

SVKM's NMIMS

School of Technology Management & Engineering, Mumbai

A.Y. 2023 - 24

Course: Database Management Systems

Project Report

Program	B.Tech Integrated Computers	
Semester	VIII	
Name of the Project:	Employee Management System	
Details of Project Members		
Batch	Roll No.	Name
C2	C113	Vidhie Jhunjhunwala
C2	C118	Mithil Parekh
Date of Submission: 23/03/2024		

Contribution of each project Members:

Roll No.	Name:	Contribution
C113	Vidhie Jhunjhunwala	Creation of Schema, Report Formation, Select queries
C118	Mithil Parekh	ER Diagram, Relational Model, Debugging

GitHub link of your project:

<https://github.com/demiraramnani/Employee-Management-system-.git>

Project Report

Employee Management System

By

Vidhie Jhunhunwala,C113

Mithil Parekh, C118

Course: Database Management System

AY: 2023-24

Table of Contents

Sr no.	Topic	Page no.
1	Storyline	

2	Components of Database Design	
3	Entity Relationship Diagram	
4	Relational Model	
5	Normalization	
6	SQL Queries	
7	Learning from the Project	
8	Project Demonstration	
9	Self-learning beyond classroom	
10	Learning from the project	
8	Challenges faced	
9	Conclusion	

I. Storyline

Executive Summary:

Given the ever-changing landscape of managing employees, this project seeks to optimize the efficiency and effectiveness of an Employee Management System (EMS) through detailed data analysis and strategic recommendations. By leveraging SQL database querying and analysis, our team has delved into the system's data to uncover valuable insights and propose actionable solutions.

Introduction:

The employee management system is always changing, so we need to keep improving how we manage employees. Our project uses SQL to help make better decisions about managing employees.

Methodology:

We conducted a thorough analysis of the employee management system's database, including employee records, performance metrics, training history, and scheduling data. Using SQL queries, we processed and examined these datasets to identify trends, relationships, and opportunities for enhancement..

II. Components of Database Design

Components of Database Design:

1. Entities Represented by tables, such as `Department`, `Employee`, `Salary`, etc.
2. Attributes: Fields or columns in each table, like `department_name`, `employee_id`, `salary`, etc.
3. Relationships: Connections between entities, like one-to-many or many-to-many relationships.
4. Constraints: Rules that enforce data integrity, such as primary keys, foreign keys, and unique constraints.

Tables, Relationships, Participation, and Attributes:

1. Department:

- Attributes:

- department_id (Primary Key)
- department_name
- manager_id
- Comp_city
- Comp_State

- Relationships:

- None

- Participation:

- All departments must have a manager, so participation is total on `manager_id` (1:1).

2. Employee:

- Attributes:
 - employee_id (Primary Key)
 - first_name
 - last_name
 - email
 - phone_number
 - hire_date
 - department_id (Foreign Key)
- Relationships:
 - One department can have many employees (1:M with 'Department').
- Participation:
 - All employees must belong to a department, so participation is total on 'department_id' (M:1).

3. Salary:

- Attributes:
 - salary_id (Primary Key)
 - employee_id (Foreign Key)
 - salary
 - start_date
 - end_date
- Relationships:
 - Each employee can have multiple salary entries (1:M with 'Employee').
- Participation:
 - Every salary entry must be linked to an employee, so participation is total on 'employee_id' (M:1).

4. Address:

- Attributes:
 - address_id (Primary Key)
 - employee_id (Foreign Key)
 - street
 - city
 - state
 - postal_code
- Relationships:
 - Each employee can have one address (1:1 with 'Employee').
- Participation:

- All employees must have an address, so participation is total on `employee_id` (1:1).

5. Project:

- Attributes:
 - project_id (Primary Key)
 - project_name
 - start_date
 - end_date
 - project_loc
- Relationships:
 - Employees can work on multiple projects, and projects can have multiple employees (M:N with `Employee` through `Employee_Project`).
- Participation:
 - Projects can exist without employees, and employees can exist without projects, so participation is partial on both sides.

