A Study on Developing a Payroll Management System based on Employee Performance for Dinakara Life Sciences Pvt. Ltd.

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INTRODUCTION

Payroll Management System is the system that maintains all the records of all the employees and accountants of an organization. This system is developed to ease the process of searching and maintaining the valuable records of all type of users (i.e., employees and accountants).

Users of payroll Management System: -
Employee-Employee is a user that can view and update its details, can view his own pay slip and can apply for leave.
Admin-Admin is a user who manages information about all the employees and add the employees.
Manager-Manager is a user who can only add information of new employees PayScale and payslips.

Database-A database is an organized collection of data, generally stored and accessed electronically from a computer system. It supports the storage and manipulation of data. In other words, databases are used by an organization as a method of storing, managing and retrieving information.

Inside a database, the data is recorded in a table which is a collection of rows, columns, and it is indexed so that to find relevant information becomes an easier task. As new information is added, data gets updated, expanded and deleted. The various processes of databases create and update themselves, querying the data they contain and running applications against it.

The are several different types of database models have been developed so far, for example, *flat, hierarchical, network* and *relational.* These models describe the operations that can be performed on them as well as the structure of the conforming databases. Normally there is a database schema which describes the exact model, entity types, and relationships among those entities

NEED OF THE STUDY

The need of this document is to describe the functionality and specifications of the design of a web application for Managing Employees and their payroll. The expected audiences of this document are the developers and the admin of the web application. Now with the help of this system the admin has the information on his fingertips and can easily prepare a good record based on their requirements.

This system will not only automate the process but save the valuable time of the manager or the admin, which can be well utilized buy his organization This will be an additional advantage and management of power based on their free time from his normal duty.

OBJECTIVES OF THE STUDY

1.   To view and manage information of all currently working employees of the organisation.
2.   To create an interface for adding and updating the details of all the employees according to their performance.
3.   To view and generate pay slip of each employee. 4.To generate report for managers.

SCOPE OF THE STUDY

The system can be developed in such a way that its existing features can be modified to better versions. And to implement a regular backup mechanism to back up the employee database to avoid disasters.
Integrating this system with any ERP or Website would be more beneficial.

REVIEW OF LITERATURE

Y Soegoto author, November 2019, *Designing Payroll Information System: Case Study on CV. Bandung ID card*, Universitas Komputer Indonesia.
This study aims to build an information system that will help the business processes of an organization or a company that has implemented payroll and presence, but the presence process is still using a lot of manual processes and has not been integrated with payroll. The methods used in this study are the object-oriented system approach method and the prototype system development method. Object-oriented approach is a new way of thinking seeing problems through real-world observations where

each object is a single entity that has a combination of certain data structures and functions. The results of this study are the design and construction of a desktop-based payroll information system can more efficiently time and errors that often occur and processes that are still manually changed to be computerized for example in the presence process using RFID, recording and input data attendance is already automated finance payroll. Based on the results of the design and construction it was concluded that desktop-based payroll information system can more efficiently discover time and errors that often occur and processes that are still manually changed to be computerized for example in the presence process using RFID, recording, and input data attendance is already automated finance payroll

P. Ranjetha, June 2022, *Online employee performance management system*.
The "Online employee performance management system" aims to design a framework system for a working community. But these projects of planning the various tasks whether they might be private or official, may lead to a problem if it is not maintained properly. The mailing process in companies may lead to loss of time management in searching for the required information and potentially cause information overload. Online Employee Performance Management System is a distributed application, created to keep up with the information and details of employees working in any association. It keeps up with the data about the individual task execution of their employees. The application is a set-up of utilizations created utilizing PHP. It is easy to comprehend and can be utilized by any individual who isn't even acquainted with an employee's framework. It is easy to use and simply requests that the client follow bit-by-bit tasks by giving a few choices. It is quick and can perform numerous tasks for an organization or association. The project has been created utilizing the strong coding devices of HTML, CSS, and PHP at Front End and Microsoft SQL Server at Back End. The application is very easy to use.

