

Emergency Leave Management System with Company Data Analysis

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Abstract—

To automate and manage employee data, leave requests, track requests, and issue leave, emergency leave management systems include a variety of procedures and tools. In many institutions, employees are entitled to several sorts of leave, which are awarded in accordance with institutional policy. The majority of the administrative department is in charge of overseeing and approving leave requests. To do this, most institutions employed traditional methods for seeking, granting, and managing leave. In the traditional procedure, a leave of absence must be physically requested by submitting a letter to the department head. The department head records the request in a minute and submits it for approval to senior personnel. This approach takes more time, is error-prone, necessitates more paperwork, and is challenging to administer. Therefore, a quicker, error-free automated leave management solution is required. The system was created by employing the three-layer software architecture concept to create an automated emergency leave management system. The system runs on Windows and is implemented using web-based technologies such as JS, CSS, PHP, HTML, and MySQL. Performance More than 500 staff members evaluated the new system's usage, conveniences, and speed in comparison to the current technique. Employee information, employee leave data, total firm spending, gender, and location are included in the data analysis. A graph and chart are used to represent it. Managing business operations is made easier by this data analysis.

Keywords— Leave Management System, Leave Request, Company, Emergency approval, Analysis.

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I. INTRODUCTION

Employees often have access to a variety of leaves, including maternity leave, research leave, study leave, sick leave, yearly leave, and leave without pay. These vacation days have been used and documented in accordance with institution policy. The administrative division is typically regarded as one of the most valuable resources in every organisation. The task of maintaining all employment records falls under the purview of the administrative department. Every administrative department at an institution is information-driven, and the administrative staff oversees and conducts daily operations. The traditional methods of obtaining and managing leave are still in use at the majority of institutions. The traditional procedure calls for academic employees to physically compose and submit leave requests to the administrative department via the Head of Department (HOD). A platform known as an employee leave management system enables personnel and administrators of a company or institution to quickly apply for, properly allocate, track, and issue leave [7]. There are several academic studies on leave management systems; [3] documents an internship report on the topic, but only a few system specifics were disclosed owing to time constraints, organisational data confidentiality requirements, and resource constraints. An intranet-based leave management system that is accessible within an enterprise [6]. This research explains the operation of the employee leave management system [1]. By calculating the personnel mix by rank and the lecturer-to-student ratio, the system manages service delivery. A method for managing staff leave that is simple, convenient, and user-friendly for both academic and non-academic employees at an

institution is presented in this study as a result of the shortcomings of the current research indicated above[9].Payroll and Leave Management System in this research [17].this investigation on the student leave administration system in [16].This research on leave management strategies for better service delivery in the Nigerian university system is found in [15].a research on mobile HRM for an online leave management system can be found in [14].research [13] regarding the Employee Management Systema research of a cloud-based system for managing employee leave is found in [12].

II. PROBLEMSTATEMENT:-

When applying for leave at a corporation or institution, employees should write the department head an email or letter. Therefore, it takes longer, and the leave procedure cannot be completed in an emergency. These are the primary issues that many employees in the firm encounter since they cannot be solved in an emergency.

