

Employee Management System



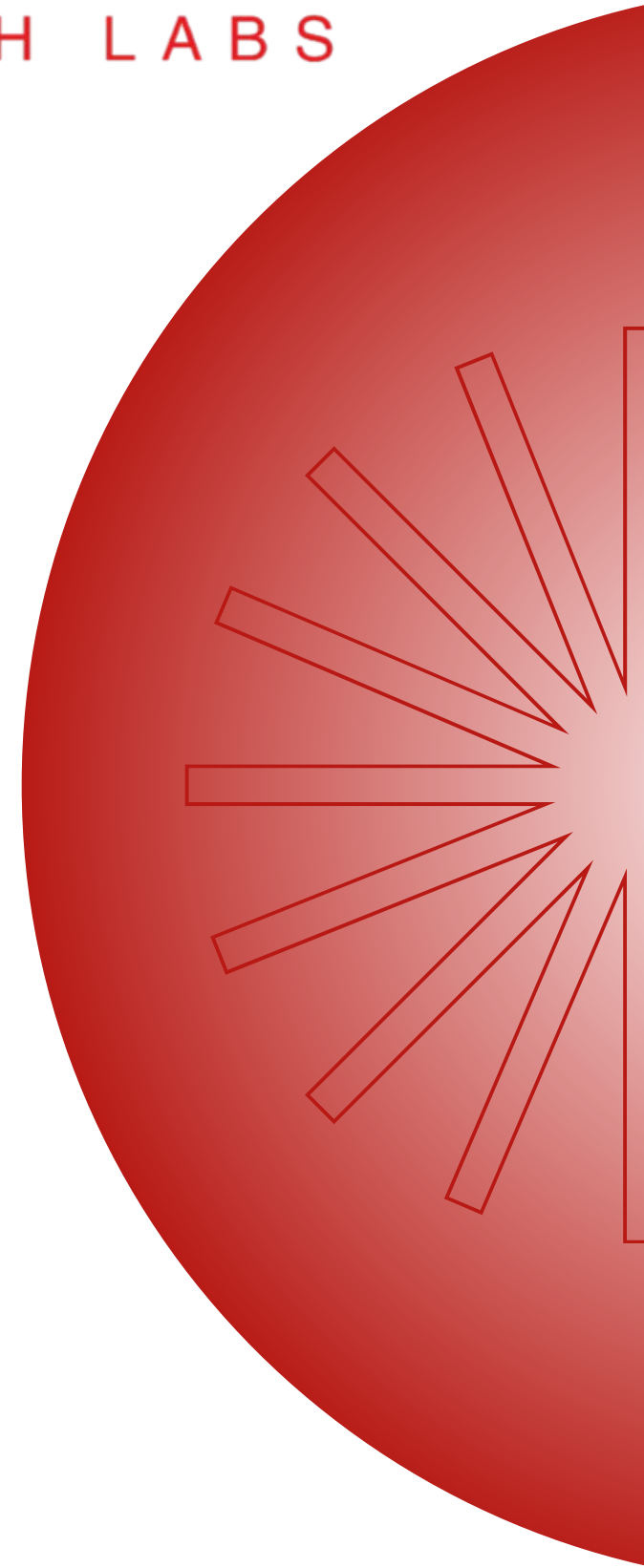
About Me

- **Education Background:**
- My name is Vaibhav Umbarkar. I have completed my **B.Sc. in Computer Science.**
- **LinkedIn:----->** <https://www.linkedin.com/in/vaibhav-umbarkar-023667324/>
- **GitHub:----->** <https://github.com/vaibhav-umbarkar47>

