

Software engineering – payroll system

Profession



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Introduction Information System is processing of information received and transmitted to produce an efficient and effective process. One of the most typical information systems is the Transaction Processing System.

Transaction Processing System collects, stores, modifies, and retrieves the transactions of a certain organization. The process of retrieving, modifying and transmitting data to be stored using information system is referred to as transaction. Transactions occur is known to be a part of records.

All of these records were originally kept in paper. When a certain organization uses a certain transaction processing system, retrieving and transmitting of information will be available at anytime needed. The number and volume of transactions can be calculated for a given time period. Payroll System is complete Payroll software right from Employees Personal Information, Pay Structure, Loans, Reimbursement, Pay Slip Generation & Printing, Salary Register, P. F. , E. S. I. , Profession Tax, Income Tax, and L. I. C. Reports etc.

Added to the above reports, standard formats for annual submissions of PF, E. S. I. , and P. T. are also generated automatically. This software can be used by Industrial units, Distribution Agencies, Departmental Stores, Consultants, Business Houses and Contractors Etc. The developers of the package follow a predefined pattern so that the user has the ease of use and can utilize the package to its fullest extent. Care has been taken so that the software is as much user friendly as possible and any suggestions on improvements in this regard are welcome.

The use of this package is a must for personnel departments in various Industrial houses since it will help in reducing monotonous manual labour and produce accurate results for salary and related calculations. Payroll System with Time keeping and Fingerprint refers to the records - paper or electronic - and calculations that you make to work out your employees' pay and deductions under the PAYE (Pay As You Earn) system. It's essential to a business or company that you pay your employees the right amount and on time - and that you make the correct deductions.

So keeping accurate payroll records is really important. Now a day, Manual System is replaced into more advance and modern technology, just like the Manual Payroll System where the accountant, computes or process employees salaries through calculator. The way of saving files and important documents are only filed in filing cabinets that may cause loss of files when large amount of data are being received. In addition, it is not secured. And in fact, most accountant, uses same software of Microsoft office especially MS Excel.

And with the use of this proposed system, a new and more advance Payroll System may be produced which can provide data security, prevent loss of data and redundancy and easier to access, accurate and faster to use.

ABSTRACT Project Objectives The Software engineering course that we took this semester placed emphasis on the paradigm of extreme Programming (XP) techniques. Extreme programming is a programming technique that bases its values on simplicity, communication, feedback and courage. It encourages team work and constant communication with the client.

The objective of this project is to put into practice the teachings that we have learnt about XP. Approach When we were first given this project, we met to determine how we were to carry out the task assigned to us. We drew up a time-line, discussed about the programming language to use to carry out the task, how the GUI would look like and also to make sure that we understood what was assigned to us. We finally settled for Visual Basic (VB) as our programming language. We got more information on what we were to do and set about completing our task, making use of the new ideas taught in class, and especially spikes.

Achievement Our task was to develop a payroll system that would keep a record of employee data including their pension plan, union membership status, and taxes and also to be able to calculate the pay of the employees taking into consideration employee data. We have been able to achieve these task. The software we developed calculates the employee net pay from the deductions. The pay slip can be printed out as a receipt. Most of the bugs that we found and those that the clients and beta users found have been corrected.

Any new bugs found will also be corrected and the software will be updated and released. Because we used object-oriented principles, modifying the software to fix bugs or add a new feature has been relatively easy. The Company name We believe that consistent quality results can be achieved only if the organization is “ process” driven. Therefore, we have designed a standard process which needs to be followed by our development group for each project/product. A process audit is carried out by the quality department, and any deviations from the standard process are reported.

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We keep enhancing our process depending upon the suggestions of our defect prevention board, and the following is the snapshot of our standard software development process: Related Document| COMPANY NAME

Software Development Life Cycle| Requirement Specifications| Step 1: Requirement Analysis: This is perhaps the most important step in the entire cycle. If the requirements are understood well and documented clearly, then the implementation becomes much smoother and less amount of re-work is required in the software. Functional Specifications| Step 2: Functional Documentation: After the requirements are known, we make “ Functional Specifications” which mainly consists of specifications of the user interface and the reports. These are given to the client, to give him the knowledge of how the system would function to meet his requirements. The comments of the client are addressed and then this document forms the basis of Software Design. | Design Specifications| Step 3: Software Design: Once the functionality is frozen, the software is then designed to implement the same. A design specifications document is created which describes the overall software architecture and the components included in the same. The Design Specification also divides the system into smaller components (modules) which we can be treated as individual units. | Program Specifications| Step 4: Module Specifications: After the Design is finalized, program specifications are prepared for each independent unit identified in the Design. The development of modules is carried out on basis of these program specifications. | | Step 5: Unit Development: Each module is developed on the basis of program specifications.

