, selling price, Acceptance value, and Selling value. The table lists various goods received over a period from October 6, 2017, to November 7, 2017.

Date	Name	Barcode	Units of measurement	quantity	Acceptance price	selling price	Acceptance value	Selling value
06.10.2017	ზეთი 200 გრ. მიწი...		ცალი	30.00	4.960000	5.100000	148.80000000	153.00000000
06.10.2017	სოლინო 202 შერის ...		ცალი	36.00	1.630000	1.661112	58.68000000	59.80003200
06.10.2017	შხეს ზეთი მარცა 1ლ		ცალი	75.00	3.000000	3.033334	225.00000000	227.50005000
06.10.2017	შხეს ზეთი მარცა 0.5ლ		ცალი	48.00	1.650000	1.687500	79.20000000	81.00000000
06.10.2017	მარლი იგიფორმულ...		ცალი	10.00	10.000000	10.200000	100.00000000	102.00000000
06.10.2017	ანკონი 60*100		ცალი	2000.00	0.374000	0.381500	748.00000000	763.00000000
06.10.2017	ორცხობილა 170გრ		ცალი	120.00	0.650000	0.662500	78.00000000	79.50000000
06.10.2017	ორცხობილა 160გრ შუ...		ცალი	100.00	0.700000	0.715000	70.00000000	71.50000000
06.10.2017	საფანელი 170გრ		ცალი	40.00	0.600000	0.612500	24.00000000	24.50000000
07.10.2017	ზეთი T1X24		ცალი	120.00	2.490000	2.550000	298.80000000	306.00000000
07.10.2017	ზეთი 200 გრ. მიწი...		ცალი	45.00	4.960000	5.100000	223.20000000	229.50000000
06.10.2017	პურის ჩხირი მარლი...		ცალი	100.00	1.000000	1.020000	100.00000000	102.00000000
07.10.2017	ტყელების ტარაღი ...		შეცვრა	50.00	12.800000	13.100000	640.00000000	655.00000000
07.10.2017	სიმინდის ბურბუშულ...		ცალი	12.00	3.200000	3.250000	38.40000000	39.00000000
07.10.2017	სიმინდის ბურბუშულ...		ცალი	12.00	3.200000	3.250000	38.40000000	39.00000000
07.10.2017	სიმინდის ბურბუშულ...		ცალი	24.00	2.950000	3.000000	70.80000000	72.00000000
				44631.00			67862,56140100	70412,39314900

Fig. 3 Goods received

❖ **Stock management.** Stocks represent the universe of those goods, which are stored in the organization. The given model allows us for determining stock of goods we have at the current time. The rational stock management ensures the effective organization of goods in stock. We are able to control the remaining items by the day, keep tabs of zero-rated goods and so on.

The screenshot shows the 'Balance' window with a table containing the following columns: Date, Good Name, Barcode, Units of measurement, Quantity, Acceptance price, Selling price, Receiving amount, and Selling amount. The table lists various goods as of November 7, 2017.

