Implementation and Development of a Proposed Payroll System

Gurlal Singh

Guide Name: - Mr. Ashwani Sethi

Email Id: - Ls.Sidhu@Ymail.Com

ABSTRACT

Payroll software can be used to speed up the process of calculating pay, ensuring that payments are both accurate and on time. They save you the burden of learning and understanding complex Payroll legislation. Trouble free Payroll processing is a critical need of any business. Payroll software completes Payroll calculations within a fraction of the time it would take to do them manually, whilst you're Payroll staff might not like it, it makes perfect sense if you are trying to run a business. Another huge advantage of running Payroll software over a manual process is in the reporting, most systems allow, weekly, month and annually required reports to be run at the press of a button. Instead of shuffling through endless files let the software do the work. It possible with a lot of Payroll software to integrate with your time sheet systems that record employee attendance or time worked. It a

simple way for information about employee hours worked to be transferred into the Payroll System removing yet another layer of manual processing. Some companies choose to operate a swipe card door system whilst many others operate on a system login basis. Payroll software also provides the capability of "what-if" calculations. This helps in forecasting and planning staff costs and budgets. Entering hypothetical numbers allow you to compare the exact total cost of an employee under different remuneration scenarios. Some Payroll systems also allow more personnel based data to be stored such as records of annual leave and sick leave.

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Payroll System with its development and implementation. If we required enter information on the form and create the print using print command then we are making a purposed system of Payroll. So my research is that if we required enter the data of employees or worker of any organization then we can create a purposed Payroll System of the organization, which is better for the organization to make an efficient system. This research is completely based on coding.

Keywords: - Visual Basic 6.0 Programming, Database, Visual Basic Programming Control i.e.   ADO and Reporting tool Crystal Report.

INTRODUCTION

The payroll system keeps accurate employee data stored in an easily accessible database. The system has the ability to update and maintain employee information and to generate required outputs including paychecks, reports to management and reports to the government. Each week, data on the current pay period is entered into the system and verified. This data is used to update the employee master file with appropriate additions, changes and deletions and to generate required output. Obviously a more detailed description would be done if I were actually documenting a system. I would include a systems flowchart at this point Sample documentation can include: Description/overview of system, systems flowchart, list of program in system, program descriptions, list of tables/files in system, file layouts and description, data dictionary for fields, list of reports in system and report layouts and description, list of screens in system and screen layouts and descriptions, controls. For each program the programmer could be asked to include program description, program specifications, logic flowchart, code, test data and sample run. Note if you are using a database such as Access, much of the documentation can be gotten from the structure of the database.

Example Program: Payroll System

Design a program that will accept as data input the hours worked and the hourly rate of an employee and calculates the overtime pay and gross pay. The program should display the hours worked, the net pay and the gross pay. Employees are paid time and a half for any hours worked over the basic forty. A **structure chart** has been developed for this system, showing the payroll system

calling **three procedures**. Each procedure is numbered in the hierarchy. This general layout follows the idea of Input, Process and Output.
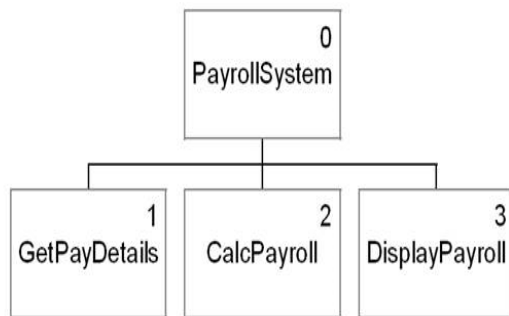

Figure1.Payroll System

PROBLEM FORMULATION

Before developing research we keep following things in mind so that we can develop powerful and quality research.

PROBLEM STATEMENT

Problem statement was to design a module:

- Which will be user friendly?
- Which will restrict the user from accessing other user's data?
- Which will help the user in viewing his data and privileges?
- Which will help the administrator to handle all changes?
- In which further additions can be made without changing its design drastically.