Shivani Gupta, March 2017, *Leave and Payroll Management System*, Thakur College of Engineering and Technology.
 Multiple user data access is provided by this system. Users like staff members or administrator can login into the software by writing id and password which are allocated to them from the organization. It involves keeping track of hours worked and can keep a record of employee data including their pay, allowances, deductions and taxes on monthly bases so that fresh definitions are reflected from the month onwards, which leaves all the past data intact. Similarly, for managing the entire task related to leave such as requesting for leave and approval of leave, we have considered leave management system as the solution. The tasks which can be processed using the Leave Management module are applying for leave, viewing leave history, viewing leave stats and granting/rejecting leave applications. The Payroll Management module consists of tasks such as viewing payroll & tax deductions and automatic tax calculation. This system can make the existing system faster, more productive and would require less manpower to handle it. They have concluded that created a web- portal for an organization by using web-technologies. This web portal can be used by employees of any organization for easily managing all their leave related work like requesting for leave application and getting notification on whether their leave request is granted or not. It also has a subsystem for managing all the tasks related to payroll and income tax deductions. This subsystem brings the much-required transparency that the employees of the organization required. This study is mainly targeted for betterment of the employees. Furthermore, it will provide both flexibility and convenience for the employees of an organization. We also conducted a survey on current system and according to the feedback we will try to make changes in the proposed system.

Okechukwu Eme, January 2013, An Analysis of Computerized Accounting and Payrolling System on Monthly Emolument in Nigerian Local Government, University of Nigeria.
The paper focuses on computerized accounting system on monthly emolument of workers in the payroll. The central objective of payroll administration is to provide pay that is both competitive and equitable. The paper examines the pros and cons of computerized accounting system .in wages/salaries administration, as well as factors that affect the applicability of computerized accounting system. It also identifies some rules and principles guiding the payrolling processes using the local government system as a case study. It is against this backdrop that this paper seeks to find out the extent to which payrolling is carried out in the Nigerian local government system. During the course of this study, it was discovered that payroll officers engage in all sorts of frivolous activities such that workers have lost confidence in them. The paper argues that the expected benefits derivable from a computerized accounting system exceed the costs/challenges associated with it. It therefore recommended that employer of labour, payroll officers, and wages/salaries administrators in general should keep pace with the evolution in e-governmental system, e-commerce, e-payments, etc., which are all affiliated to computer system and a critical cost-benefit analysis should be considered indispensable before a decision is made on the use of either manual or computerized accounting system in computing employees' monthly emolument. It is concluded that financial reporting and information availability has improved significantly since. The debut of computerization and automation in recording and accounting system.

Luiz Antonio Joia, March 2012, Resistance to the implementation of a payroll system in the public administration: a multi-case investigation, | FGV · Brazilian School of Public and Business Administration "EBAPE"
Personal, technological, social and political issues have triggered resistance to information systems within public administration. Thus, this research investigates the implementation of a payroll system in the public administration using a multiple case study. The study investigates the type of reaction the civil servants have to the system within their organizational realm, as well as whether or not the system was accepted by them. The article addresses two case studies, namely one at the executive level of a Brazilian state (case A) and the other at the justice department of another Brazilian state (case B). Both states contracted the development of the same payroll system, whereby enabling comparison between these two endeavours. While in case A the system was about to be fully implemented after overcoming several hurdles, in case B the system implementation was halted as it was not accepted by the organization where it was to be implemented. The research uses a theoretical frame that binds

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resistance factors accrued from persons, the system, as well as from the socio-political interaction between the system users and the organizational environment. The article concluded by identifying distinct types of resistance behaviours, the interrelationship among them and their transformation throughout the implementation of. the system, which led to contrasting if nil outcomes for each case.

RESEARCH METHODOLOGY
SOURCES OF DATA
1. **Primary Data** – HR Manager requirements for developing payroll system

DATA ANALYSIS TOOLS & TECHNOLOGIES
Tools: Dreamweaver for PHP, WAMP server for MySQL Operating System: Windows 10
Hardware: Processor: Ryzen 5000 series, RAM: 2GB, Hard Disk: 1TB
Technologies:
- **Languages: HTML, PHP.**
- **RDBMS: MySQL,**
- **Web Server: WAMP server**
- **Development Platform: Adobe Dreamweaver**

Use case Diagram

The requirements of a system can be captured by Use Case Diagrams. They are modelled to capture the intention 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.

