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Research Article

A system designed for inventory management

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ABSTRACT

Most of the enterprises in the economic development .at the same time, his production pressure is heavy, inventory management has become particularly important. In response to this change, we aim to move away from traditional manual management, which leads to inefficient supplies. Material Management and data acquisition issues. Inventory requirements in the enterprise have been unable to meet. Traditional inventory decision-making needs manual transmission, and we design the inventory management is a brand-new management method, it can be used as a platform for managers to directly complete the communication operation. Makes it possible for people to implement tasks faster.

1. Introduction

Due to the variety of items in the inventory, their ordering, management and distribution channels are different, management systems are not the same, a variety of statistical statements for the inventory management manual-free operation, to realize the computerized operation of Management, an inventory management information system must be prepared[1].

According to the current enterprise management system, the general inventory management system is always divided into several departments according to the mastered material categories, which are respectively responsible for planning, ordering, write off, delegated collection, acceptance and warehousing of materials.

At the same time, according to the needs of corporate leadership and their own management, quarterly and annual statistical analysis after the generation of the corresponding statements. To meet the needs of all departments of the enterprise for the delivery of materials and equipment, at any time for inventory and accounting.

Through careful investigation of these situations, the following warehouse inventory management system is developed.

2. Operating Environment

The system is modeled on the structure of layui. The front end adopts bootstrap framework and the back end adopts SSM framework to realize the function of front and back end. In addition, it also applies other related technologies, such as Baidu echarts diagram. At the same time,a good configuration environment is also required. Configuration environment is shown in Table 1.

Table 1. configuration environment server

Server name	Server
Operating system name	Window10
Back end server name	Tomcat
Back end server model	Apache Tomcat/9.0.12

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The database server is shown in Table 2, and other softwares are shown in Table 3.

Table 2. configuration environment server

Database server type	Server
Database name	MySQL
Database version	Mysql/8.0.15

Table 3. configuration environment server

Other software type	Server
Development platform	Myeclipse2015
Software name	Myeclipse
Software version number	Myeclipse5.0

3. Software Design

The importance of software architecture [2] is that it determines the main structure, macro characteristics, basic functions and characteristics of a system. For example, the main structure determines the success of the design, the macro-structure of the design is correct and rational to determine the success of software design. Therefore, the software architecture plays an important role in the whole software design.

3.1. *System structure design*

The following four parts are the structure of the whole system.

(1) The initial inventory quantity and price information can only be entered into the system by the administrator

(2) For logical operations, it can only be performed by the administrator, such as transferring, changing numbers, encoding.

(3) The administrator can view the issue / receipt documents and generate and print the documents corresponding to the above operations.

(4) The inventory history can only be viewed by the administrator, and the administrator can print out the information.

3.2. *Architecture design*

The system adopts the system design style of browsing / server. The presentation layer is responsible for user input and output to customers. The function layer is responsible for establishing the connection to the database, generating SQL statements to access the database according to the user's request and returning the results to the client. The data layer is responsible for the actual database storage and retrieval and responding to the data processing request of the function layer, And return the result to the function layer.

Overall architecture design is shown in Fig.1.

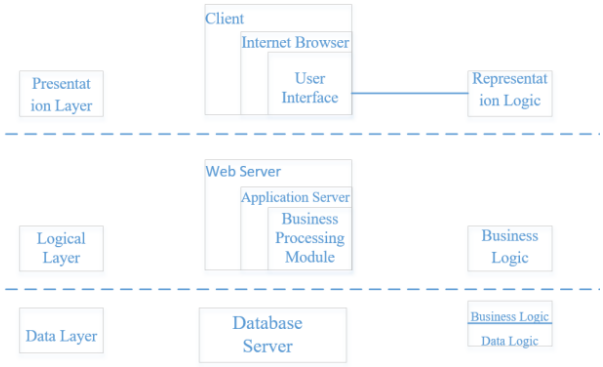

Fig.1. overall architecture design

3.3. *System structure design*

The structural design of the system is the main body of the whole design. The system is mainly designed for the administrator. It is divided into 9 modules: setting module, transfer document module, disassembly document module, count document module, miscellaneous issue document module, miscellaneous receipt document module, cost adjustment document module, inventory history module and statistical analysis module. The users in this program are inventory managers, which has nothing to do with customers. System structure design is shown in Fig.2.

