The Construction of Enterprises' Financial Management System Based on ASP

Li Li
School of Economics and Management, Changchun University of Science and Technology
Changchun 130022, China

Dianwei Qi
School of Economics and Management, Changchun University of Science and Technology
Changchun 130022, China
E-mail: qidianwei1111@126.com

Abstract

As an indispensable management information system in an enterprise's management on income and expense, financial management system plays a critical role in financial planning, financial control, financial monitoring as well as financial operation. This paper elaborates on how to establish foreign trade enterprises' routine financial management based on B/S Structure, ASP Technology and SQL SERVER 2000 as the back-end database. It aims at establishing a variety of functional modules according to enterprises' financial characteristics to enable enterprises to apply network-based management pattern, hence exerting high efficiency in capital management.

Keywords: Expense management, Salary management, ASP, Financial management, System safety

1. An Overview of Enterprises' Financial Management Process

Enterprises' financial management is composed of routine expense management, salary management and management of income and expense

Routine expense management includes expense account, travel expense account, loan and other small-sum capital flow. Expense is mainly given in cash and relies on settlement receipts. With the special financial seal on receipts as well as the applicant's signature, cash is given and receipts are left with the financial department.

Salary management is a basic section of an enterprise's monthly report, including staff's salary limit, welfare expense, taxes and so on. After financial department's compilation of staff salary and financial managers' verification, salary can be distributed. Generally, with salary information given in Excel, staff can check their salary in a certain month or any previous month.

Management on income and expense includes income from contracts, borrowed funds, companies' expense and other basic items. Financial staff is expected to enter income and expense into accounts according to receipts and items, to compile accounts reflecting different income and expense items, to settle accounts at the end of every month and compile relevant reports.

Enterprise financial management is lacking in the support of information flow and seems redundant in terms of operation process, hence doing no favor to the information-based construction of enterprises' financial sections. Therefore, it is of particular importance to establish an information system fit for enterprises' financial management.

2. Construction of Foreign Trade Enterprises' Financial Management System Based on ASP

2.1 Design of Database Structure

Financial management system mainly includes three pieces of basic information, that is, staff information, the administrator's information and staff's financial information. Therefore, three forms (user_info, admin_info, finance_info, salary_info) should be established in database to store information and the information in database can be managed through foreground.

User_info records staff information, including name, password, gender, department, position, date of entry; admin_info mainly records the administrator's basic information, such as name, password, grade and so on; fee_info records routine expense, including capital limit, capital project, the responsible person, date, number

and so on; salary_info records salary and expense in different months, including salary limit, date, capital project and so on; finance _info records the basic information of income and expense in different months, including capital limit, date, capital project, the responsible person and so on.

2.2 Design of Functional Modules

2.2.1 Design of the Interface of Login Module

The information login module of financial management system is an entrance into a platform for system information exchange. With its B/S structure and ASP interface, this module mainly includes user_login.asp and user_login_check.asp.

User_login.asp , including user, password and type, records user name, password and identity, the submit button and the reset button during the login process so as to submit the data in textboxes to the checking page.

User_login_check.asp compares the delivered information including user, password and type according to the syllables in user_info. In the case of consistence, the process will skip to the background information page; in the case of inconsistence, the user has to come to the login page again.

2.2.2 The Personnel Information Management Module

This module, intended to manage personnel information, has direct influences on a company's expense. Therefore, staff's entry, withdrawal, position transfer will affect financial information. Generally, personnel information is kept in user_info, including name, password, gender, department, position, date of entry and so on.

In this part, some management pages, such as staff_add.asp, staff_manage.asp, staff_edit.asp and staff_del.asp, are included.

(1) Staff information Addition

The administrator can add staff information in staff_add.asp and store it into user_info. Besides, staff's photos can be uploaded by copying photos into the prescribed folder and putting down the path into the corresponding place in user_info.

In order to avoid null values, JavaScript can be used to check, giving dialogues in the case of uncompleted information. Since staff needs to log in with user name and password to finish the compensation of daily expense and salary inquiry, an added user needs to be compared with the background database. If it is in existence in the current database, a prompt needs to be given requiring re-filling in order to guarantee the uniqueness of every account. The initial password is 000000, which can be altered by staff themselves after logging in their own accounts.

(2) Staff Information Management

Staff_manage.asp lists all staff's information by arranging them in the descending order of ID. The administrator can examine all staff's basic information and choose to edit or delete information. Every ID should be equipped with connection to staff_edit.asp and staff_del.asp so as to skip to corresponding pages.

(3) Staff Information Editing

When the administrator needs to edit any piece of information, he can skip to staff_edit.asp directly, where the former information is given as the initial values to be edited. For instance, when any employee is to be transferred, the administrator can choose his future department and position in the drop-down box to provide convenience for the management process.

(4) Staff Information Deletion

After staff's withdrawal, the administrator will delete their information from the database. In order to avoid false operation, JavaScript should be employed to provide an verification step when pressing the "delete" button. Once ensured, this involved employee's record in user_info will be deleted according to his ID. Besides, according to the formerly recorded path to his photo, relevant information in the server should be deleted to avoid junk files after the deletion process.

2.3 The Financial Information Management Module

This part is of the greatest significance in an enterprise's financial information platform as well as a manifestation of some major functions in daily management of financial activities.

The financial information management module is made up of daily expense management, salary management as well as income and expense management. Accordingly, fee_info, finance_info and salary_info are designed in

the database to record the inflow and outflow of capital in different categories.

In order to make management more convenient, financial management staff is divided into financial staff, who conducts management on daily expense and salary as well as put in and edit financial information, and financial managers, who are responsible for auditing information before staff logs in accounts to inquire about relevant information and auditing every business fulfilled by financial staff and inquire about relevant information with the help of the responsible person in the case of information deficiency and fault.