III. FLOW CHART

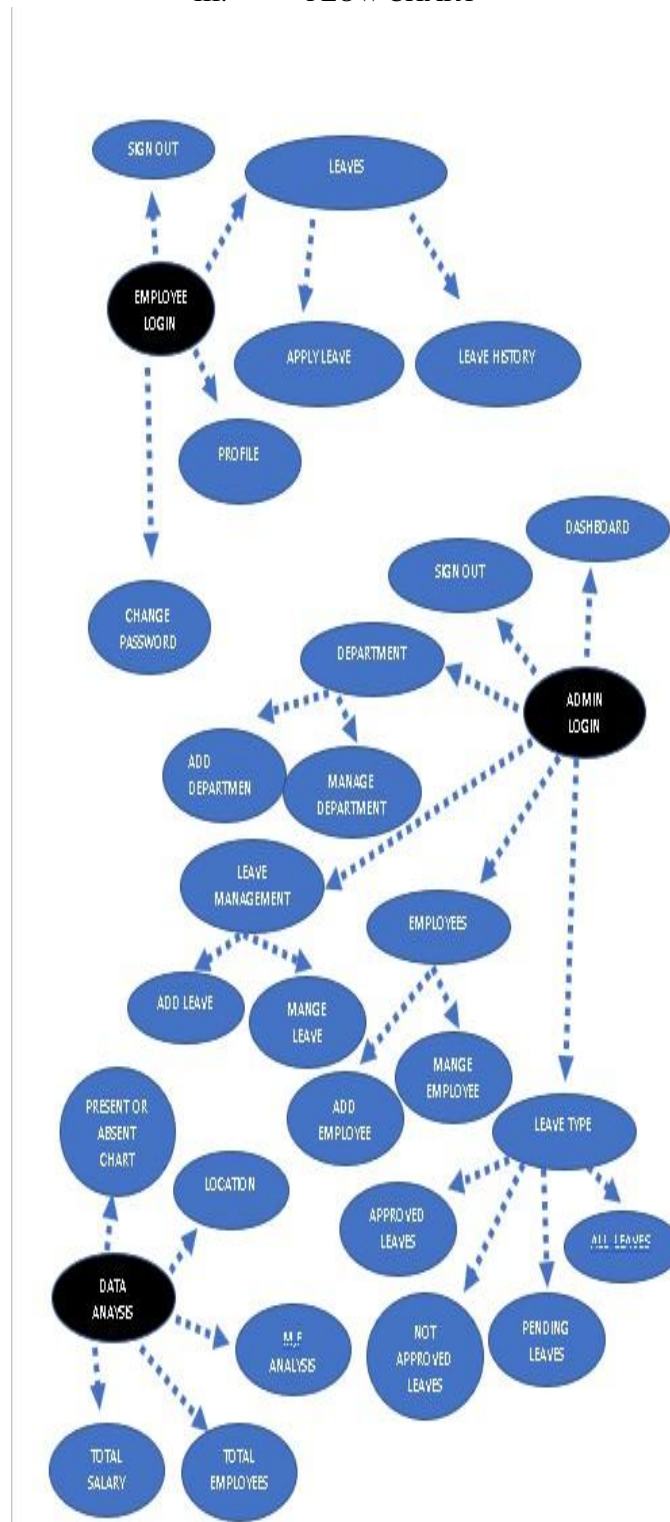


Figure 1

This figure 1 explain about the control structure of all the interface of the website consist in it.

IV. EXPLANATION

1)Employee login :-

The employee is able to log in with their employee ID and password. Each employee has a distinct ID and a type 5 password that is kept safe and secure Authors and Affiliations

a)profile:-

Each employee's profile has unique information about them. such as an employee ID, first and last names, gender, dates of birth, departments, addresses, emails, cities, countries, and mobile numbers.

b)change password:-

This portal enables employees to update their new login password by using their employee ID.

c) Leave:-

This website is one of the project's most crucial components since it makes applying for leave much simpler and quicker than it was previously. There are two subpages.

i. Apply leave:-

The employee can apply for leave on this page by providing the start and end dates, the type of leave they want, and a reason. Just 2 or 3 minutes are required for this quick operation. A notification will then be sent right away to the admin.

ii. Leave history:-

The details of each employee's individual leave requests, including the type of leave taken and the status of that leave, are contained in the leave history.

d)Sign out:-

This button aids the user in logging off of this page.

2)Admin login:-

Admin login is a screen where an admin may manage all business activities, including accepting or rejecting leave requests

A).Dashboard:-

This dashboard displays the overall staff count, departmental totals, and leave category totals. It includes every leave status that the administrator has granted or denied.

B). Department:-

Department displays the company's existing departments and allows for the addition of additional departments.

C).Leave type:-

This allows the administrator to create new leave types and displays the available leave types.

