VISVESVARAYA TECHNOLOGICAL UNIVERSITY
"Jnana Sangama", Belagavi-590018

A MINIPROJECT REPORT ON :

"EMPLOYEE REWARDING MANAGEMENT SYSTEM"

Submitted in the partial fulfillment for the award of Bachelor of Engineering degree in
COMPUTER SCIENCE & ENGINEERING.

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<u>CERTIFICATE</u>

This is to certify that Project Work entitled **"EMPLOYEE REWARDING MANAGEMENT SYSTEM"** is the bonified work carried out by **Anirudh Nitin Bakare (4AD19CS007)** & **Aman Kumar.D (4AD19CS002)** in partial fulfilment for the award of degree of Bachelor of Engineering in Computer Science & Engineering from Visvesvaraya Technological University, Belagavi during the year 2021-2022.

_____   _____

Signature of the Coordinator   Signature of HOD

Mrs. Jyothi M Patil   **Dr. Puttegowda D**

Assistant Professor   Professor & Head

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External Viva :

Name of Examiners   **Signature with date**

1............................   **1 ....**

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Anirudh Nitin Bakare (4AD19CS007)

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ABSTRACT :

Employee is the prime factor for an organization to achieve success and fulfill the goals of the organization. Employee rewarding is one of the activities of human resource management concerning the management of money, goods and services that employees receive from their employer in exchange for their work.

Given that a properly designed reward system is one of the conditions for a stable business, successful performance of work activities and the achievement of set objectives in each organization, we attempted to design a project "**EMPLOYEE REWARDING SYSTEM** ". We have incorporated many features of realistic world as possible.

- It helps in recognizing the employees of the organization who have worked very hard to achieve the goal and appreciate it through the rewards. It will not only help in recognition but also will encourage the employee to do more smart work. Employee rewards and recognition are one of the best ways to accord and promote the enthusiasm of their workforce by promoting the best employee benefits and employee experiences.

- In this project we are developing a Web Application that allows Managers to keep record of all the Employees, the Departments they are currently working for, the Projects they are working on and track their progress.

- Employee rewarding is necessary in an enterprise as it
    - Promotes employees to give their best.
    - Increase job satisfaction of staff.
    - Establish open work culture.
    - Individualizing reward accreditation.
    - Focusing on staff characteristics for identifying reward type.
    - Instant appreciation of milestone achievement.

- In the competitive economic market, retaining talented employees with cheaper and poorer reward systems can barely produce the desired results.

Functional Specification:

1.   Registering a new Employee.

2.   Getting the Employee information and storing it to databases.

3.   Getting the Employee Details (VIEW) Stored In the Database.

4.   Providing GUI Interface for ADD/DELETE/UPDATE for Manager and HR.

5.   Generating Performance Report for the above made entries

LIST OF CONTENTS :

CHAPTER -1

INTRODUCTION

Database is a collection of data and Management System is a set of programs to store and retrieve data. Based on this one can define DBMS as a collection of inter-related data and set of programs to store & access those data in an easy and effective manner.

1.1 What is DBMS?

Database Systems are developed for larger amounts of data. When dealing with huge amount of data, there are two things that require optimization: Storage of data and retrieval of data.

Storage: According to the principles of database systems, the data is stored in such a way that it acquires a lot less space as the redundant data (duplicate data) has been removed before storage.

Let us take an example to understand this. In a banking system, suppose a customer has two accounts, one is savings account, and another is salary account. Let us assume that bank stores savings account data at one place (i.e tables in the form of rows and column) & salary account data at another place, in that case if the customer information such as customer name, address etc. are stored at both places then this is just a wastage of storage (i.e redundancy / duplication of data).To organize such data in a better way the information should be stored at one place, so that it can be accessed easily, and both the accounts should be linked to that information. The same thing can be achieved in DBMS.

Fast Retrieval of data: Along with the storing of data in an optimized and in the systematic manner, it is also important that one can retrieve all the data associated with it so quickly when needed. Database systems ensure that the data is retrieved as quickly as possible.