- Which would restrict the server traffic?

The term payroll encompasses every employee of a company who receives a regular wage or other compensation. Some employees may be paid a steady salary while others are paid for hours worked or the number of items produced. All of these different payment methods are calculated by a payroll specialist and the appropriate paychecks are issued. Companies often use objective measuring tools such as timecards or timesheets completed by supervisors to determine the total amount of payroll due each pay period. In a company, payroll is the sum of all financial records of salaries, wages, bonuses and deductions. The current Federal payroll service environment evolved over many years of incremental changes that have been implemented in different ways across the Government.

FUNCTIONS TO BE PROVIDED

The various features that the proposed system will possess will be:

- The system will be user friendly and completely menu-driven so that users shall have no problem in using all the options provided.
- The system will be efficient and fast in response by careful programming.

- The system will be customized according to the needs of the organization.
- It will provide overall security to database both from user as well as administrator side.

According to the situation of the problem, a solution is provided to use a Visual Basic programming connects with database of Payroll System according to requirement of the user.

A payroll system should be geared toward paying employees what they earn within a reasonable time frame and accurately tracking paycheck amounts as well as tax and benefit withholdings. Payroll systems should be thorough without being overly complex and cumbersome, and they should be designed thoughtfully enough to work well with a minimum of oversight. Having a well-designed payroll system is in the best interest of employees, business owners and human resources staff.

Accuracy is an important objective of a payroll system, because employees are entitled to be fairly compensated for the work they have done, and a company's financial well-being depends on not overpaying employees for the time they have worked. In addition, businesses are liable for payroll taxes on employee earnings as well as remitting payroll taxes that have been withheld from employee paychecks. Accuracy in payroll operations can save the hassle of time-consuming reconciliations as well as the expense of penalties

A payroll system should create paychecks and provide information in a timely manner. Employees are entitled to be paid on designated paydays. Failure to pay employees on time can lead to morale problems. In addition, timely information about company operations can help managers to make necessary adjustments when they discover payroll costs that are disproportionally high. Timely payroll information facilitates timely filing of tax forms, saving money in penalties and interest.

A payroll system should be cost-effective by performing calculations efficiently and not taking more of the bookkeeper's time than necessary. In addition, an effective payroll system should provide detailed information about the relative efficiency of each of the company's operations, such as what percentage of employee hours are spent on

manufacturing and what percentage are spent on deliveries. Distilling and evaluating this information enables bookkeepers and managers to evaluate whether the business is spending too much on a particular sector of operations and to proactively develop solutions.

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RESEARCH METHODOLOGY

What is Algorithm in Computer Science?

Algorithm is a process of problem-solving in step by step to get result. Algorithm is very importance for programmers to do computer programming because it figures out the programming process. Algorithm is a part of problem-solving techniques. After the problem has been raise, we have to analyze the problem first then the inputs and outputs are defined. After that we start to design the algorithm that is a process to transform inputs into outputs.
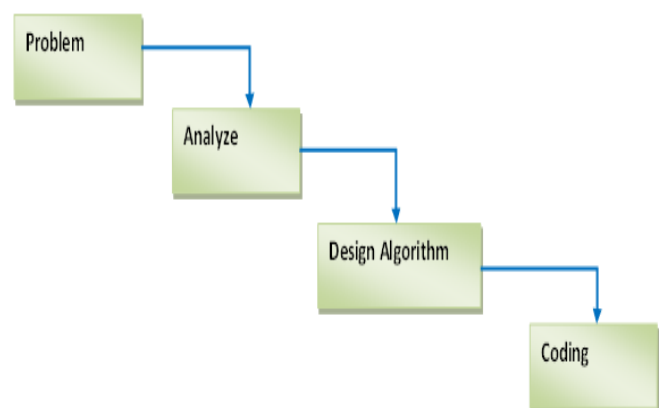