Date	Good Name	Barcode	Units of measurement	Quantity	Acceptance price	Selling price	Receiving mo...	Selling amount
11.09.2017	მათონეზი ოლივკვი 200*40		ცალი	0.000000	1.550000	1.575000	0.0000000000...	0.000000000000
11.09.2017	თევზის კ. თიხესი 185გ		ცალი	16.000000	2.980000	3.050000	47.68000000...	48.800000000000
11.09.2017	საირა 185გ		ცალი	0.000000	2.550000	2.600000	0.0000000000...	0.000000000000
11.09.2017	პურის ჩხირი მარლიანი 4კგ		ცალი	0.000000	16.500000	16.800000	0.0000000000...	0.000000000000
11.09.2017	პურის ჩხირი მარლიანი 200 გრ		ცალი	0.000000	1.000000	1.020000	0.0000000000...	0.000000000000
12.09.2017	სიმინდის ბურბუშულა -ცეროდენა 20ც		შეცვრა	0.000000	4.500000	4.600000	0.0000000000...	0.000000000000
12.09.2017	სიმინდის ბურბუშულა სიურპრობით „მისტერ კრისპი“ 20ც		შეცვრა	0.000000	15.000000	15.300000	0.0000000000...	0.000000000000
13.09.2017	მაკრონი კორიზა 3კგ		შეცვრა	0.000000	6.500000	6.650000	0.0000000000...	0.000000000000
12.09.2017	სნიკერსი სუპერი 95 გ (128		ცალი	313.000000	1.580000	1.609375	494.54000000...	503.7343750000...
12.09.2017	მამ მოკოლადითი 45 გ (192)		ცალი	0.000000	1.030000	1.050000	0.0000000000...	0.000000000000
12.09.2017	მამ მუსი თხილით 70 გ (144)		ცალი	0.000000	1.580000	1.600000	0.0000000000...	0.000000000000
12.09.2017	ანკონი 60*100		ცალი	0.000000	0.374000	0.381500	0.0000000000...	0.000000000000
12.09.2017	სოლინო 202 შერის ფანტელი 500*18		ცალი	0.000000	1.630000	1.661112	0.0000000000...	0.000000000000
12.09.2017	უსტამი 0.5*18		ცალი	0.000000	2.361112	2.388889	0.0000000000...	0.000000000000
12.09.2017	დანა 400*16		ცალი	0.000000	2.250000	2.281250	0.0000000000...	0.000000000000
12.09.2017	შხესუზირის ხაღვა 4კგ (დაპრილი-500გ)		ცალი	0.000000	13.000000	13.300000	0.0000000000...	0.000000000000
12.09.2017	მათონეზი ოლივკვი 200*40		ცალი	0.000000	1.550000	1.575000	0.0000000000...	0.000000000000
				73027,000000			98480,74883...	101642,291437...

Fig. 4 goods balance

❖ **Sales.** The module presents a very simple interface of sales, which provides fast sales, enhances the effectiveness of the operation and mitigates the risks of errors during the routine transactions. This module is equipped with the following capacities: fast customer service; the use of a bar code scanner; cash payments and calculation of change; search for goods by bar code and the name of item; accounting and control of obligations arising as a result of sales on the part of customer; price discounting by customer. The program allows for controlling sold products, determining sold goods by a given period, and so on.

To make the sale process as simple and fast as possible, the sales module envisages the automated printing of the receipt for tax purposes from the cash register upon the completion of a particular sale process, which enables the cashier-seller to avoid that routine work, which envisages the necessity of check printing from the cash register upon the completion of a particular sale process, which also eliminates any chance of error, which may be caused by the cashier-seller when printing the check on the cash register. To ensure automated picking up of a check from the cash register, the cash register has been integrated with the software.

