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PAYROLL MANAGEMENT SYSTEM

A Report for the Evaluation 3 of capstone Project 2

Submitted by

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BONAFIDE CERTIFICATE

Certified that this project report "**PAYROLL MANAGEMENT SYSTEM**" is

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ABSTRACT

"Payroll Management System" is one of the core areas of your business.

Usually, it is pursued to manage the employees the employee's expenses, Allowances, salary, Gross Salary, Deduction, Tax and many more for a specific time period. Management and Accounting are two main essential parts for payroll.

Payroll is an area in which you do not want to take any risk because it leads to some financial and serious legal consequences. Payroll is a serious concerns for every SME. It is mandatory for all business to pay every employees as per the government rules and regulations.

Furthermore, this project will develop for company management and enhance business in market and maintain the prestigious and reputation of the company. Others, this project to facilitate company to handle all the legal process and

employee's expenditure properly and systematically.

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INTRODUCTION

1.1 PROJECT DEFINITION

A payroll system is software designed to organize all the tasks of employee payment and the
filing of employee taxes. These tasks can include keeping track of hours, calculating wages,
with holding taxes and deductions, printing and delivering checks and paying employment taxes
to the government.
Payroll software often requires very little input from the employer. The employer is required to
input employee wage information and hours—then the software calculates the information and
performs withholdings automatically. Most payroll software is automatically updated whenever a
tax law changes and will remind employers when to file various tax forms.

1.2 PROJECT DESCRIPTION
The Payroll Management System deals with the financial aspects of employee's salary,
allowances, deductions, gross pay, net pay etc. and generation of pay-slips for a specific period.
The outstanding benefit of Payroll Management System is its easy implementation. Other
advantages of Payroll Management System are its extensive features and reports.

1.2 PURPOSE

Payroll Management System gives you the power to:
• Manage **Employee Information** Efficiently.
• Define the **emoluments, deductions, leave** etc.
• Generate **Pay-Slip** at the convenience of a mouse click.
• Generate and Manage the **Payroll Processes** according to the **Salary Structure** assigned to the employee.
• Generate all the **Reports** related to employee, attendance/leave, payroll etc.
• Manage your own **Security**
It may be difficult to decide which system to choose, but there are some factors
keep in mind when deciding. First, analyse the size of your business and decide

While it is possible for smaller businesses to handle payroll duties in-house through a
manual process, much time can be wasted while attempting to calculate everything
correctly. One miscalculation and the business owner could find themselves in legal
or financial trouble. Mid-sized companies with up to 100 employees benefit greatly
by investing in a payroll system.

1.3 SCOPE

1.) Recurring payroll services:
• Gross pay calculation (basic salary, wage supplements, occasional payments, cost
reimbursements, etc.).
• Calculation of payroll related taxes and contributions.
• Recording and processing of **garnishments** [NO SUCH WORD IN ENGLISH
DO YOU MEAN DISBURSEMENTS] and other deductions.
• Preparation of payroll slips and other outputs broken down by employees or by
cost centers for managerial and operational use.
• Data recording and processing in connection with voluntary pension and health
insurance funds, reporting to the pension funds.
• Recording of wage and labor-related data (registration of personnel information,
holiday and sick leave balances).
• Providing data and information for posting into the General Ledger.
• Data reports and certificates related to payroll processing (to the tax and social
security authorities, the Statistical Office, etc.).

ADMIN
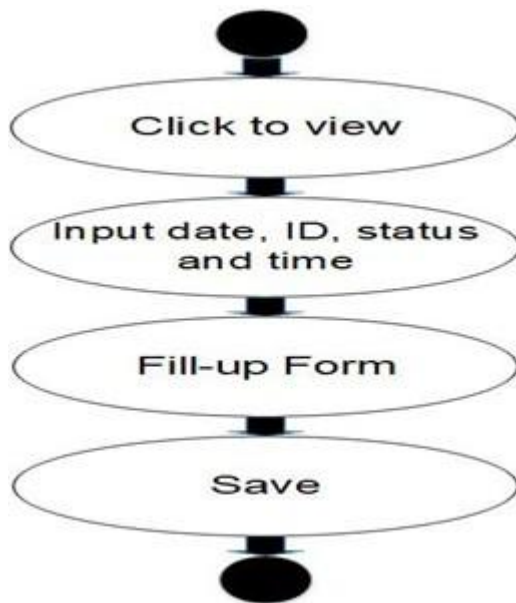
2.) Full range of Social Insurance management
3.) Tasks related to new comers and departing employees
4.) Annual services connected to payroll processing and social security administration
5.) Preparation and submission of tax declarations
6.) Payroll disbursement services:
• Movement of all payments, calculated during the pay processing cycle (net salary,

TABLES

1. **Log-In**

This is the beginning of the process, where the users are required to log in to be able for them to use it.

Table 1. Use Case 1 – Log In

Name	Log In
Description	The actors must log in to have an account.
Desired Outcome	The actors can view the whole content of the payroll system.
Actors	Admin, User
Precondition	The actors must log in to view the whole content of the system.
Scenarios	- Log In - View - Done
Work Flow	
Admin, User	
Post Condition	The number of users who used the system will increase by one.
Business Rule	Registered Users

Table 2. Use Case 2 – Register Employee

Name	Register Employee
Description	The user will add new employee data in the database.
Desired Outcome	The admin will secure the personal data of the employee.
Actors	Admin
recondition	Admin must click the register employee button.
Scenarios	• Click Employee Register button. • Fill up the form. • Save.

Work Flow
User, Employer, Admin

Post Condition	The employee will increased by one.
Business Rule	User must fill up all the information needed by the form.

- **Printing**

This is the process where the system in the admin will print out the salary.

Table 3. Use Case 3 –Printing

Name	Printing
Description	The system where print out the salary of the employee.
Desired Outcome	It will be automatically print out the deduction of tax and etc of the employee.
Actors	Admin
Precondition	User must check if the desktop time is correct.
Scenarios	- Click to view - Input date, ID, status and time. - Fill-up Form - Save.

Work Flow
Admin

Post Condition	Emoployees will have their daily time

	record.

Table 4. Use Case 4 – Backup database

	Backup database
Name	

Description	The user will backup data to avoid data loss.
Desired Outcome	The user will get a copy of the data base in his/her desired file location.
Actors	Admin
Precondition	The user must choose where to put the database.
Scenarios	- Click back-up database - Browse for folder - Click ok - Done

Work Flow	
Admin	

Post Condition	User must click Back-up database button.
Business Rule	User must log in to the system.

1.5 E-R DIAGRAM:

An entity relationship diagram (ERD) shows the relationships of entity sets stored in a database.
An entity in this context is a component of data. In other words, ER diagrams illustrate the
logical structure of databases.