D). Employees:-

The company's administrator has the ability to add new employees. It enables the display of a list of those working for this firm.

E).Leaves Management:-

The two components of leave management offer the administrator the ability to oversee any requests for leave made by employees.

F).signout:-

It assists with logging off the website.

3)Data Analysis:-

All company-related data is included in the data analysis. Graph and chart use is beneficial for business management.

A).present or absent chart:-

We use Google Charts for the presence or absence chart. This graph displays the overall company leave approval rate.

B).Total employee:-

Total number of employees generated with Power BI.It depicts the entire department in the form of a bar graph, which includes many departments with department IDs.

C).MF Analysis:-

This webpage, which was produced using Excel, displays a 3D examination of the ratio of men to women employed by the firm.

D).Total employee:-

This was made with the help of Tableau. This shows how much the firm spent overall on salaries. It aids in budget management.

E).Location:-

Blender is used to build the location. In a 3D globe map, this location displays where the workers are travelling to work.

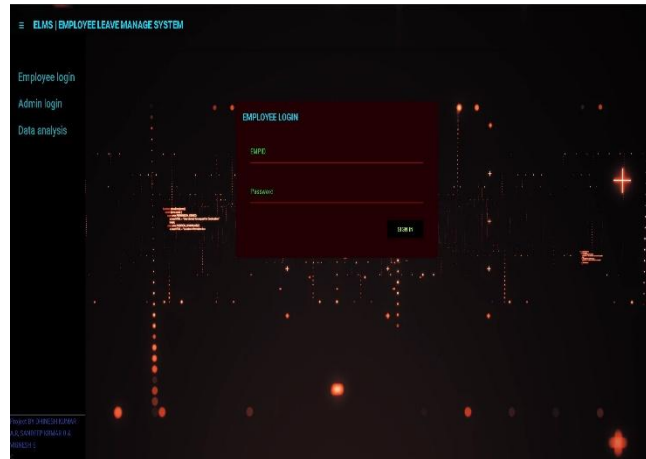


Figure 2

This figure 2 explains about the main page of the website which is explained in the 1.



Figure 3

This figure 3 explains about the admin login page of the website which is explained in the 2.

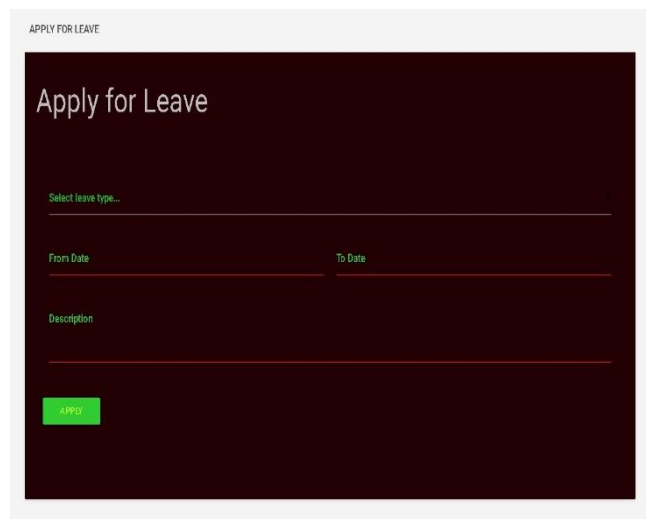


Figure 4

This figure 4 explains the employee to apply leave explained in the 1.c.i.

#	Leave Type	From	To	Description	Posting Date	Admin Remark	Status
1	Medical Leave test	01/12/2022	03/01/2023	I have viral fever	2022-12-21 21:38:31	ok at 2022-12-21 22:07:08	
2	Casual Leave	11/11/2022	13/11/2022	my grandfather death	2022-12-21 22:20:08	ok at 2022-12-21 22:27:52	

Figure 5

This figure 5 explains the employee to apply leave history explained in the 1.c.ii.