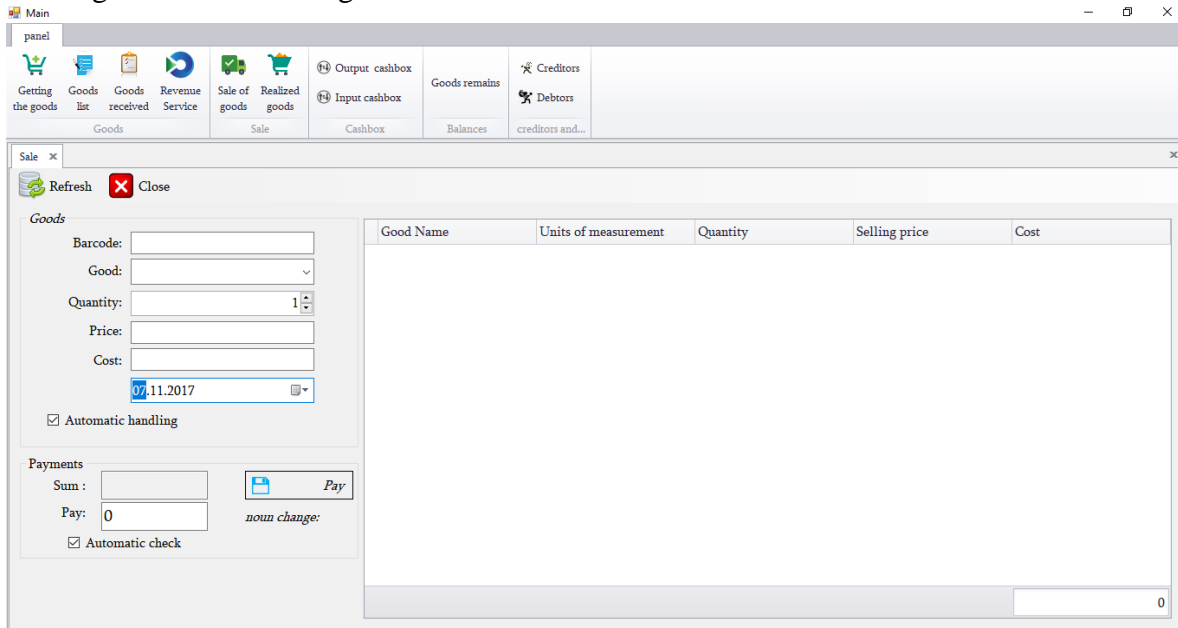


Fig. 5 Sale

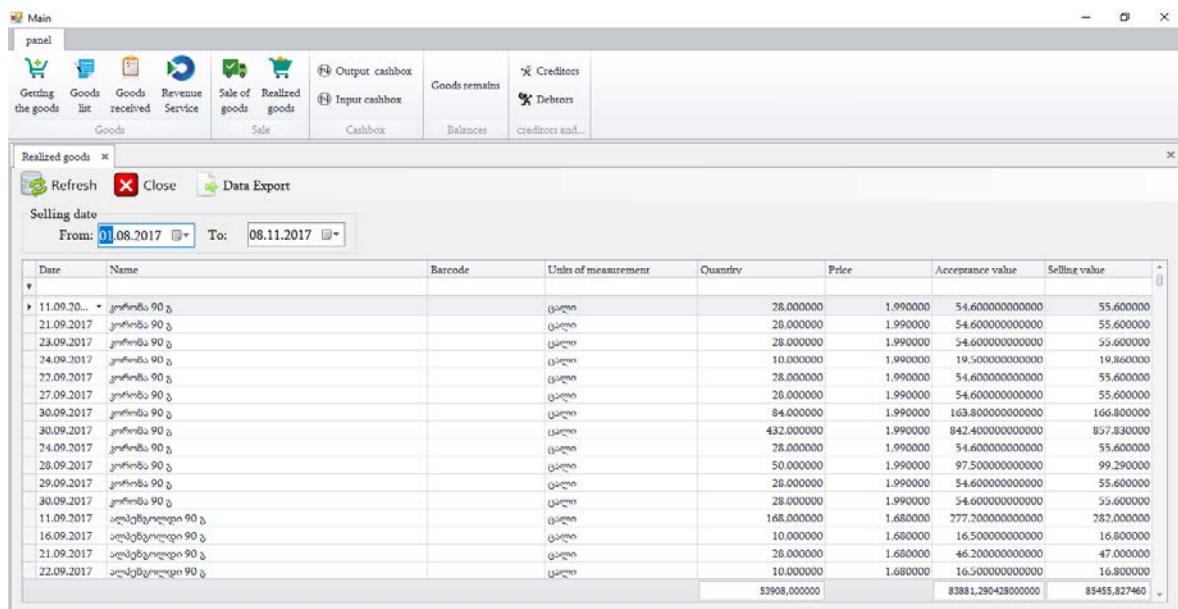


Fig. 6 Realized goods

❖ **Integration with the revenue service [6].** This module is equipped with the following capacities:

- uploading of the users of the electronic invoices created by the authorized customers of the revenue service’s electronic declaration, who are eligible to fill, store, correct, activate, cancel and complete the electronic invoice, as well as their storage in a database;
- uploading of the electronic invoice and its import in a database;

- viewing of the uploaded invoice and making adjustments (determining the sale price of the goods, giving a bar code to the goods by means of a bar code scanner, if the goods unloaded by the invoice have no bar code or have incorrect bar code);
- uploading of the electronic invoices the revenue service web-portal;
- vendor control;
- cancellation of the electronic invoice imported in a database;
- determining the sale price of goods (bringing the sale price determined earlier for the same goods);
- controlling re-uploading of the invoice imported in a database.