The use of a database product is influenced by the following factors :

- The computing platform (i.e. Hardware, Operating System)

- The volume of data to be managed.

- Support for distributed or heterogeneous computing.

- Existing applications or interfaces that an organization would contain.

- The number of transactions required per second.

- A Technical Support.

- Expenses.

1.2 Objective :

The main objective of this project is, that the managers can keep the record of all the employee's, of the departments they are currently working for, the projects they are working on and to track their progress. The HR manager can rate the employees on Weighted Competencies & Performance Goals based on their work and get Overall Rating for an employee. This can be used to give rewards to employees as simple Increment in Salary.

1.3 Problem Statement :

Problem Scenario:

Traditionally, employee rewards were based on an employee's recognition as a hard worker by the high level management, but it does not take into account one's performance based on other factors like his competence.

Problem Solution:

The scientific approach to this is to rate employees based on all the factors that are otherwise not considered, and then use this to find the best employee and distribute rewards and recognition. The application assists HR managers in rating employees based on weighted competencies and performance goals and generates an overall rating for each employee. This can be used to give rewards to employees as a simple increment in salary.

1.4 Scope of Report

The essential framework of this report would be to elaborate the design of ER-diagram, Schema Diagram and to display how the modules of the program work to achieve the Automation.

CHAPTER -2

SYSTEM, SOFTWARE REQUIREMENTS AND SPECIFICATIONS

The program works on Personal Computer / Laptop and is executed using **XAMPP,** which is a free and open-source cross-platform web server which interacts with a **MySQL** database running on the local host.

Specifications :

It describes what the software will do and how it will be expected to perform. It also describes the functionality the software needs.

2. 1 Functional Requirements:

Functional Requirements deal with what the system should do or provide for users. They include description of the required functions, outlines of associated reports or online queries, and details of data to be held in the system.

- The system shall provide an option to **Add / Delete / Update** categories, regarding details of the employee's details.

- The system shall provide option to view the entries made by Manager and HR.

- The system should give an option for login for the Manager and HR.

- The system shall provide an option to see Projects of the Department.

- The system shall calculate Performance Ratings.

2.2 Non-Functional Requirements :

Non-functional requirements define the overall qualities or attributes of the resulting system.

2.2.1 Usability:

Usability is the ease with which a **HR or Manager** of a Company can be able to **View / Add / Delete** the entities (Data) of the employee's, and HR can also be able to provide rating to the employees based on their performance.

2.2.2 Security :

Security requirements are included in a system to ensure:

- All data entries and users are well secured.

- SQL injection is prevented.

2.2.3 Reliability :

 Reliability is the ability of a system to perform its required functions under stated conditions for a specific period. Constraints on the run-time behavior of the system can be considered under two separate factors:

- **Availability**: is the system available for service when requested by the end-users.

- **Failure rate:** how often does the system fail to deliver the service as expected by end-users.

The system is reliable as it uses technologies with lot of reliable framework.

2.3 Requirement Specification :

To perform the mini project, using XAMPP Server certain **Hardware and Software** requirements are required by the system. Those hardware and software requirements are **:**

2.3.1 Hardware Requirements :

- **Processor –** 1.5GHz or above.

- **Memory** – 2GB RAM, 250 GB Hard Disk.

- **Input Device** – Keyboard.

- **Output Device** – 1024 x 768 display resolution monitor.

2.3.2 Software Requirements :

- **Operating system** - Windows / Unix /Ubuntu/ MacOS.

- **Web Server** - Apache (XAMPP).

- **Platform** - VISUAL STUDIO CODE, MySQL Workbench, Notepad.

- **Front End** - HTML, CSS, JS , BOOTSTRAP .

- **Back End** - PHP, MYSQL (MariaDB).

CHAPTER -3

CONCEPTUAL DIAGRAM

This chapter of the report describes the structure of the project, followed by Entity

Relationship Diagram, Schema Diagram, and the table structures associated with it.

