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To all of you,
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The Developers

ABSTRACT

Title of the Research:	**Computerized Attendance Monitoring and Payroll System for Saint Ignatius College**
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The Computerized Attendance Monitoring with Payroll System is developed in order to establish a system which aims to solve the problems experienced by the employees of Saint Ignatius College located at Barangay Balibago Santa Rosa City of Laguna. The school is currently using a manual system in collecting and consolidating the total number of hours incurred by the employees and faculty members for a particular cut off. This system frequently resulted to inaccuracies in the computation which is why complaints from the faculty members regarding their salaries were just a regular scenario every payroll period. Due to this problem, the developers decided to design, develop and implement a computerized system that handles the attendance of every employee and automatically computes and generates payroll. The computerized system definitely simplifies the procedure from time in and out to the consolidation of the total number of hours worked and from the computations of the employee's gross pay, deduction and net pay to the generation of fast and reliable reports.

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INTRODUCTION

In today's generation, people are engaged in a highly computerized technology aiming to enhance individual lifestyle, most especially in the world of business. It helps a lot in such a way that it makes work more progressive and productive. Computerization is an important thing that a business should have because it helps a lot in many ways such as organizing, storing and securing of data. Having a computerized system helps a company or institution to grow and become more competitive in business world. Many businesses nowadays used computerized systems to simplify their transactions and become one on the top organizations in the business world because they can deliver a fast, accurate and efficient output.

Attendance plays an important role in every organization. It helps to determine whether or not a business can be successful in the future. And through the attendance monitoring, the employees will help train themselves to become more punctual, thus resulting to a day–to-day task being fulfilled on time. Attendance also serves as a basis in deciding which employees are most likely to stay in the school for a longer time. Some employees tend to tamper their time cards in order to earn more or the same with others for which is unfair because they did not render the same work time or the amount of work that should have been done. This kind of situation greatly affects the work environment and can change the mood or work attitude of anyone.

Instituting computerized payroll systems within your business or organization can bring forth positive changes, saving hours producing and updating physical payroll journals and records. Computerized payroll systems come in the form of software packages that you must install on company computers. Whether a small, medium or large organization, this type of system creates efficiency as all records can be stored, organized and maintained electronically.

The Computerized Attendance Monitoring and Payroll System provides a convenient transaction because it has the features such as records can be stored in proper database, computations are definitely accurate and reports are generated on time resulting to have greater visibility into day-to-day operations and enhance members' trust and satisfaction.

Background of the Problem

The Saint Ignatius College, headed by Ms. Angelita O. Montero, is a private educational corporation in Santa Rosa Laguna which was founded in year 2013. The organization is cooperated and managed by 5 stakeholders with mission of developing Filipino youth equipped with knowledge and skills in the technical workforce of the industry. The institution is envisioned to utilize recent trends and changes in educational delivery through modern programs that develop students to their full potential.

Saint Ignatius College implements the traditional way of using timecard for their timekeeping and their payroll is computed through MS Excel which is outdated by the current technology. There are flaws in the computation of the employees' salary because some of the additional pay is not included. They find it very time consuming and takes so much effort to consolidate the total number of hours worked for a particular cut off period. Another, fraud usually happens when it comes to attendance recording and reporting since the institution used Bundy clock for their time in and time out using timecards. There is that instance that an employee cheated; asking his or her fellow employee to punch his or her timecard to the Bundy clock thus making it looks like he or she is on time. Moreover, overtime pay is sometimes not included.

Because of the above-mentioned problems, the designers developed an automated system in which the program will run through computer payroll record with an integration of computerized attendance. It calculates wages, deductions and efficient monitoring of the attendance of each employee. The system will not only provide accurate calculation and fast processing of payroll transaction but it also secures data through security implementation and accordingly arranges files provided by a well-designed database that

will produce a minimal or if not paperless environment. It helps a lot in many ways such as organizing, storing and manipulating data. And also the system improves accuracy and reduces errors because most computations are done by the computerized system.

Overview of the Current State of the Technology

Attendance monitoring is the process wherein the institution records the actual time–in, time–out of its employees and summarizes into report for a certain period of time. In the case of Saint Ignatius College, the employees are consist of the administrator, teachers and staff where in each employee is tasked to punch on bundy clock to record their actual time – in and time- out for the day in their time cards.

These time cards are located in the entrance gate near the security guards' post. Once recorded, it will be returned in the time card shelves. The administrative staff are scheduled from 7:00am to 4:00pm or 7:00am to 7:00pm while faculty members' schedules are dependent on their load given by the College Dean. Employees have 15 minutes grace period and beyond that they are already considered late. They are tagged as absent if they have no record of time – in and time – out for the day. Summary of attendance based on the time cards are then submitted to the finance every 15 days to compute for their semi – monthly payroll.