FIGURE.Problem – Solving Technique

FIGURE.Flow – Chart of a Problem

Problem: - The term payroll encompasses every employee of a company who receives a regular wage or other compensation. Some employees may be paid a steady salary while others are paid for hours worked or the number of items produced. All of these different payment methods are calculated by a payroll specialist and the appropriate paychecks are issued. Companies often use objective measuring tools such as timecards or timesheets completed by supervisors to determine the total amount of payroll due each pay period. In a company, payroll is the sum of all financial records of salaries, wages, bonuses and deductions. The current Federal payroll service environment evolved over many years of incremental changes that have been implemented in different ways across the Government. The influence of Agency-unique interpretation of legislation, regulation, and HR policies have all contributed to a complex set of requirements that, when taken together, create an obstacle

to the modernization of payroll systems and processes. Twenty-two Government providers currently deliver Federal civilian payroll services using 14 separate systems. The four largest – Department of Agriculture, Department of Defense, Department of Interior, and General Services Administration – service over 80 percent of the total civilian payroll, accommodating over 190 different pay plans. Because of age and capacity limitations of payroll processing environments, many service providers have either considered or completed capital investments in payroll systems infrastructure. Over the years, Federal agencies have attained cost savings through consolidation of their payroll operations with Federal payroll providers by Achieving cost avoidance in both capital investment and daily business operations EPSCO started out in 1995 from very humble beginnings driven by passion, dedication and hard work by all the staff that joined us having a strong belief...

Analyze: - I analyze this problem which is serious and it should have easy solution. Then I have made an algorithm which is necessary to solve this problem. With the help of this algorithm and database model

diagram in my research I am able to access the data or also able to generate the Payroll System of the organization with the programming and support with database and give the results better for any organization.

Design Algorithm: - The steps of this algorithm used in my research are as follow: -

Payroll is an important part of a company's processes because it's how employees get their paychecks. If it's not done correctly, employees may not get paid on time. Developing a payroll system flow chart helps to streamline the process and illustrates from start to finish exactly how checks are written and distributed. Think of your flow chart as a cheat sheet: The chart should cover both manual and automatic payroll processes unique to your company's payroll system.

Step 1

Outline the high points beginning with how amounts are determined through delivery to employees. Include information about collecting time cards, entering hours worked and calculating gross and net pay. Also include how checks are produced and delivered.

Step 2

Go back to the beginning of your flow chart and determine what secondary functions need to be added, such as adding a new employee or what happens if a change needs to be made in payroll. Depending on your payroll system, there may be functions that are done automatically, such as calculating the amount of tax deductions that should need to be included. Add these functions into the chart at appropriate stages, such as putting calculating deductions after figuring total income for the period.

Step 3

Add detail to your steps. Once you have a complete outline of the steps of your payroll process, you need to flesh out details on how to do them on your flow chart. Under each manual function, describe how each one is completed. Steps that are done automatically should have a notation that explains they are done by the computerized system without manual input. If the step is completed by an outsourced payroll company, you should also note that.

Step 4

Assign a role to each step. Include who in your company is responsible for each function. For instance, the payroll manager may need to approve new employees before

they are added to the system. The CEO may be responsible for approving payroll before it is distributed. The CFO may need to sign checks. Anywhere that a specific person is responsible for a step in the payroll process, note that person's title, name or both beside the step on your flow chart.

Algorithm (Detailed Design)

The detailed design for the algorithm is shown below:

Module 0 – PayrollSystem

Begin
Call GetPayDetails Using HoursWorked, HourlyRate
Call CalcPayroll Using HoursWorked, HourlyRate, OvertimePay, GrossPay
Call DisplayPayroll Using HoursWorked, HourlyRate, GrossPay
End

Module 1 – GetPayDetails

Begin
Display 'Please enter the hours worked: '
Get HoursWorked
Display 'Please enter the hourly rate of pay: '
Get HourlyRate
End