3.1 ER Diagram :

The ER (Entity Relationship) diagram below shows the relationship between the many tables
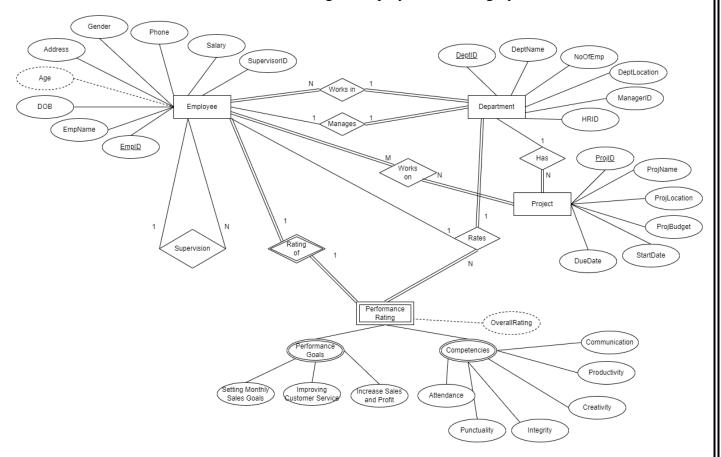that exist in the database for the functioning of Employee Rewarding System.

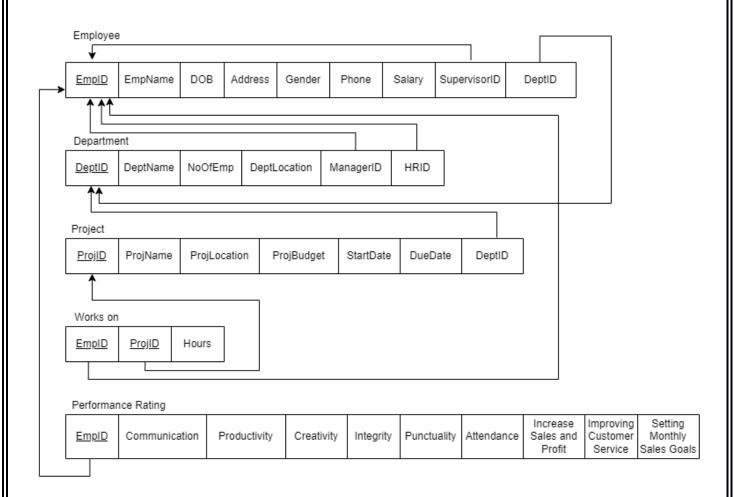**Figure - ER Diagram of Employee Rewarding System.**

3.2 Schema Diagram:

Figure - Schema Diagram of Employee Rewarding System

CHAPTER-4

TECHNOLOGIES & TOOLS USED

This chapter of the report describes the Technologies, Programming languages and used in the project:

4.1 Technologies Used :

HTML

Hypertext Markup Language is the standard markup language for documents designed to be displayed in a web browser. It can be assisted by technologies such as Cascading Style Sheets and scripting languages such as JavaScript. Basically, HTML is the code that is used to structure a web page and its content.

CSS

Cascading Style Sheets is a style sheet language used for describing the presentation of a document written in a markup language such as HTML. CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript. Basically, it is used to style the Web Page.

BOOTSTRAP

Bootstrap is a free and open-source CSS framework directed at responsive, mobile-first front-end web development. It contains CSS- and (optionally) JavaScript-based design templates for typography, forms, buttons, navigation, and other interface components.

Javascript

JavaScript is the world's most popular programming language. JavaScript is a cross-platform, object-oriented scripting language used to make web pages interactive alongside HTML and CSS (e.g., having complex animations, clickable buttons, popup menus, etc.)

PHP

PHP (Hypertext Preprocessor) is known as a general-purpose scripting language that can be used to develop dynamic and interactive websites. It is server-side languages that could be embedded into HTML, making it easier to add functionality to web pages without needing to call external files for data, and also used to connect front-end & backend. Basically, PHP act as the intermediate between Front -end & Backend.

MySQL

MySQL is an open-source Relational database management system (RDBMS). "SQL", stands for Structured Query Language. The MySQL development Project has made its source code unavailable. The application is used for a wide range of purposes, including data warehousing, e-commerce, and logging applications. The most common use for mySQL however, is for the purpose of a web database.