Potential Problem Area (PPA):

➢ Manual recording of attendance record may result to tampering of time cards.

➢ Time card location is prone to lost or damage.

➢ Their is no centralized system for monitoring of undertime,late, and absences.

Payroll is a process wherein employee's salary will be computed based on the days he/she rendered into work less deductions as mandated by the government or as stated by

the institution. For Saint Ignatius College, the admin acts as the payroll agent. They will retrieve all the time cards every period cut–off and that is $1-15$ for the 20th of the month salary and $16-30$ for the 5th of the month salary. Once retrieved, the administrator will have generate a summary of attendance that will be used by the finance department to process the payroll. Payroll is computed based on the daily rate of the employee. If he/she was absent with no more leave available, this will be also deducted from the gross salary. Semi – monthly payroll is observed by the school. Salary is received every 20th and 5th of the month. Meaning, the finance is given 5 days to prepare everything before the employees can receive their salaries. Computation of semi – monthly payroll is the same, except that every 5th , mandatory deductions are included in the computation.

Objectives of the Study

The developers have conducted an interview and research about the current Attendance Monitoring and Payroll System that the institution is using to clearly define the problem and provide comprehensive solutions that will help St. Ignatius College improve their operations as far as attendance monitoring is concerned.

General Objective

To design, develop and implement a computerized system that will enhance the current system used by St. Ignatius College in attendance monitoring and payroll processing.

Specific Objectives

1. To develop a module that will reduce fraud or cheating in the attendance with the use of a computerized attendance system.

A computerized attendance system is created to monitor the attendance of the employees. To avoid tampering of attendance records, the developers designed a module in which

employees have to time-in and time-out using their respective employee number and password and the record of attendance is automatically stored the attendance monitoring system.

2. To develop a module that will calculate gross income, salary deductions and net income per payroll period.

The administrator of the system is going to generate the attendance summary report that will be used by the finance officer to compute the payroll. An automated system is created with a function to calculate the gross income based on the attendance monitoring records minus the salary deductions based on the late, under-time absences and mandatory deductions to compute and get the net pay for the specific payroll cut-off.

3. To develop a module that will enhance the generation of pay slip together with the payroll reports.

The system provides printed pay slip for easier viewing of salary for a particular payroll cut-off. It is also designed to generate payroll summary report and annual payroll report needed by the HRD manager to comply with the requirements set by both the management of the school and the government**.**

Scope and Limitations of the Study

Scope

User Security Module - The system has the capability to secure and retrieve a password for the admin/user if they forgotten. Each user has its own privilege.

- Admin - The admin has the privilege to access all modules and modifications in the system.
- Faculty and Staff- the Faculty and Staff have the privilege to access only the modules of attendance viewing and time-in and time-out
- Finance- The finance has the privilege to access modules for computation of payroll and reports.

Transaction Module - The system can process transactions easily.

- Payroll- can be used to compute the salary of the employee.
- Loan- can be used to update the loan balance of the employee

File Maintenance - The system includes file maintenance that would update information.

- Holidays- can be used to update the schedule of holidays.
- SSS- can be used to update SSS table.
- Tax- can be used to update tax table.
- PhilHealth- can be used to update PhilHealth table.

Employees Module- The system includes Employees Module that will update all about employees' information.

- Register- can be used to add and update employees' information.
- Schedule summary- can be used to input the schedule of the faculty member.
- Attendance-can be used to update the schedule of the employees.
- Rest day- can be used to update rest day of the employees.

Employees Menu Module- The system includes employees' menu module that each employee can monitor their attendance and can record their time-in time-out.

- Information- can show information of the employees who uses the system.
- Attendance- can be used to monitor the attendance of the users.
- Login- can be used for Time-in and Time-out

Report Module - The system can generate reports needed by the admin.

- TAX Report- provides information about the tax deduction of each employee.
- Contribution Report- provides information about the SSS, Pag-Ibig, PhilHealth contribution.
- Pay slip- provides information on the salary of the employee.
- Payroll Report- provides information on the total payroll of the employees for specific period of time.
- Log Trail- shows the log in details of the users.

Limitations

1. The application was made in the windows operating system and it has Net framework. The system is not available for other operating systems.
2. The attendance of executive staff such as the owner, trainees, security guard and canteen personnel are not included to the system since they have separate agency and employer that process their payroll.

LITERATURE REVIEW

Review of Related Literature, Studies or Systems

The developers provide a better way of monitoring the attendance of St. Ignatius College where the administration can easily monitor and record the employees' daily attendance. In order to make sure that a fault-free system is developed, reference materials such as books, magazines, thesis and internet are used to guide the researchers until the computerized system is finished.