The software developed is reviewed by peer as well as by SQA. | Unit Test Plan| Step 6: Unit Testing Each unit developed is then tested independently. Stubs are used wherever there is integration required with other units. The unit is first tested by the developer, and then an Independent unit testing is carried out to flush out unit level errors. | | Step 7: System Integration Once all the units are developed, the system is then integrated together by the integration team. | System Test Plan| Step 8: Integration Testing This is the last step before the software is released to the user.

The integrated system is tested on basis of system integration test plan to see whether it meets all the requirements of the system. The integration testing is first carried out by development group and then carried out by the SQA. The system is released only when it gets satisfactory quality rating by the SQA. | UAT plan| Step 9: User Acceptance Test Once the software is released, a user acceptance test is carried out in the production environment. The system is put into production when the user is satisfied with the results of user acceptance test. | Payroll System Our Payroll System is specific to Philippine setting.

It has a fully integrated attendance leave credit monitoring, benefits & compensation management. It has an open-ended employee number capacity. It is ready for integration with any timekeeping device(s) or software. Its robust database capability can process large records with ease. TimeKeeping and Fingerprint System The Timekeeping System works as the Bundy-clock component of the payroll system. The list of employees is imported from the payroll software. There is no need for an employee list encoding! The package includes a biometric Finger Print Recognition Device. <https://assignbuster.com/software-engineering-payroll-system/>

The initial list of employees is imported from the payroll software. It is just a simple "click" on the interface button. * Simple Interface with Photo Display upon Finger Print Recognition. * Intelligent Finger Print In & Out Recognition, right on the spot for real-time verification of employees. * Fully Supported and Seamless Inter - connectivity with the PayrollPro. * Customized reports and fine-tuning is guaranteed for specific attendance-related company-policies. Statement of the Problem In any company, it is very important to monitor the employee's attendance or time for accurate payroll and discipline.

Some companies and schools are using manual punch card to record the employee's attendance while others are still using logbook. Traditionally, such information would be gathered on a site by site basis and transmitted by either manual or electronic means, to a central point where payroll would then be processed and other reports prepared. Oftentimes, the information was outdated by the time it arrived, delaying payroll preparation and requiring numerous employees to complete just that one task. Based on observation, Universidad de Manila is currently using the punch card machine and log book for time and attendance data tracking.

But these systems are inaccurate and are less secured. These also have the following time keeping problems: 1. Lost card/ logbook - Misplacement by the time keeper. - Pages of logbook are crumpled and torn apart. 2. Buddy punching -Proxy attendance for others 3. Manual encoding of attendance to payroll programs and other frauds. | General Problem: i. How to develop an upgrade payroll system that can help the employee's to lessen their effort

and consuming of time when they using it? Specific Problem: i. What are the Benefits of Payroll System?

An automated payroll system helps the company to manage its payroll processes more effectively. As an organization expands, the operations can be more challenging. The company hires new employees, promotes current ones to new positions, and terminates others. It's hard for a payroll employee or department to keep track of all these changes by hand. An automated payroll system solves these problems because it captures and stores new hire information and processes payroll quickly and accurately especially we will upgrade their current system to a new one which is much easier to access data. ii.

How the Fingerprints help the employees to lessen the time they consume before? Well Fingerprints help solve mysteries and crimes and such is because a fingerprint is unique because you're the only one who has that pattern such as cuts, curves, and swirls. But now we will use Fingerprint as Time in and Time out to lessen the waste of time of an employee. They just need to touch the biometric and that is so easy than the previous system they use. Current State of Technology In a company, payroll is the sum of all financial records of salaries for an employee, wages, bonuses and deductions.