When documenting a system or process, looking at the system in multiple ways increases the
understanding of that system. ERD diagrams are commonly used in conjunction with a data flow
diagram to display the contents of a data store. They help us to visualize how data is connected
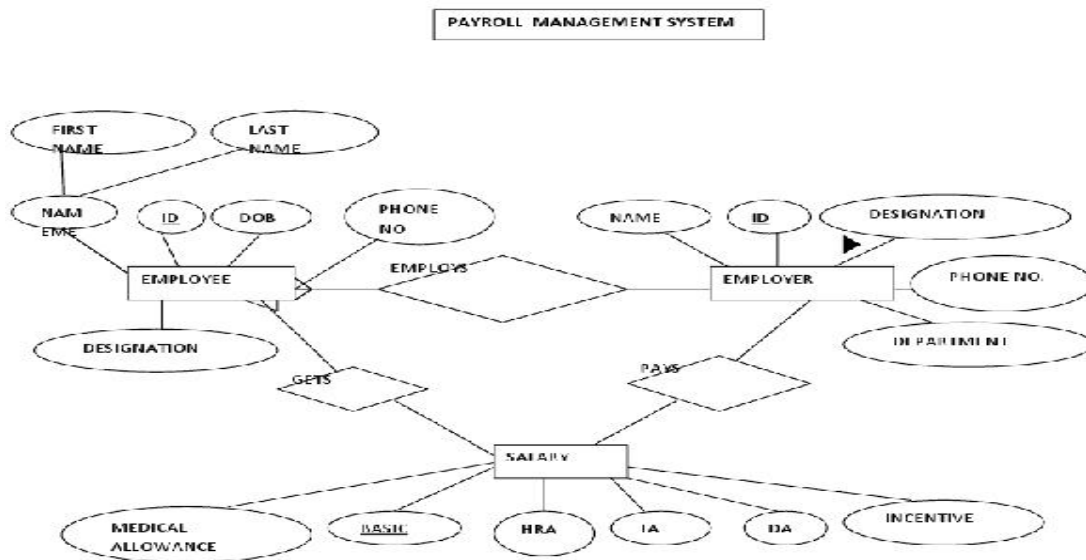in a general way, and are particularly useful for constructing a relational database

Fig 1.1 diagram

1.6 DFD (DATA FLOW DIAGRAM)

A data flow diagram (DFD) illustrates how data is processed by a system in terms of inputs and
outputs. As its name indicates its focus is on the flow of information, where data comes from,
where it goes and how it gets stored.
**DFD Layers:** Draw data flow diagrams can be made in several nested layers. A single
process node on a high level diagram can be expanded to show a more detailed data flow
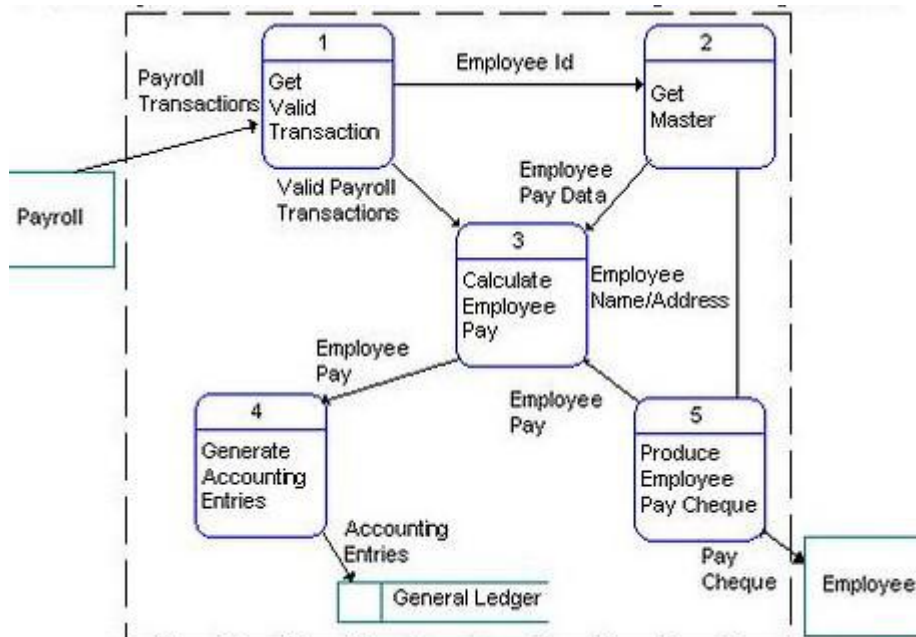diagram. Draw the context diagram first, followed by various layers of data flow diagrams.
DFD Levels: The first level DFD shows the main processes within the system. Each of these
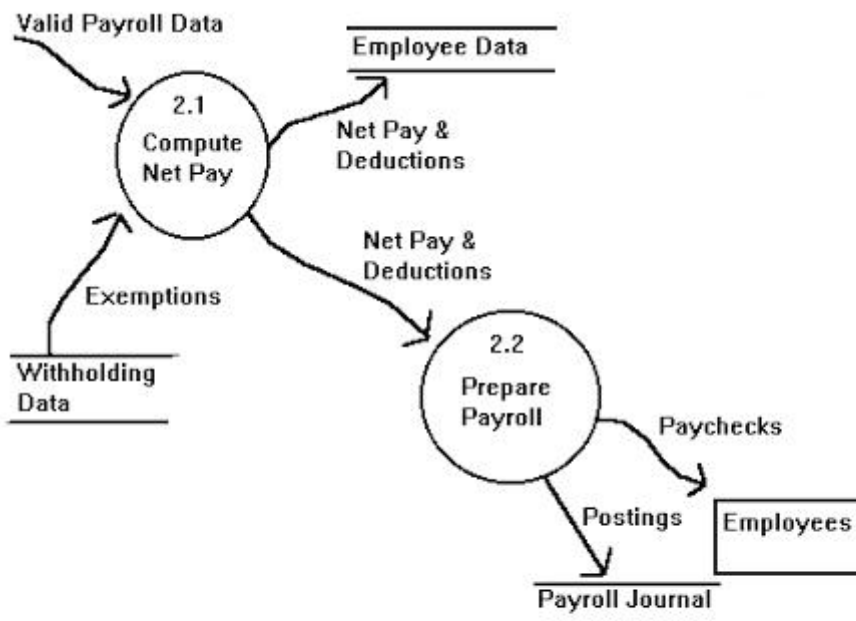processes can be broken into further processes until you reach pseudo code.