6. Employee_Project:

- Attributes:
 - employee_id (Foreign Key)
 - project_id (Foreign Key)
- Relationships:
 - Represents the many-to-many relationship between `Employee` and `Project`.
- Participation:
 - Every employee must be assigned to at least one project, and every project must have at least one employee, so participation is total on both sides (M:N).

7. Task:

- Attributes:
 - task_id (Primary Key)
 - task_name
 - project_id (Foreign Key)
- Relationships:
 - Each task is associated with one project (1:M with `Project`).
- Participation:
 - All tasks must be part of a project, so participation is total on `project_id` (M:1).

8. Attendance:

- Attributes:
 - attendance
 - employee_id (Foreign Key)
 - date
- Relationships:
 - Each attendance record is linked to one employee (1:M with 'Employee').
- Participation:
 - All employees must have an attendance record, so participation is total on 'employee_id' (M:1).

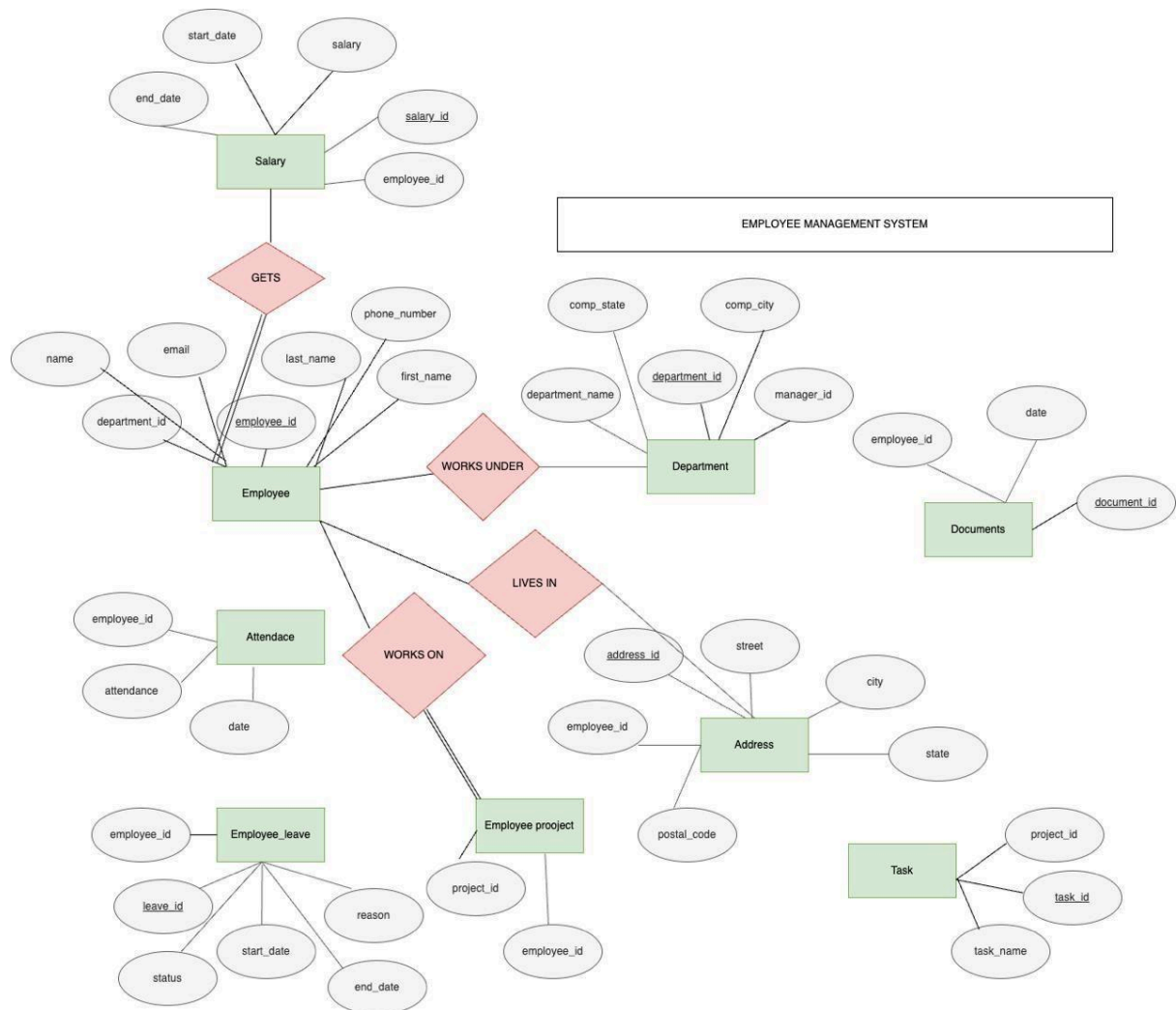
9. Emp_Leave:

- Attributes:
 - leave_id (Primary Key)
 - employee_id (Foreign Key)
 - start_date
 - end_date
 - reason
 - status
- Relationships:
 - Each leave request is associated with one employee (1:M with 'Employee').
- Participation:
 - All employees must have a leave record, so participation is total on 'employee_id' (M:1).

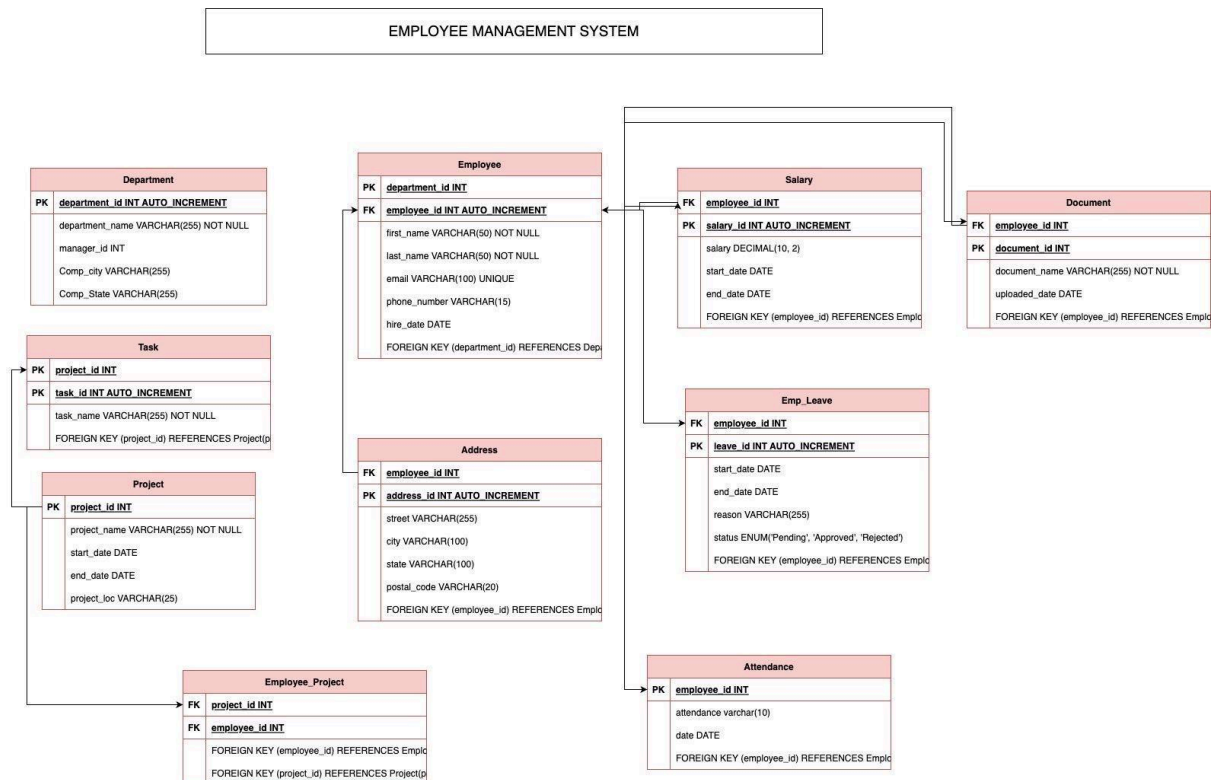
10. Document:

- Attributes:
 - document_id (Primary Key)
 - document_name
 - employee_id (Foreign Key)
 - uploaded_date
- Relationships:
 - Each document is associated with one employee (1:M with 'Employee').
- Participation:
 - All employees must have at least one document, so participation is total on 'employee_id' (M:1).

III. Entity Relationship Diagram



IV. Relational Diagram



V. SQL Queries (ADDED AFTER CONCLUSION FOR CLARITY AND NEATNESS)

VI. Project Demonstration(ADDED AFTER CONCLUSION FOR CLARITY AND NEATNESS)

VII. Self-Learning Beyond Classroom

The project greatly enhanced our team's proficiency in SQL, especially in querying and analyzing databases, which is crucial for managing employee information effectively. We learned to navigate complex datasets, create efficient queries, and extract valuable insights to inform decision-making related to employee management.

Additionally, we gained hands-on experience in data cleaning and validation, ensuring that employee data was accurate and consistent. This involved identifying and correcting errors and anomalies within the dataset, which is essential for maintaining reliable employee records.

Engaging in exploratory data analysis and trend identification honed our analytical skills, allowing us to identify patterns, correlations, and outliers within employee data. This is valuable for understanding employee performance, identifying training needs, and making informed decisions about promotions or salary adjustments.

Furthermore, the project improved our problem-solving abilities, as we tackled real-world challenges in managing employee information. We learned to approach problems systematically, breaking them down into manageable components and devising effective solutions. This is essential for resolving issues related to employee data management, such as data entry errors or database performance optimization.

Collaborating on this project also improved our communication and collaboration skills, as we learned to effectively communicate complex technical concepts to non-technical stakeholders, such as HR managers or department heads. This is crucial for ensuring that the employee management system meets the needs of all users and stakeholders.

Overall, the project highlighted the transformative potential of data-driven decision-making in employee management, driving improvements in operational efficiency and employee performance.

VIII. Learning From The Project

- Understanding SQL Basics: Working on an employee management system database project allowed us to solidify our grasp of SQL fundamentals. We learned how to query employee data, perform calculations, and extract valuable information from the database..
- Data Refinement and Handling: Working with SQL in the project allowed us to efficiently refine and handle employee data. We were able to manipulate and analyze the data by applying SQL functions and operations to gain insights into employee performance and other relevant metrics.
- Optimization for Better Performance: As we tackled SQL queries, we realized the importance of optimizing them for faster performance. We learned techniques such as indexing, query restructuring, and optimizing execution plans to reduce query execution time and enhance the overall efficiency of the employee management system.
- Resolving Errors and Debugging: Dealing with errors in SQL queries was a valuable learning experience. We became adept at identifying and fixing common errors like syntax issues, logical errors, and data inconsistencies using debugging tools and techniques provided by SQL environments.

IX. Challenges Faced

Understanding Database Concepts: Initially, newcomers to database management may find concepts like normalization and transactions overwhelming.

Database Design: An essential aspect of creating a robust database involves carefully designing entities, attributes, relationships, and constraints.

Time Efficiency: Managing project deadlines and allocating adequate time for planning, design, implementation, testing, and documentation are critical for project success.

Documentation: Thorough documentation of the database schema, data dictionary, system architecture, and user manual is necessary for system understanding and operational efficiency. Students should excel in creating clear and easily understandable documentation.