4.2 Tools used :

Visual Studio Code (VS Code)

Visual Studio Code is a source-code editor made by Microsoft for Windows, Linux and macOS. Features include support for debugging, syntax highlighting, intelligent code completion, snippets, code refactoring, and embedded Gita Platform where we have written code and saw the various actions.

MySQl Work Bench

MySQL Workbench is a visual database design tool that integrates SQL Development, Administration environments and gain better visibility into databases, database design, Creation and Maintenance into a single integrated development environment for the MySQL database system.

XAMPP (Server)

XAMPP is a free and open-source cross-platform web server solution stack package developed by Apache Friends, consisting mainly of the Apache HTTP Server, MariaDB database, and interpreters for scripts written in the PHP. Basically, we use Xampp server to run our Project.

4.3 Functional Modules :

The functional modules included in the project are listed below:

Insert Module:

This module provides the functionality of collecting the required data from the designed interface and transmitting it to the appropriate table present in the database designed for this project. If the provided data does not satisfy the given constraints, it must refrain from storing it into the database.

Update Module:

This module again has the functionality of collecting the data from the designed interface, but it updates the already existing tuple that matches the provided primary key of the tuple to be updated, by replacing the existing attribute values with the newly collected data. Again, if the newly provided data does not satisfy the given constraints, it must refrain from updating the corresponding tuple.

Delete Module:

The delete counterpart is loaded with the ability to delete a single or multiple records from the table. It searches for the tuple, in the query specified table, based on the provided value

for an attribute. Admin can delete in the interface, based on which delete module searches for the record corresponding to that provided attribute value and deletes the record.

Retrieve Module:

The retrieve module has a basic functionality of accessing the entire specified table from the database and displays it.

Stored Procedure Module:

A stored procedure is used to retrieve data, modify data, and delete data in database table. We don't need to write a whole SQL command each time to insert, update or delete data in an SQL database.

CHAPTER-5

TABLE DESCRIPTION OF EMPLOYEE REWARDING SYSTEM

Employee Rewarding System enables the HR or Manager to **Add/Delete/Update** the details of the Employees made HR or Manager and to track them in order to manage.

- Login

- Employee's

- Department.

- Project.

- Works on.

- Performance Rating.

(User) LOGIN TABLE :

Table name: User.

Description: It stores the details about User ie. Username, email, and password.

Attributes: username varchar(20), password varchar(255), role varchar(5), Eid varchar(8), dno int)

Primary key: username, Eid.

TABLE -1

Table name: Employee.

Description : The employee table identifies every employee by an employee id and lists basic personnel information.

Attributes: EmpID varchar(8), EmpName varchar(30), DOB date, Address varchar(100), Gender char, Phone bigint, Salary decimal(10,2), SupervisorID varchar(8), DeptID int(5));

Primary key: EmpID

Table -2

Table name: Department.

Description: It means an individual Employee Employeed in the department.

Attributes : DeptID int(5), DeptName varchar(30), NoOfEmp int, DeptLoc varchar(30), MgrID varchar(8), HRID varchar(8)

Primary key: DeptID .

Foreign key: DeptID , SupID**,** MgrID, HRID,

Table- 3

Table name: Project.

Description: The project table describes list of project and each project that an employee is currently undertaking or took.

Attributes : ProjID int(5), ProjName varchar(30), ProjLoc varchar(30), ProjBudg decimal(10,2), StartDate date, DueDate date, DeptID int(5),

Primary key: ProjID.
Foreign key: DeptID.

Table- 4

Table name: WorksOn

Description: This Table Specifies employee working on projects (details).

Attributes: EmpID varchar(8), ProjID int(5), Hours int.

Primary key: EmpID, ProjID

Foreign key: EmpID, ProjID.

Table- 5

Table name: Performance Rating.

Description: This Table Specifies performance of Employee is, how an Individual member fulfils the duties of their role, completes required tasks, Based On that Rating Is Provided to The Employee.