DIAGRAM
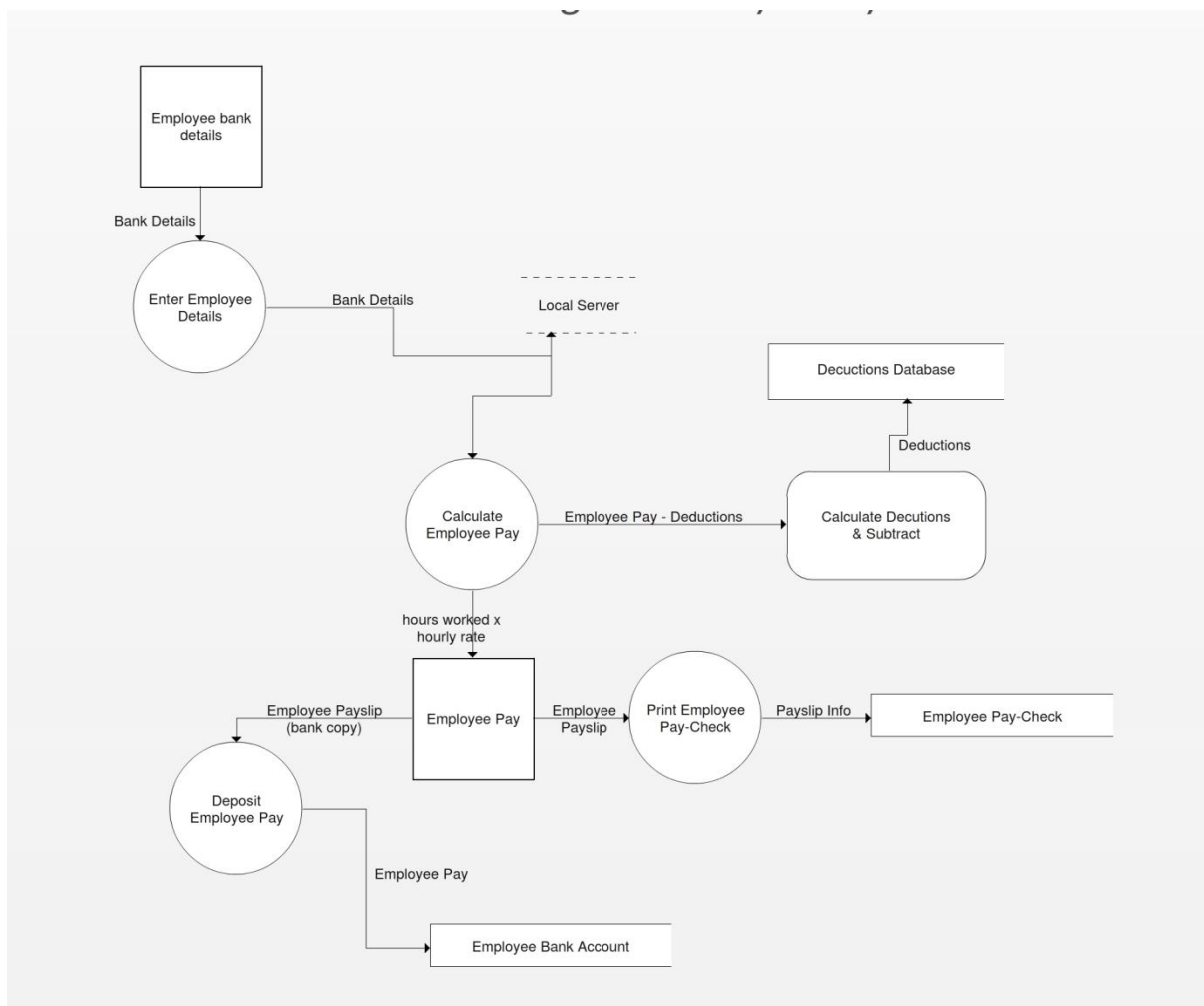
DATA FLOW LEVEL 1 DIAGRAM

DFD(level2) diagram

SYSTEM REQUIREMENT STUDY

2.1 USER CHARACTERISTICS:

• A payroll system that is computer driven offers to manage and automate the functions of
payrolls systems in a particular organization. Before emergency of the computer systems,
most organizations calculated the payroll manually.

• The use of the computer in payroll calculation has de it easier for the management to
make and retain the information relating to payroll. Among the main characteristics of
payroll systems, include the heightened security with regard to storage of sensitive
company information and automatic calculations in employee payments.

• An organization's payroll system ought to effectively accommodate all its workers and
the hours worked by each in an accurate manner. In essence, a good pay roll systems is
the once which ensures that the hours worked by each employee in the firm are
accurately kept. Although human is to err, an automated system minimizes the potential
of such error as the only factor employed is the reporting and departure of these
employees.

• In the case when the time clock malfunctions or when certain employees forget to go out
for lunch, the correction can easily be made by the administrator or the accountant using
the payroll system. Therefore, the payroll system is the third party which could
effectively and accurately keep and record the hours for outsourcing the payroll
functions

2.2 SOFTWARE AND HARDWARE REQUIREMENTS:
SOFTWARE REQUIREMENTS:-

REQUIREMENTS ANALYSIS

Disk Drive: 1.44MB Floppy Disk Drive
Monitor : 1024

Windows Operating system
➢ **Software requirement**
Microsoft Visual Professional (2013)
Microsoft Visual Studio (2008)
Microsoft windows
MS –Access

HARDWARE SPECIFICATION

Processor : Intel Pentium or more
Motherboard :   Intel
Chipset Motherboard.
Ram: 128 MB or more
Cache: 512 KB
Hard disk: 16 GB hard disk recommended

3. CLASS MODELING

3.1 Definitions for Class Diagram:

- **Administrator:** This Class Contains the Information of administrator details.
- **Attributes:** Admin name, admin e-mail id.
- **Employee:** This class contains the information about the user background.
- **Attributes: Name, Address, Email-id, Department Number and Name**
- **User:** This class contains information about the user (Employee).
- **Attributes User Id, Password, and Login address**
- **Admin**: This class handles and checks every details of the employee added or removed**. (Holds the main position when it comes in handling the data of the company and employee).**
- **Attributes:** Add _emp, Dep_emp, Gen_Salaryslip and Edit_Emp.
- **Department name**: this class contains department information.
- **Attributes**: **Department Id, Department name, Description**.
- **Add_emp**:- requires the new emp_name, emp_id, department name, gross salary and HRA.
- **Final sheet: -** Contains all details of the employees after being paid.(All the updates are carried out and then entered in the final sheet of the Company).
- **User check: -** Confirms the username and password when the employee logins into the system. (Specially carried out by the admin Department of the company)**.**
-
- **Category**: contains information about the employee's related (personal & professional data).
- **Attributes**: **department id, department id, position name, job description.**
- **Update-Sheet: - Contains emp_id, emp_name, no. of work days.**
- **Gen_Salary Sheet: - update the salary sheet after each transaction.**

3.2 Class Diagram:

A class is a set of objects that share a common structure and Common behavior (the same attributes, operations, relationships and semantics) . A class is an abstraction o real-world items. When these items exist in the real world they are instances of the class and are referred to as objects the attribute and operation sections of the class box can be suppressed to
Reduce detail in an overview. Suppressing a section makes no statement.