X. Conclusion

Completing this project has proven to be a complex yet exhilarating journey. While grappling with issues related to data quality and performance optimization posed significant challenges, we managed to deepen our understanding of SQL fundamentals and enhance our data analysis skills.

PROJECT DEMO //TABLES //QUERIES

```
abc* SQL File 3* x
Limit to 1000 rows
353
354
355 • Select * from Employee;
356 • Select * from Department;
357 • select * from Salary;
358 • select * from Address;
359 • select * from Project;
360 • select * from Employee_project;
361 • select * from Task;
362 • Select * from Attendance;
363 • select * from Emp_Leave;
364 • Select * from document;
365
```

Department table

	department_id	department_name	manager_id	Comp_city	Comp_State
▶	1	HR Department	101	Mumbai	Maharashtra
	2	IT Department	102	Bangalore	Karnataka
	3	Finance Department	103	Delhi	Delhi
	4	Marketing Department	104	Kolkata	West Bengal
	5	Operations Department	105	Chennai	Tamil Nadu
	6	Marketing Department	104	Kolkata	West Bengal
	7	Operations Department	105	Chennai	Tamil Nadu
	8	Sales Department	106	Hyderabad	Telangana
	9	Production Department	107	Pune	Maharashtra
	10	Customer Service Department	108	Jaipur	Rajasthan
	11	Research & Development De...	109	Ahmedabad	Gujarat
	12	Quality Assurance Department	110	Gurgaon	Haryana
	13	Supply Chain Department	111	Noida	Uttar Pradesh
	14	Legal Department	112	Lucknow	Uttar Pradesh
	15	Human Resources Department	113	Indore	Madhya Pra...

Salary table

salary_id	employee_id	salary	start_date	end_date
1	1	5000.00	2022-01-01	2022-12-31
2	2	6000.00	2022-01-01	2022-12-31
3	3	7000.00	2022-01-01	2022-12-31
4	4	8000.00	2022-01-01	2022-12-31
5	5	9000.00	2022-01-01	2022-12-31
6	6	10000.00	2022-01-01	2022-12-31
7	7	11000.00	2022-01-01	2022-12-31
8	8	12000.00	2022-01-01	2022-12-31
9	9	13000.00	2022-01-01	2022-12-31
10	10	14000.00	2022-01-01	2022-12-31
11	11	15000.00	2022-01-01	2022-12-31
12	12	16000.00	2022-01-01	2022-12-31
13	13	17000.00	2022-01-01	2022-12-31
14	14	18000.00	2022-01-01	2022-12-31
15	15	19000.00	2022-01-01	2022-12-31

Address table

address_id	employee_id	street	city	state	postal_code
1	1	Chhatrapati Shivaji Marg	Mumbai	Maharashtra	12345
2	2	Sane Guruji Marg	Bangalore	Karnataka	67890
3	3	Bombay Samachar Marg	Delhi	Delhi	54321
4	4	Jawaharlal Nehru Road	Kolkata	West Bengal	98765
5	5	MG Road	Chennai	Tamil Nadu	23456
6	6	Sector 17	Chandigarh	Punjab	87654
7	7	Devaraja Urs Road	Mysore	Karnataka	34567
8	8	Cross Cut Road	Coimbatore	Tamil Nadu	76543
9	9	JLN Road	Jaipur	Rajasthan	45678
10	10	Banjara Hills	Hyderabad	Telangana	65432
11	11	Ashram Road	Ahmedabad	Gujarat	98765
12	12	FC Road	Pune	Maharashtra	23456
13	13	Hazratganj	Lucknow	Uttar Pradesh	87654
14	14	Wardha Road	Nagpur	Maharashtra	34567
15	15	RS Puram	Coimbatore	Tamil Nadu	76543