TOTAL REGD EMPLOYEE: 10

LISTED DEPARTMENTS: 9

LISTED LEAVE TYPE: 5

LATEST LEAVE APPLICATIONS

#	Employee Name	Leave Type	Posting Date	Status	Action
1	Alinkovle Sarah(10196)	Restricted Holiday(94)	2022-12-21 19:50:50	waiting for approval	VIEW DETAILS
2	Johnny dha(EMP10006121)	Medical Leave test	2017-11-20 16:44:14	Approved	VIEW DETAILS

Figure 6

This figure 6 explained in 2.a

ADD LEAVE TYPE

Leave Type

Description

[ADD](#)

Figure 7

This figure 7 explained in 2.c.

The screenshot shows the 'MANAGE LEAVE TYPE' interface. It includes a 'LEAVE TYPES INFO' section with a 'From' dropdown menu and a 'Search records' button. Below this is a table with the following data:

Sr no	Leave Type	Description	Creation Date	Action
1	Casual Leave	Casual Leave	2017-11-01 17:37:55	mode_edit delete_delete
2	Medical Leave test	Medical Leave test	2017-11-04 18:45:09	mode_edit delete_delete
3	Restricted Holiday(RH)	Restricted Holiday(RH)	2017-11-04 18:48:38	mode_edit delete_delete
4	dead	emergency	2022-12-21 21:41:23	mode_edit delete_delete
5	dead	emergency	2022-12-21 21:46:57	mode_edit delete_delete

Figure 8
This figure 8 explained in 2.e

The screenshot shows the 'ADD DEPARTMENT' form. It contains three input fields: 'Department Name', 'Department Short Name', and 'Department Code'. Below these fields is a green 'ADD' button.

Figure 9
This figure 9 explained in 2.b.

The screenshot shows the 'MANAGE DEPARTMENTS' interface. It includes a 'DEPARTMENTS INFO' section with a 'From' dropdown menu and a 'Search records' button. Below this is a table with the following data:

Sr no	Dept Name	Dept Short Name	Dept Code	Creation Date	Action
1	Human Resource	HR	HR001	2017-11-01 12:44:25	mode_edit delete_delete
2	Information Technology	IT	IT001	2017-11-01 12:49:37	mode_edit delete_delete
3	Operators	OP	OP1	2017-12-03 02:56:56	mode_edit delete_delete
4	Production Technician	Production Technician	19	2022-12-19 15:53:12	mode_edit delete_delete
5	Data Analyst	Data Analyst	09	2022-12-19 15:53:54	mode_edit delete_delete
6	Software Engineer	Software Engineer	24	2022-12-19 15:56:41	mode_edit delete_delete
7	Network Engineer	Network Engineer	16	2022-12-19 15:57:22	mode_edit delete_delete
8	Sales Manager	Sales Manager	21	2022-12-19 15:58:05	mode_edit delete_delete

Figure 10
This figure 10 is the one of the type of 2.b.

Figure 11
This figure 11 is the one of the type of 2.d.

S.No	EmpId	Full Name	Department	Status	Reg Date	Action
1	EMP10006111	Johny doe	Human Resource	ACTIVE	2017-11-15 16:59:59	mode_edit clear
2	EMP1133	James doe	Information Technology	ACTIVE	2017-11-15 19:50:02	mode_edit clear
3	10196	Ashwinia Sarah	Production Technician	ACTIVE	2022-10-19 16:07:53	mode_edit clear
4	10178	Suresh Kumar	Data Analyst	ACTIVE	2022-10-25 16:57:05	mode_edit clear
5	10102	Thiruthar	Software Engineer	ACTIVE	2022-12-13 16:43:52	mode_edit clear
6	10305	Valentijn Jackie	Area Sales Manager	ACTIVE	2022-12-04 16:50:55	mode_edit clear

Figure 12
This figure 12 is the one of the type of 2.d

#	Employee Name	Leave Type	Posting Date	Status	Action
1	Ashwinia Sarah(10196)	Restricted Holiday(2d)	2022-12-21 19:50:58	waiting for approval	VIEW DETAILS
2	Johny doe(EMP10006111)	Medical Leave test	2017-11-20 16:44:14	Approved	VIEW DETAILS

Figure 13
This figure is explained in 1.c.ii.