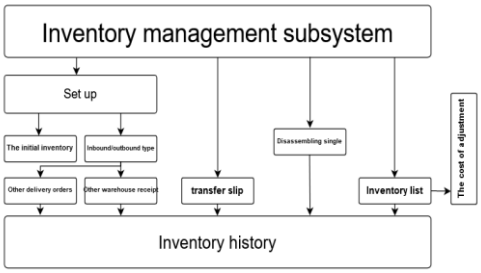

Fig.2. system structure design

4. Project Testing and Statistic

The purpose of the test is to find out the possible problems in the system before the system goes online, check the system performance [3],[4], and test whether the network request can be sent normally, whether the function can be realized stably and whether the operation is stable under the condition of cross domain. The project test is shown in Table 4.

Table 4. Project test

Test unit	Function description	test result
Issue / receipt category	New, modify, delete issue / receipt type	success
opening inventory	Manually enter (add), view and output (document) inventory goods	success
Transfer order	Add, modify, delete, query and output transfer documents	success
Disassembly order	Add, modify, delete, query and output transfer documents	success
Inventory sheet	Add, modify, delete, query and output transfer documents	success
Miscellaneous issue doc	Query and output issue doc	success
Miscellaneous receipt doc	Query and output issue doc	success
	Transfer doc operation generation record	success
Inventory history	Disassembly order operation generation record	success
	Count sheet operation generation record	success

Statistical analysis can be used as a tool to display its data information in an image in such a way that it can see changes in inventory, where the edges of the image are different, the realistic information data can enable the manager to make the corresponding judgment. The statistical analysis is shown in Fig.3.

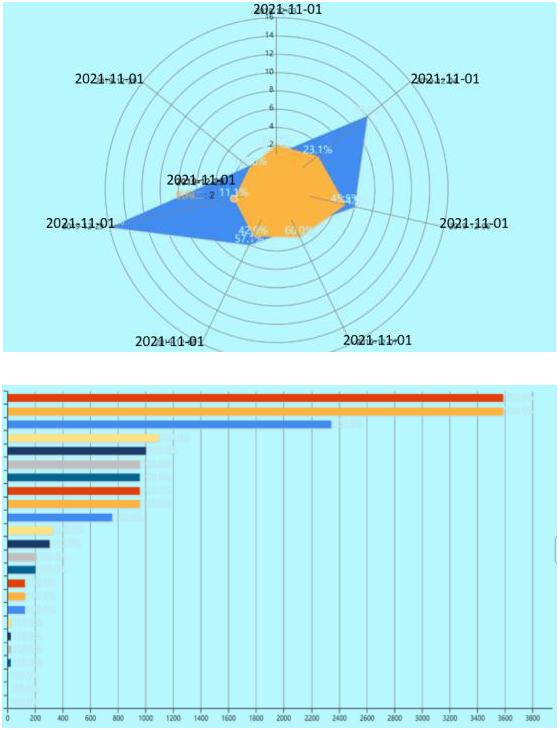

Fig.3.Statistical analysis

5. Conclusion

Dream cloud ERP system based on Java-inventory management subsystem v10. It is used in the management of inventory software, can be widely used in enterprises. Its features can do most of the work. When applied to an enterprise, the inventory management function of the work of an administrator can be replaced. such as inventory setting[5], opening inventory, transfer doc, disassembly doc, count doc, other receipt doc and other issue doc, In addition, there are functions such as inventory history and statistical analysis. The software interface is clean and simple to operate. Users can intuitively view the real-time results of system management. The system has a good user experience effect.

At present, most enterprises use traditional inventory management, which can not meet the requirements of enterprises, because it needs people to do most of the operation. Today, with the rapid development of Computer 1, this kind of management will be replace.

Therefore, in this case, it is very necessary to replace the manual inventory management system with such a collection, which has the advantages of fast retrieval,

convenient search, high reliability, good confidentiality and low cost. Dream cloud ERP system based on Java - inventory management subsystem v10 provides great convenience for enterprises to process the data statistics of inventory information management, make the information clearer, make the data query easier, and promote better communication between enterprises. The system runs stably and is convenient for daily maintenance.

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6.

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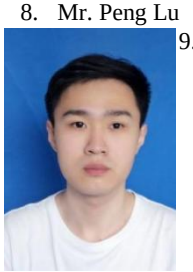

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