Project table

project_id	project_name	start_date	end_date	project_loc
101	Project A	2024-01-01	2024-06-30	Location A
102	Project B	2024-02-15	2024-12-31	Location B
103	Project C	2024-03-10	2024-09-30	Location C
104	Project D	2024-04-05	2024-11-30	Location D
105	Project E	2024-05-20	2024-10-31	Location E
106	Project F	2024-06-15	2024-12-15	Location F
107	Project G	2024-07-01	2024-12-31	Location G
108	Project H	2024-08-10	2024-11-30	Location H
109	Project I	2024-09-05	2024-10-31	Location I
110	Project J	2024-10-01	2024-12-31	Location J
111	Project K	2024-11-15	2024-12-15	Location K
112	Project L	2024-12-01	2024-12-31	Location L
113	Project M	2024-01-15	2024-06-30	Location M
114	Project N	2024-02-20	2024-12-31	Location N
115	Project O	2024-03-05	2024-09-30	Location O

Emp_project table

	employee_id	project_id
▶	1	101
	21	101
	2	102
	22	102
	3	103
	23	103
	4	104
	24	104
	5	105
	25	105
	6	106
	7	107
	8	108
	9	109
	10	110

Task table

task_id	task_name	project_id
1	Research market trends	101
2	Design user interface	103
3	Write test cases	102
4	Optimize database performance	104
5	Conduct user testing	107
6	Coordinate project meetings	109
7	Implement security measures	111
8	Perform code review	113
9	Prepare project presentation	115
10	Integrate third-party APIs	117
11	Resolve bug reports	119
12	Create data visualizations	120
13	Manage project timeline	110
14	Develop backend functionality	103
15	Write test cases	105

Attendance table

	attendance	employee_id	date
▶	present	1	2024-03-22
	absent	2	2024-03-22
	present	3	2024-03-22
	absent	4	2024-03-22
	present	5	2024-03-22
	absent	6	2024-03-22
	present	7	2024-03-22
	absent	8	2024-03-22
	present	9	2024-03-22
	absent	10	2024-03-22
	present	11	2024-03-22
	absent	12	2024-03-22
	present	13	2024-03-22
	absent	14	2024-03-22
	present	15	2024-03-22

Leave table

	leave_id	employee_id	start_date	end_date	reason
	7	7	2024-03-28	2024-03-30	Paternity Leave
	8	8	2024-03-29	2024-03-31	Personal Leave
	9	9	2024-03-30	2024-04-01	Mental Health Day
	10	10	2024-03-31	2024-04-02	Remote Work
	11	11	2024-04-01	2024-04-03	Comp Time
	12	12	2024-04-02	2024-04-04	Unpaid Leave
	13	13	2024-04-03	2024-04-05	Jury Duty
	14	14	2024-04-04	2024-04-06	Volunteer Time Off
	15	15	2024-04-05	2024-04-07	Study Leave
	16	16	2024-04-06	2024-04-08	Sabbatical
	17	17	2024-04-07	2024-04-09	Travel Leave
	18	18	2024-04-08	2024-04-10	Administrative Leave
	19	19	2024-04-09	2024-04-11	Training Leave
	20	20	2024-04-10	2024-04-12	Sabbatical
	21	21	2024-04-11	2024-04-13	Personal Time Off

Document table

	document_id	document_name	employee_id	uploaded_date
▶	1	Aadhar	1	2024-03-22
	2	Pancard	2	2024-03-23
	3	Drivers License	3	2024-03-24
	4	Aadhar	4	2024-03-25
	5	Pancard	5	2024-03-26
	6	Drivers License	6	2024-03-27
	7	Aadhar	7	2024-03-28
	8	Pancard	8	2024-03-29
	9	Drivers License	9	2024-03-30
	10	Aadhar	10	2024-03-31
	11	Pancard	11	2024-04-01
	12	Drivers License	12	2024-04-02
	13	Aadhar	13	2024-04-03
	14	Pancard	14	2024-04-04
	15	Drivers License	15	2024-04-05