Attributes : EmpID varchar(8)**,** Communication int**,** Production int**,** Creativity int**,** Integrity int**,** Punctuality int**,** Attendence int**,** IncSaP int**,** ImpCS int**,** SettMSG int**,** Compete float, PerGoals float,

Primary key: EmpID.

Foreign key: EmpID

Stored Procedure:

Procedure Name: EmpPRIns

Description: this procedure takes in the Performance Rating Fields values and updates the Competency and Performance Goals in the Performance Rating Table

Arguments: id varchar(8), Comm float, Prod float, Crea float, Inte float, Punc float, Atte float, IncSaP float, ImpCS float, SettMSG float
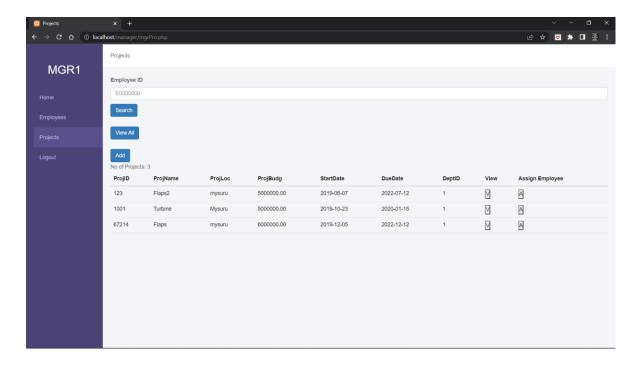
CHAPTER-6