#	Employee Name	Leave Type	Posting Date	Status	Action
1	Ashwinia Sarah(10196)	Restricted Holiday(2d)	2022-12-21 19:50:58	waiting for approval	VIEW DETAILS

Figure 14
This is the one of the type or subdivision of 2.e.

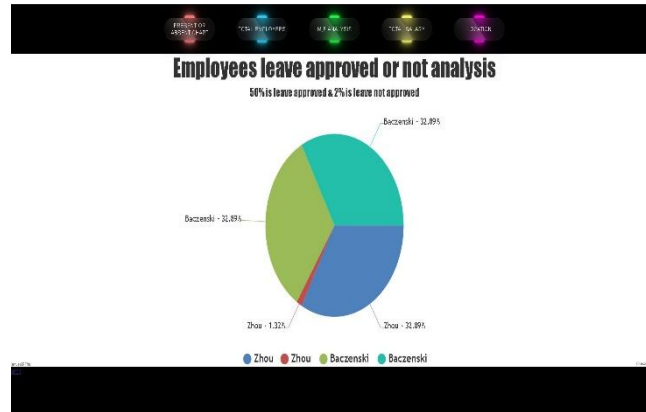


Figure 15

This figure show the company Leave approved or not in Chart Analysis

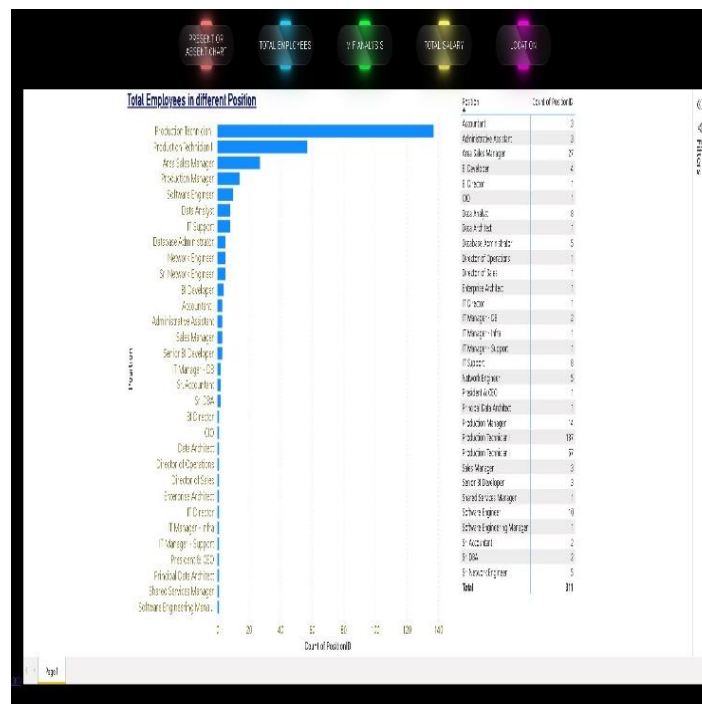


Figure 16

This figure show the company Department and Department Id by using Power BI

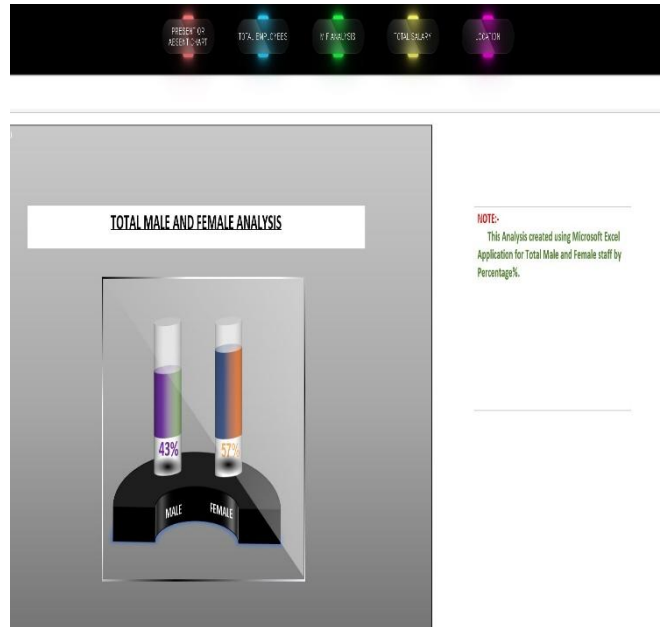


Figure 17

This figure show the company Male and Female 3D analysis by using Excel

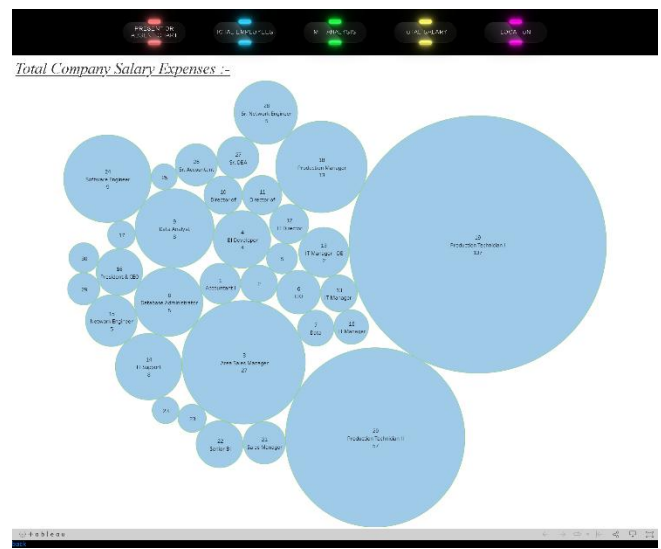


Figure 18