DFD (Data Flow Diagram):
A data-flow diagram is a way of representing a flow of data through a process or a system.
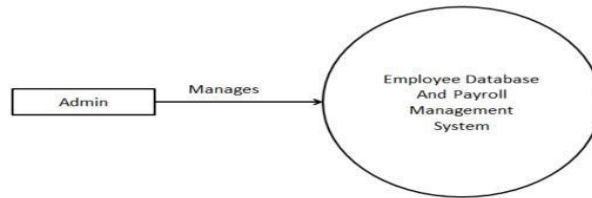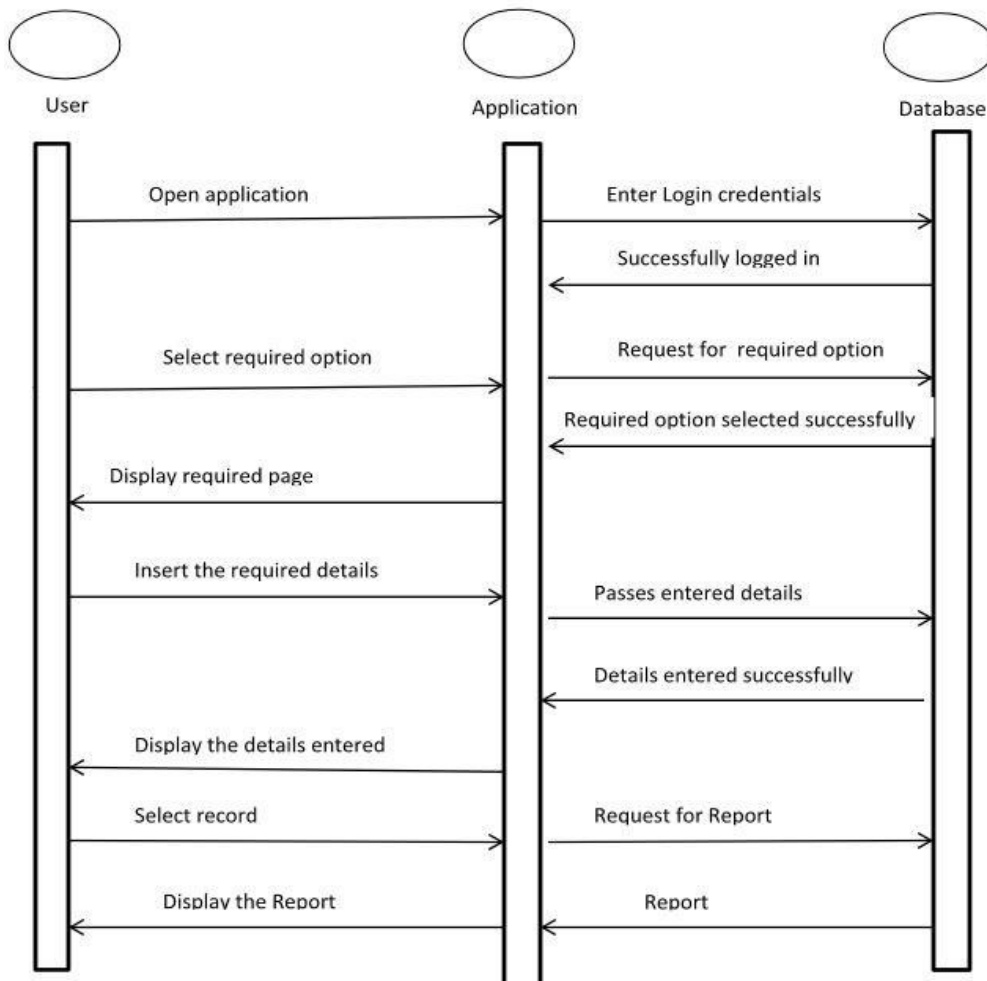
Level 0
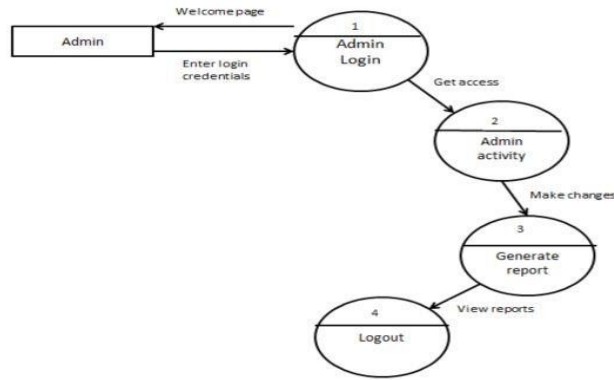
Level 1

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.