CLASS DIAGRAM

Fig 4.1 Class Diagram

(Payroll Management)

4.   STATE MODELING

- ■ Valuable technique for modelling behaviors that can be described in terms of:
- ■ States
- ■ Events

- ■ Transitions

STATE DIAGRAM
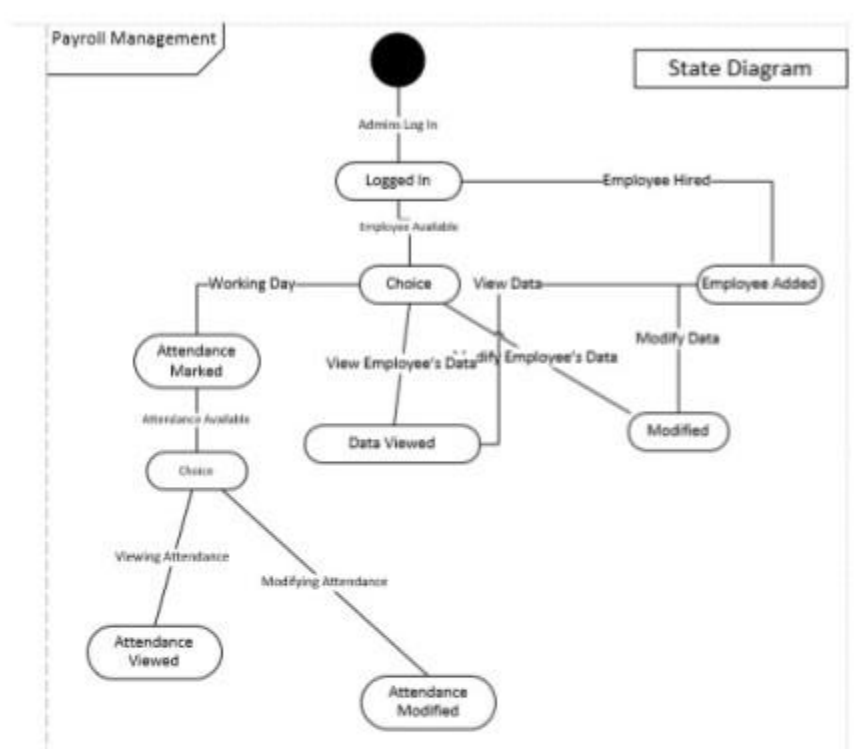
Fig 4.1 State Diagram

(Payroll Management)

5 .INTEREACTION MODELING

5.1 Use Case Diagrams:

The requirements of a system can be captured by Use Case Diagrams. They are
moded to capture the intended of the system. Use Cases interact with
human or actors that use the system to accomplish some work. They set of
sequence of actions that a system performs to yield an observable result of value
to an actor. An actor represents a role that a human, a hardware device or
another system plays with a system.

➢ Identify the actors that interact with the system.
➢ Organize actors according to their roles.
➢ Identify the primary ways in which an actor interacts with the system
   elements.
➢ Organize these behaviors as use cases.

DIAGRAM:
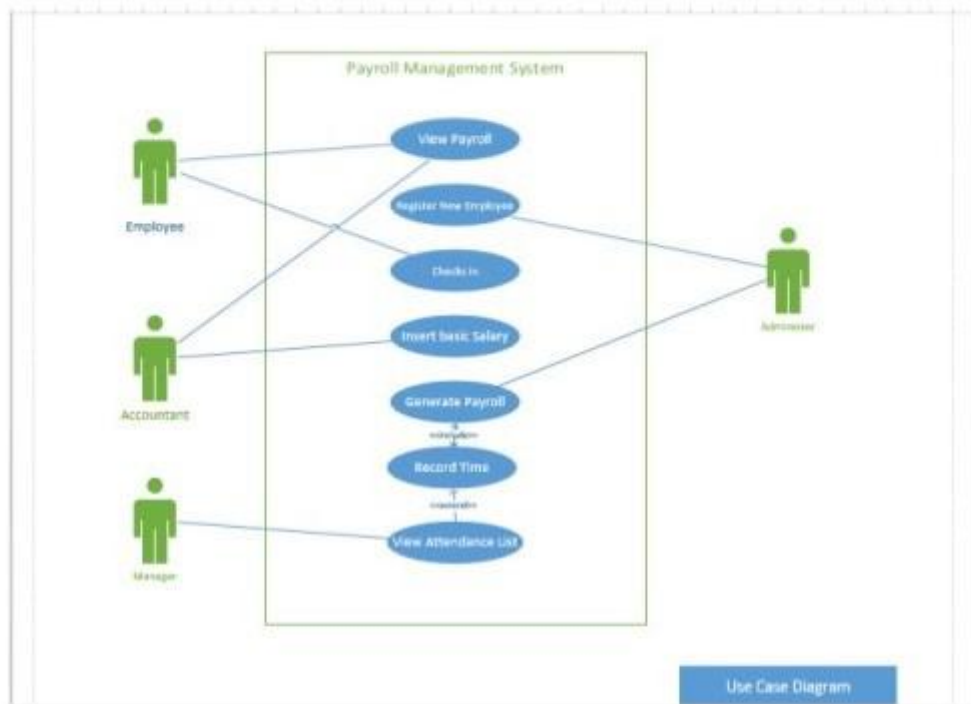
Fig 5.1 Use case Diagram

(Payroll Management)

5.2: Sequence Diagram:

Sequence diagram describes an interaction by focusing on the sequence of messages that are
Exchange , along with their corresponding occurrence specifications on the lifelines.
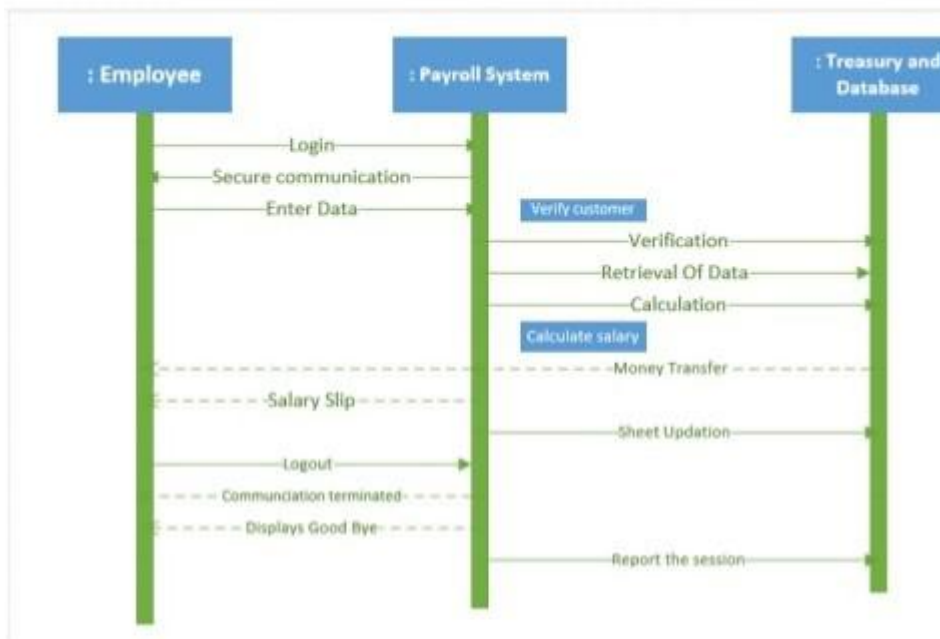
Fig 5.2 Sequence Diagram (1)