It consists of the following sub-modules:

(1) Daily Expense Management

This involves management over a variety of expense in daily operation, such as travel expense, maintenance cost and so on, including major functional pages such as fee_add.asp, fee_edit.asp, fee_check.asp, fee_del.asp and fee_report.asp.

By logging in the background through the interface, adding daily expense and submitting it to the database, financial staff can add information to fee_info, including amount, use, the responsible person, time and so on. After that, financial managers are expected to audit the information by comparing the given information and the submitted receipts. If they are inconsistent, financial managers list this piece of information as "failing" and then financial staff is expected to compare and edit the information and receipts before submitting them again. Once passing the verification process, information will be numbered according to random function with the principle of "date function + random function" to guarantee the uniqueness of all data on daily expense. Besides, the information passing verification can be inquired about after logging in to enhance the transparency of expense management. Financial managers can delete the information put in due to some faults to avoid disorder in data management. At the end of each month, financial managers export the expense EXCEL form that month through fee_report.asp and keep it as a record with their signature.

(2) Salary Management

This part mainly involves financial affairs every month which are to be stored in salary_info, including limit, date, capital items, details, responsible persons and so on. Its major functional pages include salary_add.asp, salary_manage.asp, salary_edit.asp, salary_del.asp, salary_check.asp, salary_report.asp and report_manage.asp.

According to the salary information provided by the human resources department, financial staff writes relevant details into salary_info through salary_add.asp, including name, department, limit of basic salary, limit of bonus, deducted fees, pre-tax salary, payable tax and after-tax salary, the responsible person, data and so on.

By calculating the added data in salary_add.asp through session variable, we get the amount of payable tax (tax_total) and after-tax salary (salary_net) in accordance with the formula of individual income tax as well as pre-tax salary (salary_total). Then the above three values are inserted into corresponding syllables in salary_info and financial staff will submit the salary information that month to financial managers after confirmation.

Financial managers compare the information offered by the human resources department and the details written by financial staff into the salary information page and conduct verification with salary_check.asp. After this, all information is numbered with the principle of "date+ random function" and staff can log in to inquire. Those data failing in the verification process need to be edited again for another submission. After passing this stage, these data can be inquired about in the same way. At the same time, financial managers will delete false information to avoid redundant data and establish an EXCEL form to report to the management level for signature and verification. After all these steps, salary can be distributed.

(3) The Management of Income and Expense

This part involves those large-sum income and expense affairs, which are stored in finance_info, including the information on limit of daily income and expense, date, capital items, taxes, details, responsible persons and so on as well as some major functional pages such as finance_add.asp, finance_manage.asp, finance_edit.asp, finance_del.asp, finance_check.asp, finance_report.asp and finance_report_manage.asp.

Financial staff writes income and expense details into finance _info through finance_add.asp, including limit of income and expense, data, capital items, taxes, details, responsible persons and so on, and submit the salary information that month to financial managers for verification.

Financial managers compare the written details with actual income and expense and conduct verification through finance_check.asp. For those data passing this stage, they are numbered according to "A (B) + date+ random function" and then stored; for those failing this stage, alteration needs to be made for another submission and the same procedure as above once passing the verification process. Financial managers are responsible for deleting

false information on income or expense to avoid redundant data. In addition, they need to establish an EXCEL form and keep it as a record with their signature.

(4) The Management of Capital Accounts

All the above income and expense affairs can be reflected in the increase and decrease in the amount of capital accounts. As financial staff deals with and financial managers verify financial information, account_manage.asp conducts statistics in all the data and stores them in a universal way. Meanwhile, they can get the details of income and expense, total profit or total loss each month, which help financial managers to grasp the overall capital flow of their enterprises.

3. Network Safety Precaution in Enterprises' Financial Management System

Since enterprises' financial management system is based on the B/S pattern, the safety of the server and network appears to be particularly important. Accordingly, enterprises are expected to take precautious measures against some possible problems to ensure the safety of financial information.

3.1 Encryption Algorithm

Encryption Algorithm is an algorithmic language to conduct data encryption in order to avoid hackers' stealing and decoding data, in which RSA and MD5 are popular types. MD5 is more suitable for the information platform with ASP+SQL structure, in which the initial password is set at 000000 when a user's information is added. With the alteration of MD5 value, the initial password will be encrypted to be a 16-digit combination of letters and numbers, that is 8ad9902aecba32e2.In this way, hackers cannot log in with the password they get by decoding database, hence guaranteeing the safety of the login interface and accounts.

3.2 Precaution against Leaks in Uploading Files

FSO physical files need to be copied when we upload pictures and information, that is, writing and deleting files outside the database. This method enables hackers to copy Trojan files into the server and to cause huge visiting pressure to the server as well. As a result, ASP files will be infected by Trojan virus, causing failures in access to information platform or even breakdown finally.

Filtration of uploaded syllables helps to restrict hackers from uploading Trojan files effectively. Since Trojan files usually have exe, asp, php and asa as their postfixes, they need to be filtrated in uploaded pages. That is to say, when a user uploads the above files, the system will give a judgment according to JS form and deliver a prompt and return to the original page in the case of illegal characters. With these measures taken, some leaks can be prevented effectively, hence guaranteeing the safety in uploading files.

4. Conclusion

A financial information platform based on ASP is mainly intended to accomplish convenient operation and reliable information management, to have macro-control on cash flow, to conduct effective management on salary information as well as daily income and expense information, to combine the management over staff information and financial information, to realize the division and cooperation of financial staff, financial managers, human resources administrators in information management, hence promoting the information-based construction of the financial field while guaranteeing the safety of enterprises' financial information.

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