This figure show the company Total Salary spend by company created using Tableau

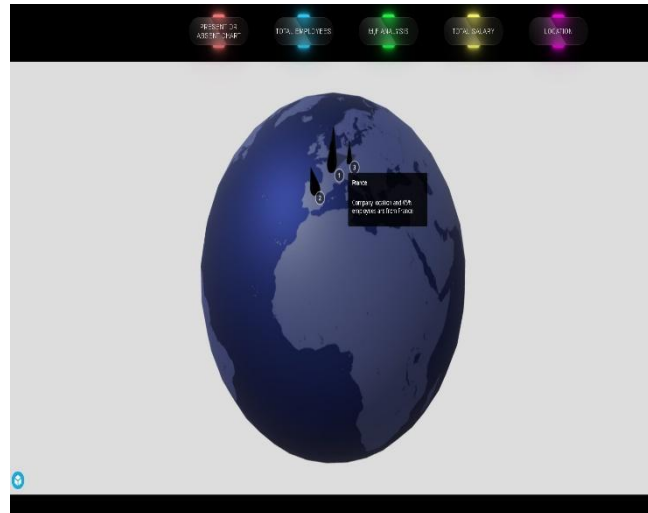


Figure 19

This figure show the company Location 3D analysis by using Blender

V. REQUIREMENTS:-

Frontend:-

- ✓ PHP
- ✓ HTML
- ✓ JAVASCRIPT
- ✓ CSS

Backend:-

- ✓ MYSQL

Software requirements:-

- ✓ XAMPP
- ✓ VISUALSTUDIOCODE

Workon:-

- ✓ WINDOWS
- ✓ LINUX
- ✓ MAC

VI. CONCLUSION:-

This strategy for managing emergency leaves can speed up the process and aid with leave needs. Using data analysis, the corporation can control things like salaries, departments, gender, locations, and workers.

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