Module 2 – CalcPayroll

Begin
If (HoursWorked is greater than 40) Then
Begin { If }
Calculate OvertimeHours as HoursWorked - BasicHours
Calculate GrossPay as (BasicHours * HourlyRate) + (OvertimeHours * 1.5 * HourlyRate)
End { If }
Else
Begin { Else }
Calculate GrossPay as (HoursWorked * HourlyRate)
End { Else }
End

Module 3 – DisplayPayroll

Begin
Display GrossPay
End

EXPERIMENTAL RESULTS

6.1 A PROPOSED PAYROLL SYSTEM

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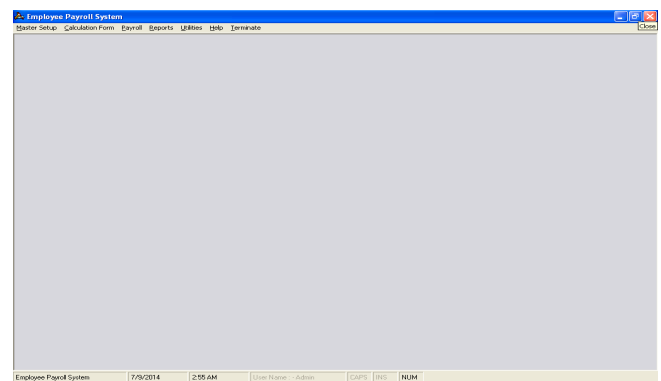

FIGURE 7.My Payroll software Login Form
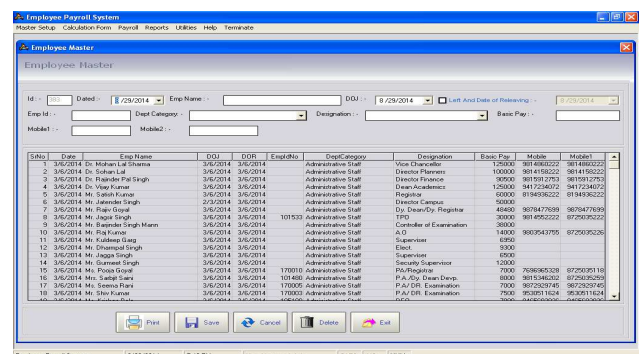

FIGURE 8.The Payroll Main MDI Form

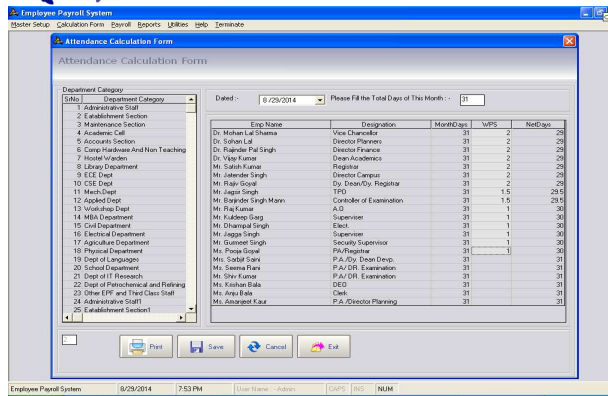FIGURE 9.The Payroll Employees Form
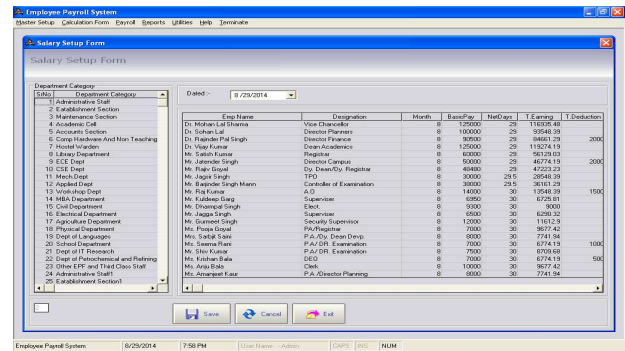
FIGURE 10.The Payroll Attendance Form

