

# The Design and Implementation of the Enterprise Customer Relationship Management System

Zitong Wang

Nanjing University of Science & Technology  
512583563@qq.com

**Abstract.** In today's technological progress, the future market competition has developed to the service competition, and it is important to establish and develop long-term customer relationship with customers is particularly important. Based on customer relationship management, this paper mainly completes order management and customer service. The order is arranged according to the abnormal situation of the order and the closer to the delivery time. If the order is abnormal, you can directly notify customers with mobile phone SMS, or provide humanized service. The system uses Visual Studio 2019, SQL Server 2019 and MVC development platform to explore the design and development of the Web-based user relationship management system.

**Keywords:** enterprise; system design; C RM system.

## 1. Introduction

In today's society, the timely, accurate, applicable and economic requirements of management information are getting higher and higher. Computer is a storage and processing tool of modern information, which plays an important role in human life. Computer technology can be used in both scientific research, military affairs, culture and other fields. Facing the management technology of the new era, enterprises must have their own strategies if they want to retain a new customer. The focus of marketing has shifted from developing customers to maintaining customer relationships. In the face of massive customer information, how to better manage customer resources, has always been a big problem for enterprises. However, with the rapid development of computer technology, especially the emergence and development of "Internet +", the operation and management of enterprises has a new development. How to build and perfect the customer relationship management system engineering, has become the primary task of the current enterprise development. As a brand new enterprise management mode, its purpose is to improve the relationship between the enterprise and customers, and has been widely used in the integration of external resources of enterprises, such as sales, after-sales service and technical services.

## 2. Enterprise C RM Product profile

Customer relationship is divided into customer type between B to B CRM and B to C CRM, B to B CRM, B to C CRM customer relationship management is responsible for individual customers in enterprise customers. CRM required for enterprise product and service providers, the content of most CRM in the market. Businesses that serve personal and household consumption need customer relationship management[1].

According to the focus of CRM, CRM can be divided into operational and analytical CRM. Most CRM is an operational relationship management that supports every working process in CRM, while analyzing CRM is mainly about data analysis.

### **3. System Analysis and design**

#### **3.1 The feasibility analysis**

##### **3.1.1 Technical applicability**

System adopted system functions based on the user relationship, performance and various limitations of the system, through the goal of the new system to measure the required technology, the system technology is mature, software performance requirements and environmental conditions are very good, according to the current technical conditions, the function of the system index should be able to meet. At the same time, considering that the development time is also relatively long, it is expected to be completed in a certain period of time.

##### **3.1.2 Sustainable economic development**

The customer relationship management system is equipped with information equipment and the corresponding application platform to support the system. The system is designed based on its own actual experience in programming, does not require a lot of money, and is not expensive in the development process, so the development cost is acceptable[2].

From the above analysis, we can see that it is feasible to establish a customer relationship management system.

##### **3.1.3 Sustainable development in the society**

The system was developed and developed based on the actual working status of CRM, and after extensive investigation and research, the software was designed in an independent environment without any software that could be replicated. There are no special technical skills for users, except for their experience in using personal computers on the Microsoft Windows platform. The system administrator must be skilled with the IIS server and does not need to train the operating system before running. This can reduce investment costs and simplify operations.

#### **3.2 Overall design requirements**

CRM is an important management platform for the relationship between enterprises and customers. It handles the business of the enterprise and customers as well as business within the enterprise. The CRM has both information about its customers and its competitors, as well as data on corporate marketing, sales, and support. There are many kinds of data sources, including local databases, remote databases, e-mail messages, text files, etc. The complicated relationships between customers and enterprises, departments and departments, business and business, sales and markets, and services make the data structure, type, and interconnection in customer relationship management very complicated and varied; and these data are handled differently[3].

Customer relationship management is user-centered, and compared with other management systems, CRM has its own characteristics. Therefore, it is necessary to establish your own CRM database. In the process of establishing the customer relationship database, we should not only pay attention to the characteristics of customer relationship management, but also pay attention to the relationship between customer relationship management and other management systems of the enterprise.

The basic information management module of the system includes the basic information of adding, modification, deleting, query, etc. The user information management module is to add, modify, delete, find user information and contact information. Customer service information management module includes customer complaints, contracts, needs, etc. The employee information management module is mainly responsible for employee personal data, work logs, contact records, etc.

## **4. system design**

The main unit modules include customer management, marketing management, service management, statistical reports, and system settings. Each large functional unit has a specific small unit, with 15 small modules throughout. In this system, the various parts of the CRM system are described in detail.

### **4.1 Customer management**

According to the FMC model, namely the RFMC model, four indicators are adopted: the last purchase time R, purchase frequency F, purchase amount M, and service cost C, and different customer grades are divided according to the score after scoring. The customer value level is divided into: the highest value, the value, general and the lowest contribution.

Under customer management, it mainly includes the maintenance of customer basic data and customer loss processing. Customer basic data function includes customer relationship, customer tracking record, customer relationship record, contract, order, etc., and has the function of historical data output. The customer loss management module mainly introduces the time, reasons and response strategies of customer loss.

