The Design of the Furniture Factory Material Management System

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ABSTRACT

The rapid development of China's economy, on the one hand, provides enterprises with development opportunities, on the other hand, forces enterprises to adjust production mode and optimize management mode in time. In the case of furniture manufacturing, to adapt to the market, it is necessary to make an essay in the way of management. Based on this, the article for material, size is different, phyletic and various furniture manufacturing etc., designed and implemented based on B/S structure of the furniture factory material management system, improve the efficiency of the furniture factory in material management, for the storage of materials, material, material application, material, material statistics provide a convenient, reduce the efficiency problem due to the disadvantages of artificial management, greatly improve the operational efficiency of enterprises.

INTRODUCTION

At 1970s and 1980s, the overall supply and demand in the market is demand less than the supply. As long as you can produce product, you don’t need to consider the market and sales. At that time, as far as possible, purchase enough raw materials to produce products. This is the initial stage of information management. But with the rapid development of the national economy, the concept has been changed. It is no longer the more the better, but the delicate, to get the product to stand firm in the economic tide, which requires a lot of manpower to manage the material. The
The development of IT has helped people to solve this problem. More and more enterprises have realized the intellectualization of management[1,2].

**Domestic Situation**

The practice of using IT to manage materials in China originated in the 1980s and has been developing for many years, and is technically mature. But this kind of management requires more people, and the cost of all kinds of hardware and network is higher. Small and medium enterprises difficult to shoulder the cost input. Because the introduction of the software system can reduce costs, so at present manage the material in the form of a software system becomes the mainstream. The application of software system improves the efficiency of material management and indirectly increases the profit for the company. [3]

In China, new generation of ERP software system uses B/S mode, the body is a three-tiered architecture, displays, logic and data access, reduce the coupling between the code and make each part of the system work independently. Using this model, the user can use the system after the login, only need a PC installed with the browser software.

**Status Quo Abroad**

Industry developed countries have long been especially pay attention to the management of material. In the early stage, the management of materials is simply inventory management, so it is difficult to predict the trend of products or the use of materials. In order to solve these problems, the management system of materials appeared. It can predict the material quantity of the enterprise according to the demand of the market, make the material purchase plan reasonably, the product production plan and so on[4,5].

Later, as companies grow, MRP which just solve the problem of order cannot satisfy the needs of enterprises. The related scholars proposed the idea of MRPII, which makes material management more systematic and standardized [6].

**DESIGN OF MATERIAL MANAGEMENT SYSTEM OF FURNITURE FACTORY BASED ON B/S STRUCTURE**

The system’s function is divided according to the type of user, and the functions for different users are different. According to the actual needs of the furniture factory, users can be divided into four categories, including system administrator, manager, warehouse keeper and workman. The first three types of users only have a single user. The workman can be multiple, depending on the work needs.
Data Flow Diagram

Figure 1. User Information Flow Diagram.

The first is the data flow diagram of the user data. User data mainly consists of two parts, the first part is used for user login. When logging in, according to the validation condition, the user information obtained from the database, and then returned to the user. The second part is the administrator's management of user information. Include store new user information in the database, view and get all user's information records. The data flow diagram for this section is shown in Fig.1.

The second is the data flow diagram of the material application. In this system, the most important data flow is the operation of the application materials after the successful login system of the workers. The workers choose the products to be processed and submit the material application form to the manager. After the manager examined and approved, the status of the application was changed to approval and submitted to the warehouse keeper. The warehouse keeper shall issue the materials according to the approval materials. Then the status of the application form was changed to issued. This data flow diagram is shown in Fig.2.

System Functional Structure Design

Figure 2. Material application processing data flow diagram.
The system function structure is shown in Fig. 3. The primary function of the system administrator module is to manage user information, including the addition, deletion, modification, and query of user information. In this case, the administrator can query by user classification or fuzzy query. In addition, the system administrator should ensure the normal operation and maintenance of the system, including maintaining data security, backing up important data files, testing system performance, upgrading and maintaining, analyzing log files to exclude potential threats.

The functions of the manager module include: approving the material application form submitted by the workers; viewing the report of material use and the material purchasing suggestion of the system; adjusting the production plan in time; viewing the material storage and material loss; viewing the cost estimation and price suggestion of the system; managing the production and setting the relationship between products and materials; approving material information provided by the warehouse keeper.

The function of the warehouse keeper module includes: inputting the information of materials and submitting it to the manager; changing material information timely; updating the quantity of materials timely after purchase; distributing materials according to the approved material application form; filling in the purchasing list according to the material storage condition; regularly generating reports of materials and submitting them to the manager for decision.

Worker module's main function is: selecting products and generating material application according to the product plan; filling in the material loss according to the materials applied.
IMPLEMENTATION OF SYSTEM

Based on the previous system design, according to user operation logic order, the system function is encapsulated as a class and the material management system of furniture factory is integrated. The main interface is shown in the Fig. 4.

CONCLUSIONS

Through running the system, improve the efficiency of the furniture factory in material management, provide convenient for the warehousing, application, approval, outbound and statistics of materials. It greatly improves the operational efficiency of enterprises. But there are still many functions can be further perfect, such as the optimization of product management, supplier information management and so on, and these functions will also be the direction to improve this system.

REFERENCES