RELATED LITERATURE

Attendance Monitoring System-Many companies out there use an attendance monitoring system to keep track of their employees. If you are not one of them, you are certainly doing yourself a disservice. With the changes to the Fair Labor Standards Act, Time Clock Wizard (TCW) will help you maintain compliance easier. One thing that no company wants is errors when keeping track of attendance. When you leave this type of task up to humans, there is always a chance that something may go wrong. The average attendance monitoring system has an error rate of less than one percent, which is much less than expected when the task is performed manually. TCW minimizes manual manipulation. Using an automated system means that you will have the benefit of tracking attendance and figuring out the total of each check without having to pay someone to do it.

Over time, this translates into more of your money staying in your pocket. If your company is very large, this can be rather tedious and it will waste a wealth of time that could be better spent on less mundane tasks. With an automated attendance monitoring system, your role in this task is diminished significantly, therefore empowering you to focus on more pressing matter Employees are given the task of manually keeping track of their own attendance (Honor System). You should be aware that this can create a huge margin of error, not to mention the trust factor. As a result, employees could attempt to

dispute facts regarding hours payable with you and possibly claim billable hours at times when they were not there. That is why time-stamping is critical.

Time Clock Wizard has a high accuracy rate. Employees will learn that their ability to cheat the system (and get away with it) has been all but eliminated. As you can tell, there are several definitive advantages to using an automated attendance monitoring system to keep track of your employee's attendance. You may not like the idea of micromanaging the time of others. It is important that you do whatever is needed to make sure that time is not being wasted, especially since you are the one who will end up paying for it. (https://www.timeclockwizard.com/advantages-using-attendance-monitoring-system 2019)

Local Literature

Computerize Timekeeping System for Makati City Government has capability to monitor the daily attendance of employees working in its offices at the City Hall complex in Barangay Poblacion. Makati Mayor Jejomar Erwin Binay said the move was in keeping with the commitment of the city government to harnessing technology to promote transparency and efficiency in its operations and services. "Aside from ensuring the accuracy of daily time records and the warning attempts of time theft, the new timekeeping system also promotes fast and efficient payroll calculations," Binay said.

Vissia Marie Aldon, city personnel officer, said using the system eliminated the possibility of employees making 'proxy' time-in or time-out for other employees. Employees were required to sign in and out on a timesheet to serve as back-up in case the system malfunctioned.(https://www.philstar.com/nation/2014/07/29/1351664/makati-fully-implements-Computerize-timekeeping-system, July 29, 2014)

Computerized Payroll System for MADES Manpower and Enterprise. The system is made to compute and generate payslip of the employee of MADES Manpower and Enterprise. The proposed topic will save time, money and effort giving opportunity for the company to accomplish more at a lesser time. (Computerized Payroll System for MADES Manpower and Enterprise, Cielo, J.T., July 2017)

Computerized Payroll System for Mary Immaculate Academy Of Santa Rosa Inc.
The Academy has a capability to compute the salary and to generate payroll reports within the system efficiently and updates the salary and the employee information instantly.

(Computerized Payroll System for Mary Immaculate Academy of Santa Rosa Inc., Narisma, JL., September 2017)

Foreign Literature

According to Ameena Bibi a Digital Content Writer at SumoPayroll. A ComputerizedAttendance System solution that if integrated with Payroll and HR system will eliminate employee time theft without stress. Time & Attendance solution is engineered to help organizations manage their human resource capital efficiently, minimizes inconsistencies, and ensures improved productivity by saving time.

It has been observed that in most businesses payroll and workforce management consumes almost 50% of their total budget. That is the main reason many organizations are adopting computerize time and attendance systems to improve workforce productivity, efficiency, and labor management.

(https://www.quora.com/profile/Ameena-Bibi-3, August 2015)

M-Rex Payroll System and Attendance monitoring system developed at University of Arkansas. Computerize system will be an ease to the company. The admin's job is to enter each employee's record just once in the program. The systems will be redirected to the payroll portion to compute the total salary. (https://studymoose.com/payroll-and-attendance-monitoring-essay, October 2014)

Synthesis

In review of related literature and studies, the developers with the appropriate background to look for theses in attendance monitoring and payroll system in the exciting field of time keeping and payroll materials. The documents presented by Jon Louis Narisma, Junrey T. Cielo and the Automated Timekeeping System for Makati City have the same thought regarding the use of Computerized in time keeping and payroll system.

In the literature review conducted by the developers, most of the developments focused on adding new features to support the reduction of many problem while other projects reduces unnecessary features for improvement. But at certain point, same purpose of the projects were always compared in order to classify if it is unique compared to other projects. The developers designed project aims to design a basis system that can be used to improve the state of the present technology

The literature helps the developers to have an idea on how the payroll system and attendance monitoring system works and applying it for the next research.