### **4.2 Marketing management**

Marketing management module, a module designed to address user identity and acquisition issues. Using the sales funnel method, the state of the whole market is divided into initial contact, evaluation opportunities, planning, negotiations and signing contracts. The main measurement criteria are established to divide the customer types in the market into: potential customers, process customers, and transaction customers. The overall process of marketing is divided into: early communication, project approval and evaluation, plan formulation, business negotiation, and contract signing. For different users, different processing methods are adopted to improve customer service and experience, and guide enterprises to take follow-up measures.

Marketing management includes two parts: market opportunity management and customer development planning. Market opportunity management module refers to the market opportunities found by marketers through market leads in their market activities, and they are recorded by them on this basis. Customer development projects are mainly to transform market opportunities into practical business opportunities, including founder, time, content, etc.

### **4.3 Service management**

The module is designed to address customer expectations, demands and complaints in the process and after the service, which are directly felt from the customer. The function of this module is to record and analyze the data provided by these users, and to make a reasonable analysis of these data. In terms of behavior, we can use a complete information process common between users and enterprises, and the requirements of users are put forward, and the enterprise can respond accordingly according to the needs of users. In order to timely understand the needs of customers. Through the summary of the above information, we will continue to improve and improve the services under the customer-first business philosophy, to help enterprises to gain greater users and market share.

Service management includes five functions: service creation, service allocation, service processing, service feedback, and service archiving. The service building module is the service record of building a system for the user. The business assignment module assigns an established business to the person who provides the business. The business processing module is responsible for processing the business. The service feedback module retains some of the feedback information after the service for easy future query and analysis. Service Archive module, responsible for maintaining and maintaining customer data.

#### 4.4 Statistical statements

The module focuses on the application of the 80 / 20 law. The main design goal is to obtain, analyze, summarize and analyze customer information and customer service information from the enterprise database, and centrally display it in the form of charts. The results can provide a reference for the daily operation decisions of enterprises.

Specific functions are divided into: customer contribution analysis, customer composition analysis, customer service analysis, customer loss analysis, data analysis. Customer contribution analysis is classified as tabulated based on the customer's order volume. The customer composition analysis module mainly analyzes the value of different customers in the enterprise through intuitive data charts. Customer service analysis is designed to analyze the service process, so that the service quality can be continuously improved. The customer loss analysis module reflects the customer loss situation, and finds the corresponding countermeasures on this basis. The data analysis tool used previous user-based data, using a third-party Spread JS online editor, processed the data and analyzed it in a tabular form, with the most commonly used being the RFMC model.

### 5. Implementation of the system functions

#### 5.1 Realization of the CRM system module function

First, the system login interface, in which requires the login to enter the correct account and password, and press the login key, to enter the customer relationship management system home page. The second is the system home page, through the customer relationship management system to log in the system, input the correct information on the login page, and then click the login or return button, you can enter the home page of customer service, in the home page shows how the enterprise how to serve users business philosophy.

#### 5.2 Main modules of the CRM system module

The system module mainly includes four modules: marketing management, statistical report, customer information and household service, to realize the interface. In the marketing management module, the marketing opportunity management interface, add interface, marketing opportunity information retrieval, customer development plan interface, add interface and customer development information query can be operated. Statistical reports generate application value in customer contribution analysis, customer source analysis, customer service analysis, and customer loss analysis[4]. In the current data analysis tool Spread JS, a data processing tool similar to Excel Data Editor, it has various functions such as online data analysis, data screening, calculation, sorting, and chart generation. In the customer information and customer service module, you can maintain the customer specific information and management, in the practical application for customer management module, using two high configuration PC to simulate 40 concurrent users, running time is 1h, test results show that the customer relationship management system application service platform in simulating 40 concurrent users, can fully meet the customer management needs (test record number and network condition monitoring data refer to Table 1 and Table 2, respectively). After collection and analysis, such data can produce great value to the operation of enterprises. The function of the system is tested to test the difference between the completed functions and the functions of the system used in the design, so as to achieve the purpose of the design. After the stable debugging of the function, no error was found, indicating that the working performance of the system is stable.

Table 1. is the simulated user data statistics

Test time period	60min(15:00-16:00)
Sims the number of users	40

test items	Customer Management Module	Sims the number of users	Fifteen
		Record the number of separate	1200 Zhang
		Record time	60min
		The average number is recorded	16.5

Table 2 Statistical Table of Network Status Monitoring Data

PC	Contract number	Contract number	packet loss probability	Minimum delay	Maximum delay	Average delay
PC1	8098	8098	0%	54ms	1914ms	65ms
PC2	5732	5732	0%	54ms	1860ms	65ms

## 6. Conclusion

The system mainly completes customer information management, employee information management, basic information management, customer service information management. In order to ensure the security of the database, the database connection is required. In the operation process, should fully consider the actual needs of users, eliminate the excess information, make the operation more simple. After the system debugging, the system correctness and robustness are verified. Given the lack of individual competence and partial knowledge, the system needs to be improved in some ways. I will study actively and gain more knowledge in the days to come.

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