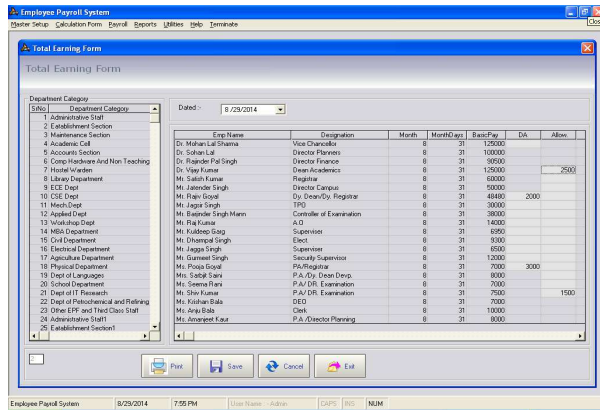FIGURE 13.The Payroll Salary Form

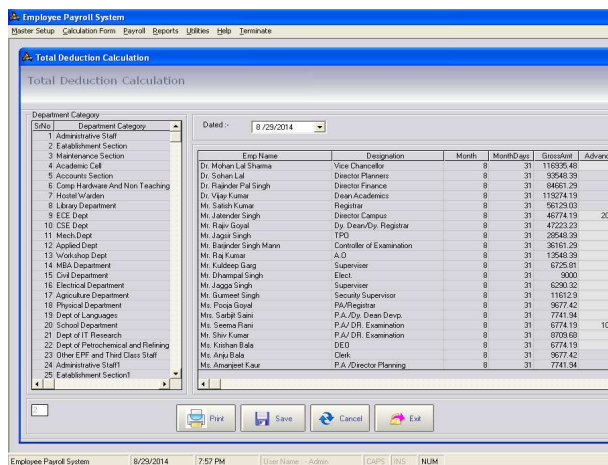FIGURE 11.The Payroll Earning Form

FIGURE 12.The Payroll Deduction Form

CONCLUSION AND FUTURE WORK

This chapter is based upon the conclusion of what we have done so far and how the system can be further enhanced with an increase in requirements.

Conclusion

The criteria set for goals are to generate files, deliver on time, performance and efficiency issues of the system. The major goal we have achieved is to generate the bank files/invoices for the banks with salary information so that the banks are able to transfer the salaries of the employees into their accounts. After developing the system, we calculated the salary and generated a Bank file. The bank file was then sent to the bank and was practically done successful to check the performance and efficiency of the system. It is a load, stress and performance

testing tool for web sites and web applications. We created basic testing scenarios and hence got some meaningful results. These results are showing that this web application is efficient and performing very well.

Our target was to deliver the system by the end of October 2010. Whereas, we finalized it by 15th October 2010 and delivered well on time. The system we developed is more customized and specifically designed according to the requirements of our client and is able to integrate with the

existing AMGs system to form one complete computerized system for the organization.

The system is able to calculate employees' salaries according to certain parameters, such as age. It is also able to generate specific files for the organization such as employee salary slips and bank files. The system is also able to calculate tax payable by the organization on the basis of certain formulas provided by the tax authorities according to the Swedish law. It generates and sends tax files to tax office; moreover, the system is more cost effective as compare to other salary management systems.

As this system is integrated with the existing system so does not need new resources to run the system. Therefore, it is easy to handle single system instead of two. Maintenance is easy and requires no further cost; further enhancement is possible according to the requirements of the organization which is not possible in the case of using existing salary management software's available in the market. Hence the system is developed successfully and is in proper function ac-
Cording to our goals and criteria

Future Enhancements

Budget Program

This salary management program can be further enhanced by a budget pro-gram in future. In budget program every team leader will have support to manage and utilize specific amount of money in a better way. With this amount he will manage everything like stadium rent, office expenditures and employees salaries.

Visual Representation of Data

Graphs and charts can be added into future version of salary management program. Through these charts or graphs management can see the change in the salary of an employee or over all increment in salaries of employees. Management can also analyze the tax paid by company in different time periods.

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