(Payroll Management)
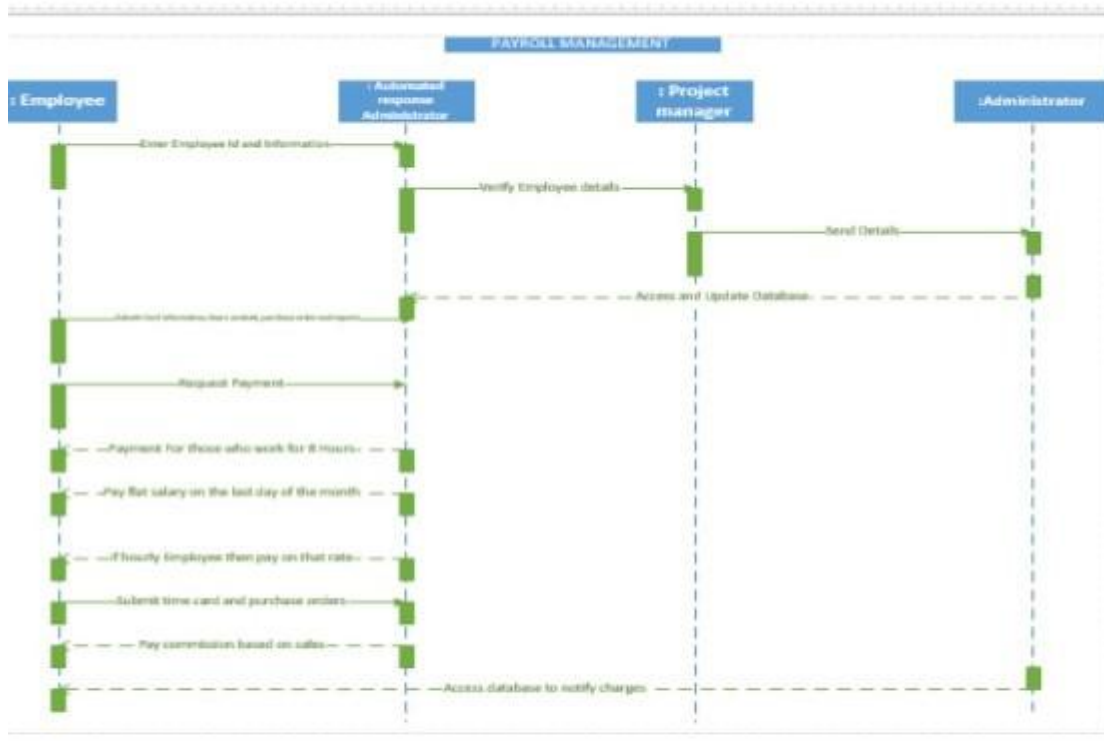
Fig 5.3 Sequence Diagram (2)

(Payroll Management)

SEQUENCE DIAGRAM (3)
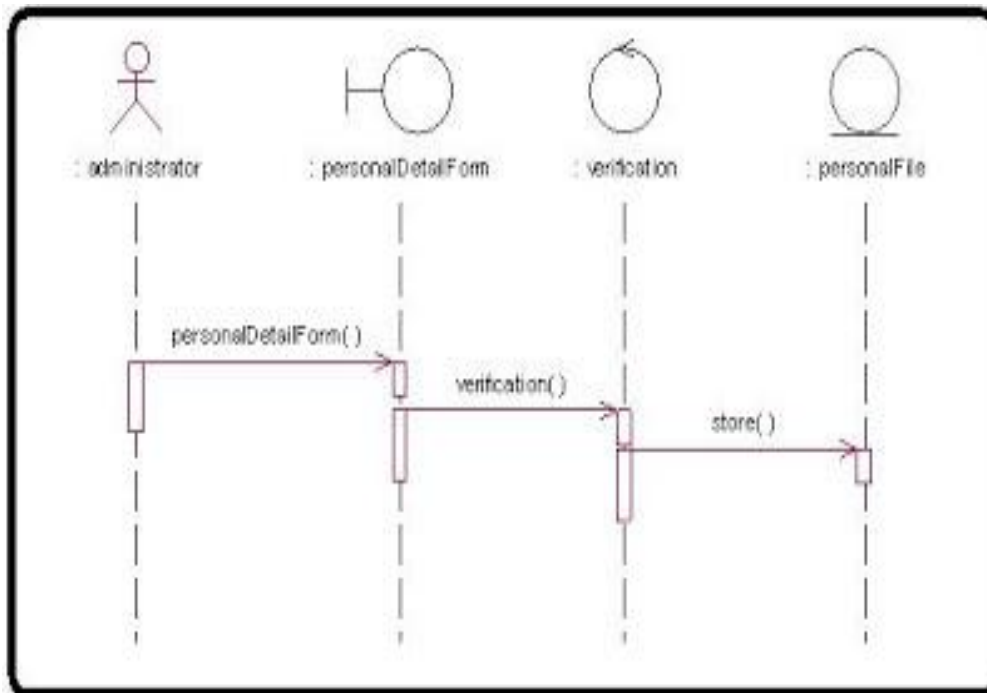
5.3 Activity Diagrams:

An activity diagrams essentially a flowchart showing flow of flow of control from activity to activity. We use activity diagram to model the diagram aspects of a
system. For the most part this involves modelling the sequential (and possibly concurrent) steps in a computational process. With an activity diagram, you can also
model the flow of an object as move from state to state at a different points in the flow of
control activity diagram may stand alone to visualize, specify, construct and document
the dynamics of a society of objects, or they may be use to model the flow of control of
an operation.