SNAPSHOTS

Login page

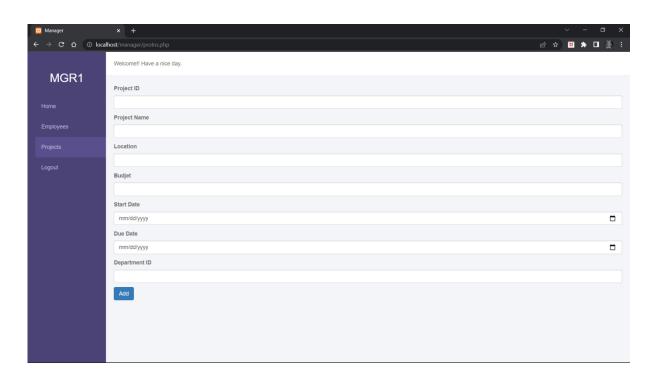**Admin – Department Management**

Admin – Manager/HR Login Management
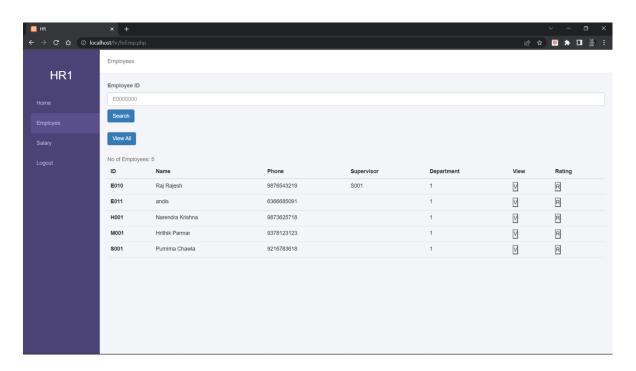

Manager - Employee Management
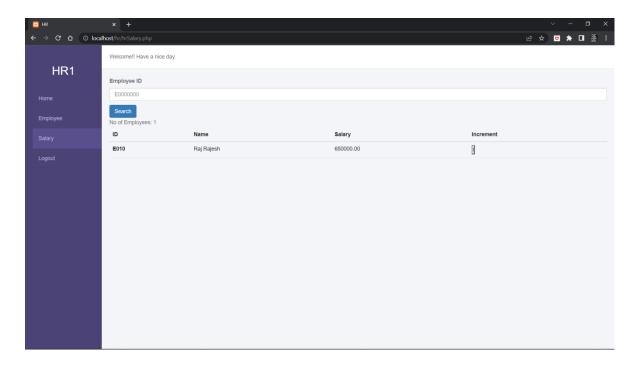
Manager – Project Management
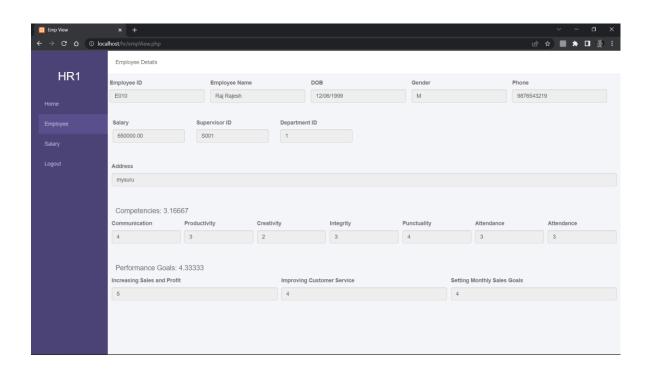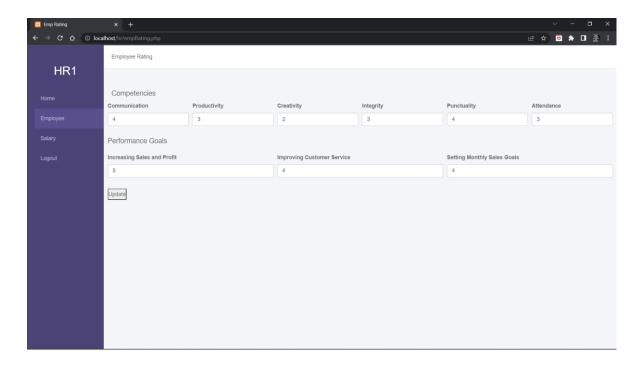

Manager – Add Employee

Manager – Add Project
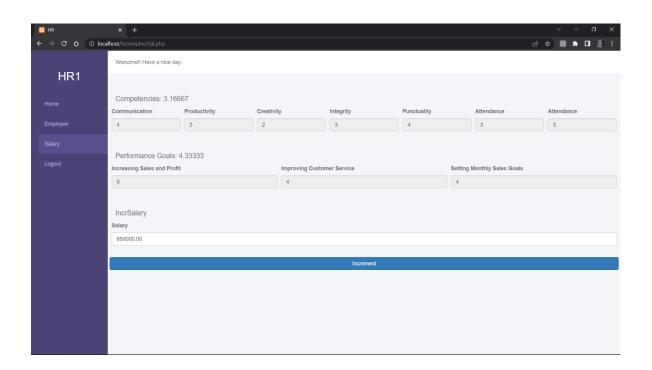

HR – Employee Management

HR – Salary Management

HR Employee Details View

HR – Performance Rating

HR – Salary Increment

CHAPTER-7

CONCLUSION AND BIBILOGRAPHY

The Employee Rewarding Management system provides better functionality for managing the Resources and can be more efficient and reduce manual paperwork to automate all tasks. For implementing the system, HTML, CSS, JS, BOOTSTRAP, and MySQL are used.

7.1 CONCLUSION

Our project is only humble venture to satisfy the need to manage their project work. Several user-friendly coding has also adopted. This package shall prove to be a powerful package in satisfying all the requirements of an Enterprise. The objective of software planning is to provide a framework that enables the Manager and HR to make reasonable estimates made with a limited time frame at the beginning of the software project and should be updated regularly as the project progresses.

The following Conclusions / Features can be deduced from the project:

- It provides friendly graphical user interface which proves to be better when compared to the existing system

- Management of Records.

- Adding/Deleting/Updating the Records.

- Dashboard consists of records of a particular employee.

- Can track Data & Reward the employee based on the Performance.

- System security, Data security & Reliability are staking factors.

- System has adequate scope for modification in future if necessary.

- Finally, the system is implemented and tested according to test case.

It is not possible to develop a system that makes all requirements of the user. User requirements keep changing as the system is being used. Using emerging technologies more advanced, upgraded system with adaptive to surrounding environment can be developed.

7.2 BIBILOGRAPHY

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