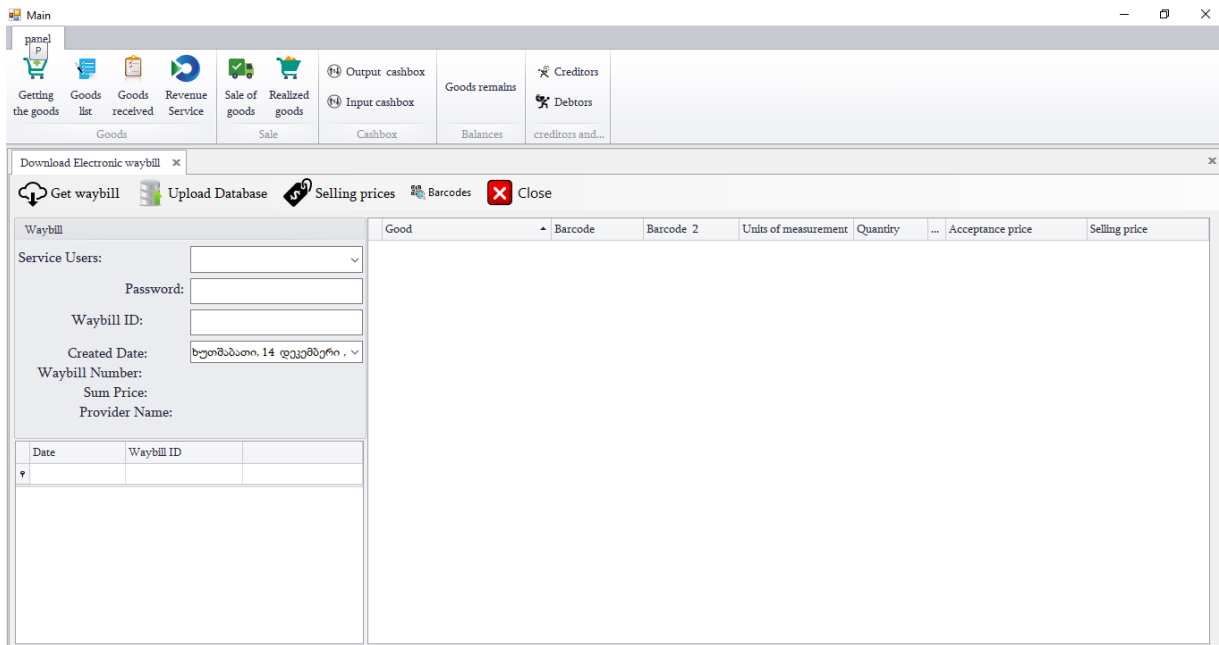


Fig.7 rs

❖ **The creditor and debtor module.** The module provides the control of receivables and payables, as well as their detailed accounting, which allows us for obtaining detailed information on receivables and payables.

❖ **Cash flow management.** This module ensures accounting of cash assets entered into the till and pulled from the cash register.

The proposed software has been developed by using the Microsoft company's technologies (.Net Framework, C# software programming language). A software database has been developed and placed on a Sql Server 2014, which is a modern and widely accepted management system of the client-server databases, which is being widely used for working with the large databases[2,3].

3. Summary

There has been developed the sales management software, which enhances the effectiveness and reliability of the sales process.

The proposed sales management software meets those quality requirements, which are imposed on the software: effectiveness; functionality; simplicity of use; promptness; integratedness; compatibility; sustainability, expansibility, etc.

The software presented by this paper has been introduced in the companies and is being used actively and successfully by them.

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