Basic Notations for Activity Diagram:

- **Initial node:** The filled in circle is the starting point of the diagram. An initial node isn't required although it does make it significantly easier to read the diagram.
- **Activity final node:** The filled circle with a border is the ending point. An activity
diagram can have zero or more activity final nodes.
- **Activity:** The rounded rectangles represent activities that occur.
- **Flow/edge:** The arrows on the diagram. Although there is a subtle difference between flows and edges we have never seen a practical purpose for the difference although we have no doubt one exists. We'll use the term flow.
- **Fork:** A black bar with one flow going into it and several leaving it. This denotes

Join: A black bar with several flows entering it and one leaving it. All flows going
into the join must reach it before processing may continue. This denotes the end of parallel processing.
- **Condition:** Text such as *[Incorrect Form]* on a flow, defining a guard which must
evaluate to true in order to traverse the node.
- **Decision:** A diamond with one flow entering and several leaving. The flows leaving include conditions although some modelers will not indicate the conditions if it is obvious
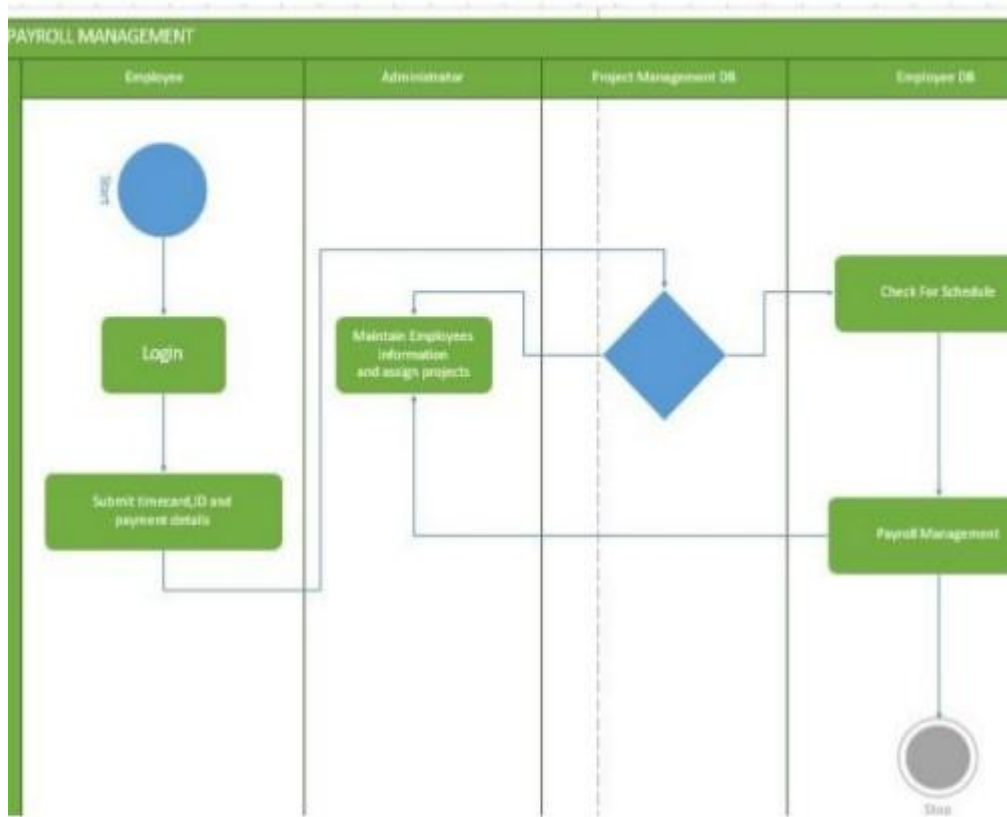
Fig 5.5 Activity Diagram

(Payroll Management)

Component Diagram

A component diagram describes the organization and wiring components in a system. Component diagrams are often drawn to help model implementation details and double
check that every aspect of the system's required functions is covered by planned development. In
the first version of UML, components included in these diagrams documents, database table, files, and all physical elements with a location. In the world of UML
2, these components are less physical and more conceptual stand-alone design elements such as a
Business process that provides or requires interfaces to interact with other constructs in the
 The physical elements described in UML 1, like files and documents, are now referred to
as artifacts. A UML 2 component may contain multiple physical artifacts if they naturally belong
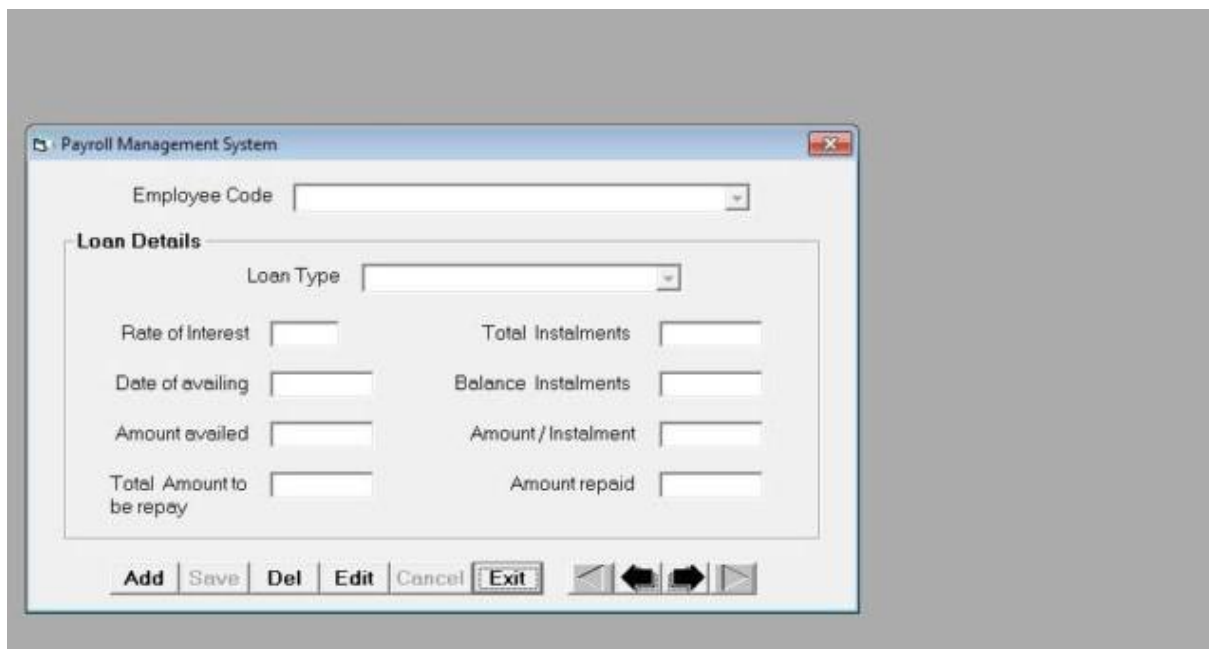together.