In accounting, payroll refers to the amount paid to employees for working for a period of time. Payroll is crucial because payroll and payroll taxes considerably affect the net income of most companies and they are subject to laws and regulations. The primary mission of the payroll department is to

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ensure that all employees are paid accurately and timely with the correct allowances and deductions, and to ensure the allowances and deductions are paid in a timely manner. This includes salary payments, tax withholdings, and deductions. Pens and big notebook are usually used in logbook system.

Employees will simply write down their names, time they log-in and signatures as their attendance. When the time of work is done or employees had to leave from their work because of an emergency, they will just write the time-out for completing their attendance for the day. While in punch card machine, the employees simply insert the time card or punch card into a slot on the Bundy clock. When the time card hit a contact at the rear of the slot of the clock, the machine could print day and time information on the card. Using this, employees can easily do the proxy attendance for others.

Especially when you will need to calculate manually the taxes, insurance and any other applicable deductions and allowances in addition to each employee's actual earnings. The advantage of using their manual system is that it is very inexpensive, with virtually no start-up costs and the disadvantage of it is that whatever you save on start-up costs will probably be eaten up by the amount of time it takes to process payroll. In addition, it's very easy to make mistakes when processing payroll manually, and the penalty for mistakes, especially mistakes in taxing, can be very costly.

Project Rational The study focuses on the Automated Payroll System that will help the company to have an accurate system that will lessen the waste of time when they use this system. This study will be the one source to improve the Technical knowledge in system in software engineering. This study will

be a great foot step to practicing their ability in making an automated system and to their knowledge in programming. The computerized payroll software systems save time and money, they're very easy to use and they're also very practical.

Especially for the employee, Computerized payroll systems are much faster and easier compared to the manual processing also quick and accurate it will be easy for Time In and Time Out and also it lessen the work load of the Accountant specifically when preparing the summary of their report and the computation of monthly deduction and net salary. General Objective Specific Objective: An objective of our proposed system is to develop a system that will eliminate the problem of insufficient and incomplete information. This proposed system will contain a different flow in calculating the salary, education and etc. that will eliminate the error. and also we provide a fingerprint to make a sufficient process when making a Login and Logout. To develop a payroll system that has a fingerprint technology we provide a fingerprint to make a sufficient process when making a Time in and Time out and it will be much faster and less of time for the employee and to the accountant. She don't need to encode it in a spreadsheet because, it's connected to the payroll so it become easy for the accountant. Computerized Payroll System File Maintenance The system provides the following:

Employee File

The employee file program is used to add, change view or delete employees' data. Position Deduction File This program is used to maintain employee deduction records. Note: only employees who have adjustments, misc. earnings, or misc. deductions should have a deduction record. Deduction
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records that do not have a corresponding employee record will be automatically purged by the calculate payroll pre-processing program. Scope and Limitation After several interviews and observations, the researchers have come to identify how the payroll works. The aim of the research is to provide a specific COMPANY, a computerized payroll system.

The proposed system will guide the employer through all the stages of the process. SCOPE The System is designed for the enhancement or development of Computerized Payroll System for COMPANY. It includes the features that can Add Employees record, Edit Employees information, Delete Employees record, print / Save the Pay Slip of each employee and Updating Employees information as well as the Weekly Salary, Cash advance, the rate per day, overtime, Gross payment, Net pay, and Deduction such as withholding tax and SSS, adding up with a log-in log-out process for security purpose.

Moreover, with help file can be used by the users to know how to use the payroll software. Special Features Time Card Entry (Daily Entry or Summary Entry per Payroll Period) Automated computation of withholding tax * (weekly/ semi / monthly/ year-end) * Automatic computation of SSS/ PhilHealth and PagIbig Premiums * Infinite slots for user definable other income and deductions * Loan handling module for SSS, PagIbig and your very own company vales which effectively keeps track of each balances * Printing of Pay Slips and Payroll Register Report generation for SSS, PhilHealth, PagIbig ; withholding tax (monthly ; quarterly reports) * Automatic year-end recap of withholding LIMITATIONS On the other hand, this study limits only to the proposed enhancement Computerized Payroll <https://assignbuster.com/software-engineering-payroll-system/>

System of the COMPANY. A proposed system which can only be access by authorized person. It does not support network topology implementation, online program or online transaction.