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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.
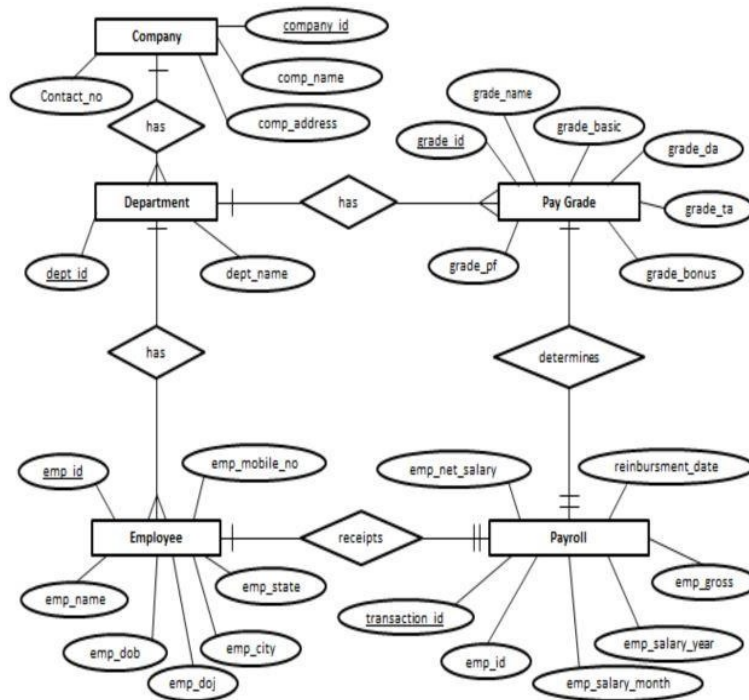
Database Tables
User Table Database Structure:

| user_id(int)-Primary Key	Id for the user.
user_name(varchar)	Enter the name of the user
password(varchar)	Enter the password of the user
email_id(varchar)	Enter the email_id of the user
usertype(varchar)	Enter the type of the user
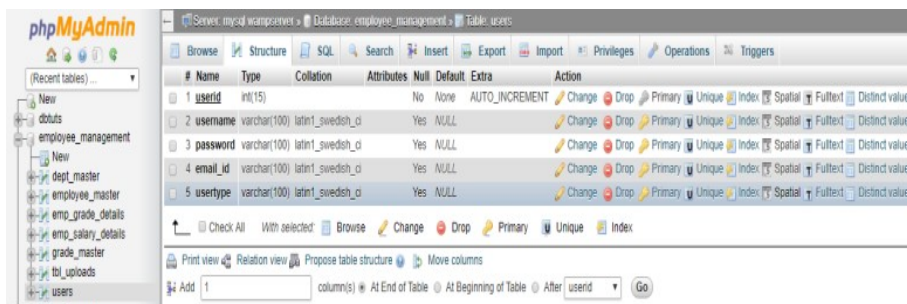
Department Table Database structure:

dept_id(int)-Primary key	Id of the department
dept_name(varchar)	Name of the department

Grade Table Database Structure:

grade_id(int)-Primary key	Id of the pay grade
grade_name(varchar)	Name of the pay grade
grade_short_name(varchar)	Short name of the pay grade
grade_basic(int)	Enter the basic amount
grade_ta(int)	The amount of the Travel Allowance
grade_da(int)	The amount of the Dearness Allowance
grade_hra(int)	The amount of the House Rent Allowance
grade_ma(int)	The amount of Medical Allowance
grade_bonus(int)	The amount of bonus received
grade_pf(int)	Amount of Provident Fund to be deducted
grade_pt(int)	Amount of Professional Tax to be deducted.
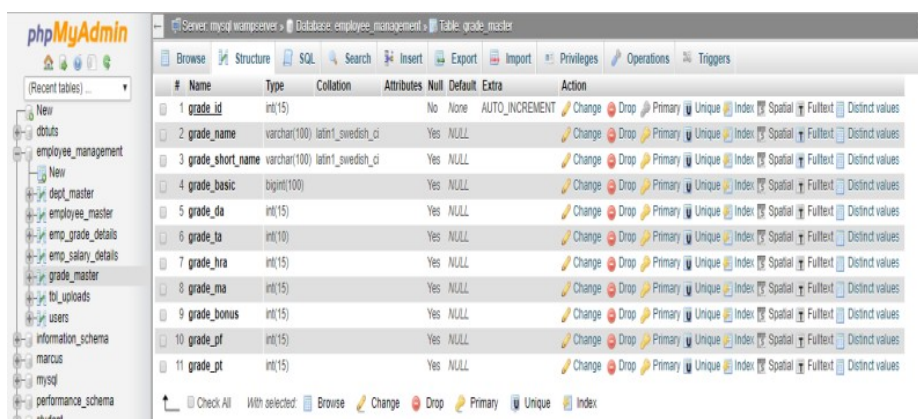
Employee Table Database Structure:

emp_id(int)-Primary Key	Id of the employee.
emp_title(varchar)	Enter the title of employee.
emp_name(varchar)	Enter the name of employee.
emp_dob(date)	Enter the date of birth of employee.
emp_doj(date)	Enter the date of join of employee.
emp_address(varchar)	Enter the address of the employee.
emp_city(varchar)	Enter the city of the employee.
emp_pincode(int)	Enter the pincode of the employee.
emp_mobile_no(int)	Enter the mobile number of the employee.
emp_state(varchar)	Enter the state of the employee.
emp_mail_id(varchar)	Enter the mail id of the employee.

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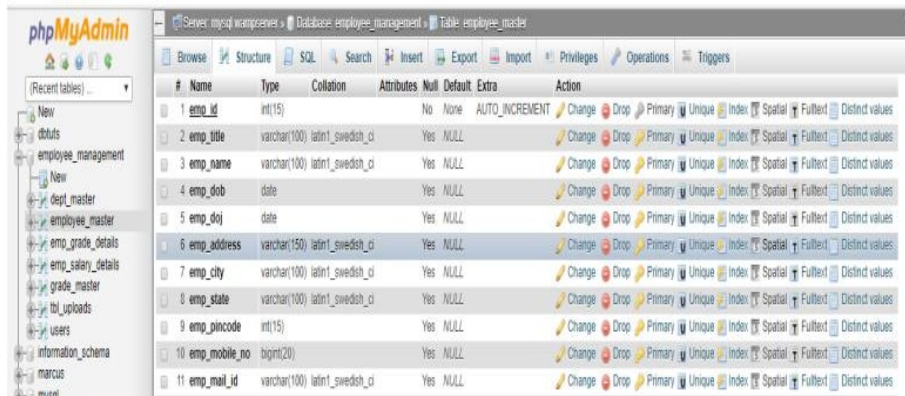
Employee Grade Details Table Database Structure:

transaction_id(int)- Primary Key	Unique transaction id.
emp_id(int)	Employee id of employee.
emp_dept_id(int)	Department Id of employee.
emp_grade_id(int)	Grade Id of employee.
emp_from_date(date)	Date of join of employee in a department.
emp_to_date(varchar):	Last date of an employee in a department

Conclusion

The payroll management system based on employee performance for dinakara life sciences pvt.Ltd, it is used by user that is the Admin & Manager. It is built for small scale organization where the number of employees is limited. According to the requested requirement the admin can add, manipulate, update, and delete all employee data in organization. The Manager can add new departments and delete them. The admin can also add predefined pay levels for the employees. The required records can be easily viewed by the admin and Manager anytime. The payment of the employee is based on monthly basis. Numerous validations implemented would enable the admin to enter accurate data. The main objective of this framework is to save time, make the system cost effective and management records efficiently. The System may provide a facility to manage presence of employees on daily basis. The System may provide facility to increment the salary of employees based on their part time work.

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