COMPONENT DIAGRAM

Diagram:

Administrator

Login

Personal Detail Form

Database

Maintaining Employee Details
(ADD/REMOVE)
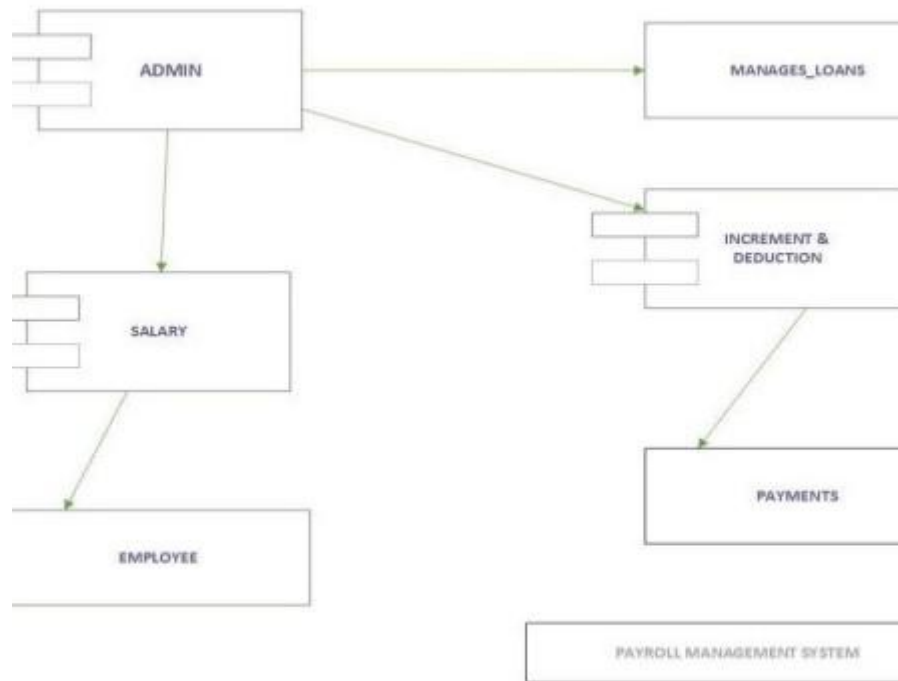
PAYROLL MANAGEMENT SYSTEM
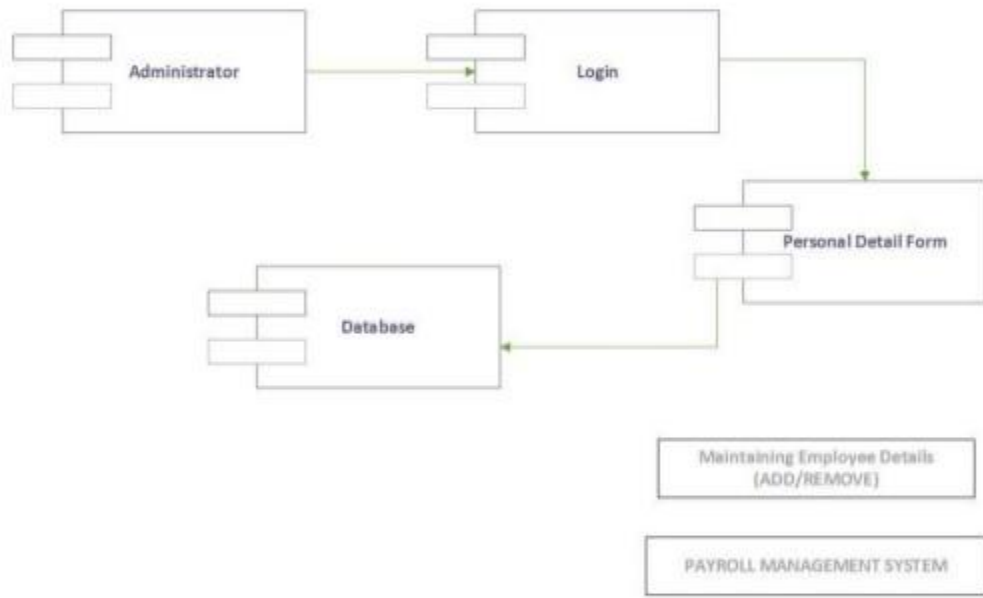
Fig 7.1 Component Diagram
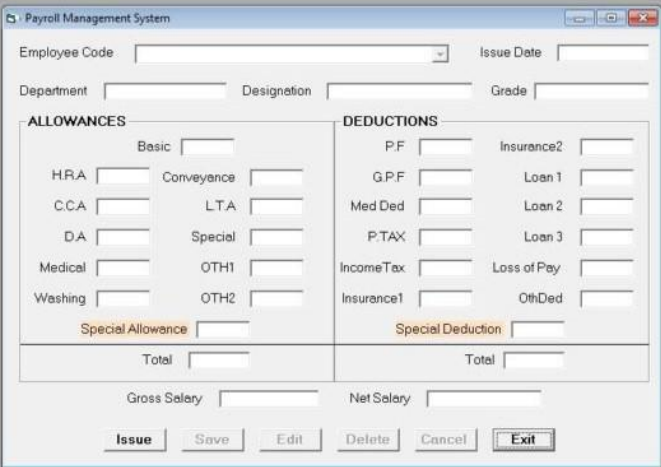
OUTPUT
1.REPORT GENERATION
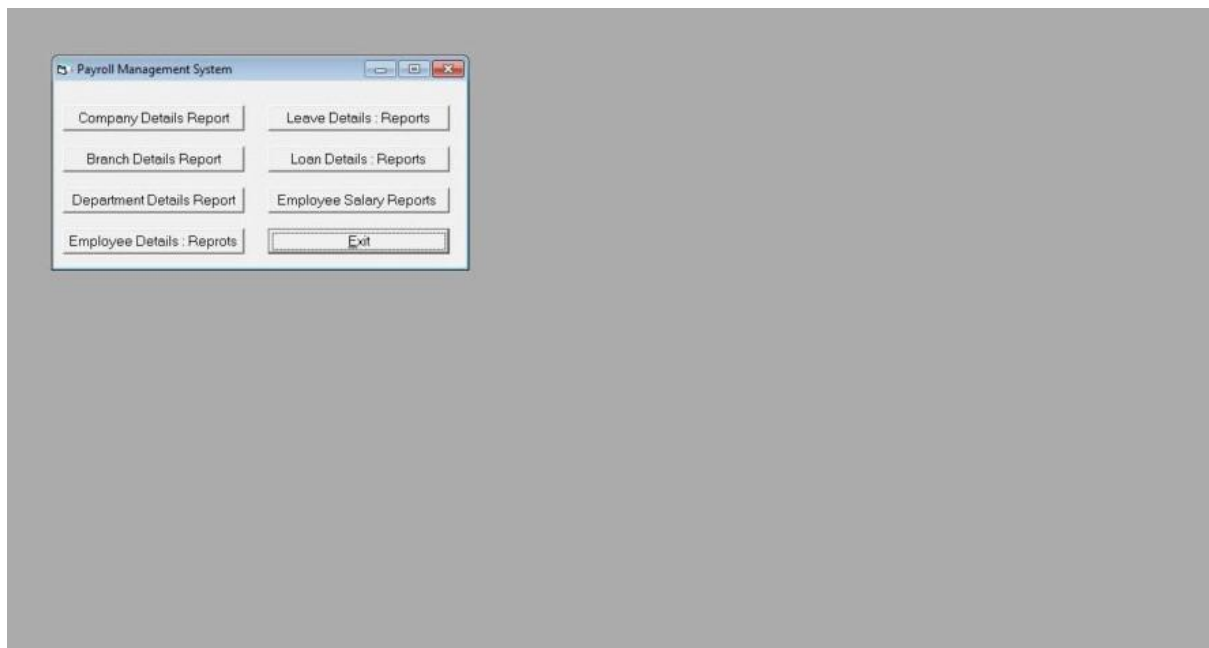
2.EMPLOYEE LOAN