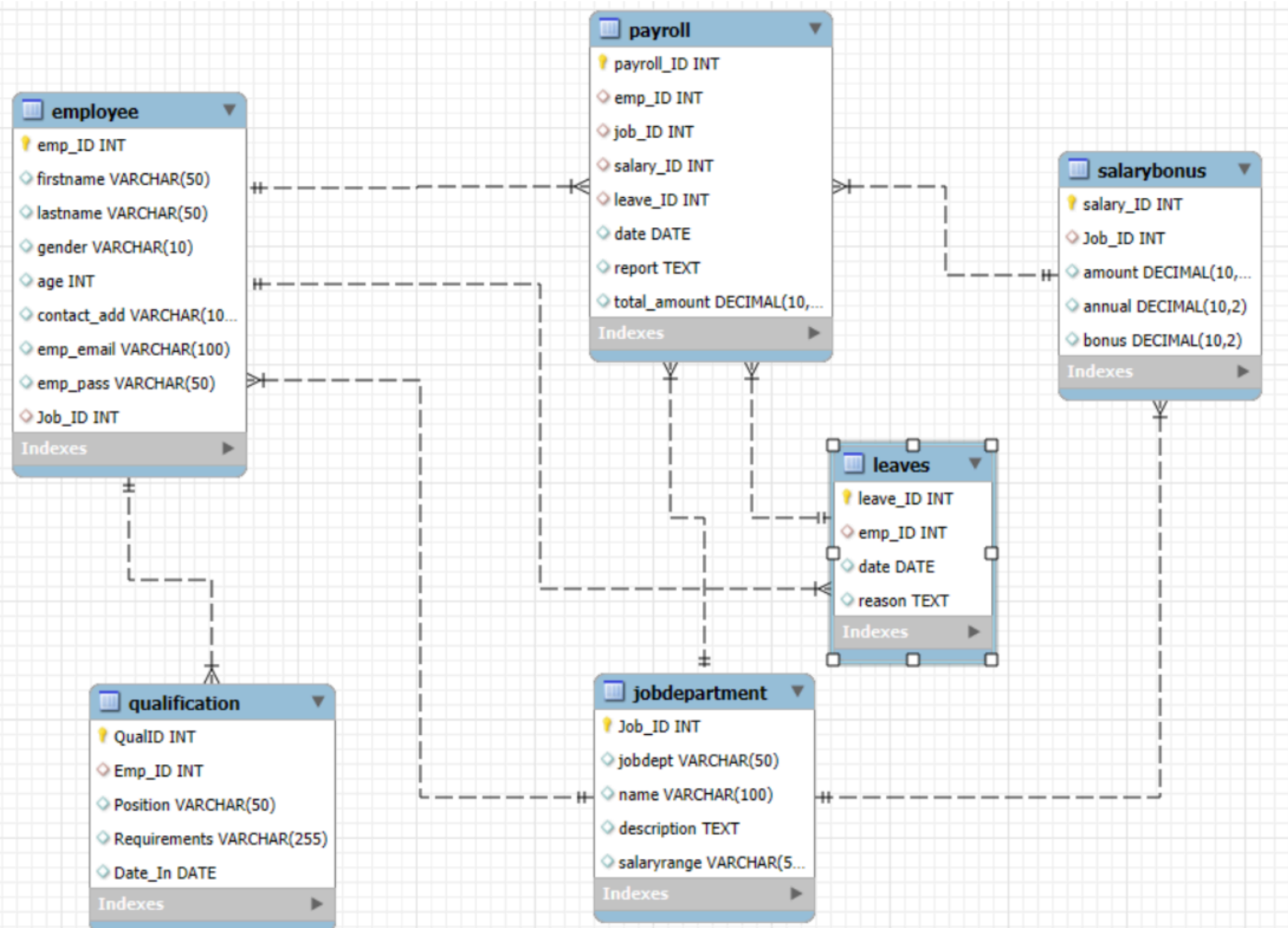
Project Objectives



The Employee Management System aims to store and manage employee details, track departments, salaries, qualifications, and leaves, and generate payroll reports. It helps in analyzing workforce data, calculating salary expenditure, and improving efficiency in employee management through SQL queries.



ER Diagram



Employee

Stores personal info. Connected to job and qualification. Central to all other tables.

jobdepartment

Defines job roles and salary ranges. Linked to employee, payroll, and salarybonus.

qualification

Lists qualifications and requirements. Referenced by employee.

payroll

Tracks salary payments with date and receipt. Linked to employee and jobdepartment.

salarybonus

Captures annual salary and bonus. Linked to employee and jobdepartment.

leave

Logs employee leave dates and reasons. Linked to employee.

Problem Statement



1. Which departments have the highest number of employees?

	jobdept	No_of_emp	rnk
▶	Finance	9	1
	IT	9	1

The top 2 departments with the most employees, likely showing Finance and IT based on the data.

2. Who are the top 5 highest-paid employees?

emp_id	jobdept	firstname	lastname	amount
37	Finance	Ingrid	Adams	170000.00
38	Engineering	John	Baker	160000.00
35	Marketing	Grake	Moor	150000.00
36	IT	Hank	Wilson	150000.00
39	Sales	Kelly	Cooper	140000.00

It displays the top 5 employees with the highest salaries, including their ID, department, name, and salary amount.

3. Which departments have the highest total salary allocation?

jobdept	highest_total_salary
Finance	651000.00
IT	638000.00
Engineering	568000.00
Operations	550000.00
Sales	528000.00
Marketing	525000.00
HR	438000.00
Legal	423000.00

It shows the total salary expenditure for each department and identifies which department has the highest overall salary cost.

4. Which employee have the taken most leaves?

emp_id	firstname	lastname	most_leave
1	John	Doe	1
2	Jane	Smith	1
3	Alice	Brown	1
4	Bob	Johnson	1
5	Charlie	Williams	1
6	Dave	Miller	1
7	Eve	Davis	1
8	Frank	Wilson	1
9	Grace	Moore	1
10	Harry	Taylor	1
11	Irene	Anderson	1
12	Jack	Thomas	1
13	Karen	Jackson	1
14	Louis	White	1
15	Maria	Harris	1
16	Nathan	Martin	1
17	Olivia	Lee	1
18	Paul	Clark	1
19	Quinn	Lewis	1

counts the number of leaves taken by each employee, in this case, the output shows that every employee has taken exactly one leave.

5. Which department receives the highest total bonuses?

jobdept	highest_bonus	rnk
Finance	96000.00	1
IT	94000.00	2
Engineering	88000.00	3
Sales	78500.00	4
Operations	77500.00	5
Marketing	73000.00	6
Legal	66500.00	7
HR	57200.00	8

identifies the department with the highest total bonus, if more than one department shares the same highest bonus, all of them are shown.

Business insights

Business Insights:

- From this system, management can get insights like which employees or departments take the most leaves, how payroll is affected after deductions, and overall cost trends. These insights help improve productivity, control HR costs, and support better decision-making.

Conclusion...

Employees are clearly grouped by department and job role. IT and Finance have the most people.

Salaries and bonuses are different for each role. Some records have missing or repeated data.

Most leaves are for medical or personal reasons. A few employees take leave very often.

Many employees have more education than needed for their job. Some have less than required.

Some data is missing or doesn't match between tables like Payroll, Leaves, and Qualification.

**Thank you
very much!**