3.SALARY

4.PAYROLL MANAGEMENT SYSTEM SALARY

5.PAYROLL SALARY

6.PAYROLL SYSTEM USE CASE LOG IN

7.GENRATE PAYROLL

Literature/Studies

The proponents made a relative comparison of the studies and literature in earlier sections of this chapter. As concluded, this proposal has based some of its concepts from such documents. The proposed system uses master lists coming from the Human Resource Department, yet the attendance relies on the system itself.

Foreign studies

According to the book "System Documentation" (2010), states that "a computerized payroll system must have the ability to update and maintain employee information and to generate required outputs including paychecks, reports to management and to the government."

According to a blogged article in blastasia.com (2007), says that "a computerized payroll system is designed to help human resource professional as well as finance and accounting personnel to manage employee compensation, deductions, allowances, and benefits in an organization."

According to the definition of Enterprise Resource planning on Wikipedia.com, stated that "organizations perceive ERP as a vital tool for organizational competition, as it integrates dispersed organizational systems and enables flawless transactions and productions". This statement serves as basis of this proposed systems capability and flexibility to integrate to other subsystems within the airline system.

Based on the research study entitled "PAYROLL ERP SYSTEM" of Advantos Systems (2013), explains that it is vital that a payroll system must allow the user to set up an employee paycheck record. It also emphasized the use of separate salary record for each employee and the proper maintenance of data on tax rates and exemptions.

Based on the system study entitled "INFONETICS PAYROLL SYSTEM"(2012), emphasizes that a payroll system must be user-interactive in all its processes (including maintenance of payroll records ad payroll reports and checks printing). It also explains that the system must be capable of maintaining accuracy of tax tables and deductions using a concrete formula.

Significance of the study

The PAYROLL SYSTEM within Surgiaodel Sur state University is primarily focused on the staff and personnel's salaries, taxations, etc. The system's processes accuracy and legitimacy.

- Employees they will find it easier to transact about their records since searching in the system is faster than tracking in the record book or log book.
- Accountant will able to manage employee services, hours, pay rates it also includes elimination of time cards and unauthorized overtimes.
- Future researchers the proponents will gain knowledge about the system existing inside the administrative office, with this; skills in the system analysis will be improved and also it helps the future researcher to have an idea about payroll system and develop their own system. They can learn about the proponents system and at the same time develop a greater system with the help of the proponent study.

Definition of terms

Basic Pay – This refers to monthly rate divided by the number of working days multiplied by number of days worked.

Overtime hours – is the amount of time someone works beyond normal working hours. Normal hours may be determined in several ways.

Database – This refers to a organized collection of data for one or more purposes, it is usually digital form.

Deduction – This refers to business expenses or losses which are legally permitted to be subtracted from the gross revenue of a firm in computing its taxable income.

Employee – This refers to a person who is hired to provided services to accompany on a regular basis in exchange for compensation.

Gross Pay – This refers to total of an employee`s regular remuneration including allowances, overtime pay, commissions and bonuses, etc. before any deductions are made.

Loan –This refers to funds transferred from one party to another as payment purchased goods of services.

Net Pay – This refers to the remaining amount of an employee`s gross pay, after deductions, such as taxes and retirement contributions, are made.

Payroll – This refers to a 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 services they provided during certain period of time

Payslip – This refers to a detailed breakdown on how much an employee is paid during a specific period.

Salary – This refers to wages received on a regular basis, usually weekly bi-weekly or monthly.

Limitations and Future Enhancements:

Accurate and correct payroll is very important to your employees and important to you as a

business owner. Payroll is more than just sending out paychecks every two weeks. You need to

comply with and make sure you pay all of the federal, state and local taxes that are tied to having

employees. A payroll service will handle the details and keep you out of trouble with the taxman;

however, such a service does have some drawbacks.

Advantages:

Control vs. Outsourcing:

The decision to use a payroll service could be a personal choice dictated by how much

control you want to have over the different aspects of you company. If you keep payroll in

house, it is easy to make changes and answer questions concerning the pay information of

your employees. The decision to use a payroll service means giving up some control of that

portion of your business. However, payroll is primarily a repetitive operation, so letting

someone else handle the details can free up time for more productive tasks.

Costs:

A payroll services adds another cost to your budget. If you are a small business with few

employees on a tight budget, paying for the service may not fit into the budget. The cost of a

payroll service for a small business will be proportionately larger than for a bigger business.

You need to compare the cost of the service to the time required to complete the payroll in

house and what that time would be worth doing other work.

Access to Data

Using a payroll service means your employee pay data will be on some other company's

computer system. This may be an issue if you need to make a change or if an employee has a

problem with her paycheck. How much the fact that pay information is not kept in your

business depends on how much access the service provides. You may want to compare

services with this need in mind as wells comparing costs.

 Compliance

Possibly the biggest benefit of using a payroll service is that the service will keep your

business compliant with payroll tax laws and changes. While you are an expert at your

business, unless your business is a CPA firm, you probably don't have the time to become a system.

Disadvantages:

 Manual:

The manual payroll system requires payroll processing to be by hand

Therefore, time card, wages and payroll tax computations; wage garnishments; and voluntary

deductions are done manually. Furthermore, paychecks and pay stubs are handwritten or

printed on a typewriter. The main disadvantage with this system is its high room for error.

result in penalties from federal and state tax agencies.

Outsourced/External:

The employer uses the outsourced or external payroll system when it hires a payroll service

provider. The latter has a payroll staff that, for a flat fee, processes its client's amp; risqué;

payroll. Services vary by provider, but most payroll service providers perform paycheck and

direct deposit processing. Many also offer payroll tax and benefits administration. Because

the employer is entrusting its payroll tasks to an off-site company, it can suffer from not

having immediate help when needed. If the payroll service provider has many clients, the

On-Site Computerized:

The in-house computerized system enables the employer to use an on-site payroll staff and

payroll software to process its payroll. The employer must invest in and maintain the

software, which can be expensive. Depending on the complexity of the

employer may have to pay for training for the payroll staff. Furthermore, depending on the

size of the payroll, the employer may have to employ a full payroll staff.

SCOPE:

The System is designed for the enhancement or development of Computerized

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.

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