20 select queries

```
SELECT * FROM Employee WHERE department_id = 2 AND hire_date > '2023-01-01';
```

	employee_id	first_name	last_name	email	phone_number	hire_date	departmer
▶	2	Aryan	Desai	aryan.desai@abc.com	9876543211	2023-01-15	2
	7	Saisha	Kumar	saisha.kumar@abc.com	9876543216	2023-04-01	2
	12	Atharva	Rajput	atharva.rajput@abc.com	9876543221	2023-06-15	2
	17	Kiara	Dube	kiara.dube@abc.com	9876543226	2023-09-01	2
	22	Rohan	Sharma	rohan.sharma@abc.com	9876543231	2023-11-15	2

```
381 • SELECT * FROM Attendance WHERE NOT attendance = 'present';
```

Result Grid						Filter Rows:	Edit:	Export/Import:	Wrap Cell Content:
	project_id	project_name	start_date	end_date	project_loc				
▶	101	Project A	2024-01-01	2024-06-30	Location A				
	102	Project B	2024-02-15	2024-12-31	Location B				

```
375
```

```
376 • SELECT * FROM Salary WHERE salary BETWEEN 5000 AND 10000;
```

```
377
```

Result Grid						Filter Rows:	Edit:	Export/Import:	W
	salary_id	employee_id	salary	start_date	end_date				
▶	1	1	5000.00	2022-01-01	2022-12-31				
	2	2	6000.00	2022-01-01	2022-12-31				
	3	3	7000.00	2022-01-01	2022-12-31				
	4	4	8000.00	2022-01-01	2022-12-31				
	5	5	9000.00	2022-01-01	2022-12-31				
	6	6	10000.00	2022-01-01	2022-12-31				

```
SELECT * FROM Employee WHERE first_name LIKE 'A%';
```

Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Cont

employee_id	first_name	last_name	email	phone_number	hire_date	department_id
	Aryan	Desai	aryan.desai@abc.com	9876543211	2023-01-15	2
	Anaya	Verma	anaya.verma@abc.com	9876543213	2023-02-15	4
	Anika	Reddy	anika.reddy@abc.com	9876543220	2023-06-01	1
	Atharva	Rajput	atharva.rajput@abc.com	9876543221	2023-06-15	2
	Aayan	Bajaj	aayan.bajaj@abc.com	9876543225	2023-08-15	1
	Arnav	Nair	arnav.nair@abc.com	9876543227	2023-09-15	3

ee 21 x

379

```
380 • SELECT * FROM Department ORDER BY department_id;
```

381

Result Grid | Filter Rows: | Edit: | Export/Import: | W

	department_id	department_name	manager_id	Comp_city	Comp_State
	11	Research & Development De...	109	Ahmedabad	Gujarat
	12	Quality Assurance Department	110	Gurgaon	Haryana
	13	Supply Chain Department	111	Noida	Uttar Pradesh
	14	Legal Department	112	Lucknow	Uttar Pradesh
	15	Human Resources Department	113	Indore	Madhya Pra...
	16	Training Department	114	Bhopal	Madhya Pra...

Department 22 x

379

```
380 • SELECT * FROM Attendance WHERE NOT attendance = 'present';
```

381

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

	attendance	employee_id	date
▶	absent	2	2024-03-22
	absent	4	2024-03-22
	absent	6	2024-03-22
	absent	8	2024-03-22
	absent	10	2024-03-22
	absent	12	2024-03-22

385

```
386 • SELECT *
387 FROM Employee
388 LEFT OUTER JOIN Address ON Employee.employee_id = Address.employee_id;
```

Result Grid								
Filter Rows: Export: Wrap Cell Content:								
employee_id	first_name	last_name	email	phone_number	hire_date	department_id	address_id	employ
1	Keya	Shah	keya.shah@abc.com	9876543210	2023-01-01	1	1	1
2	Aryan	Desai	aryan.desai@abc.com	9876543211	2023-01-15	2	2	2
3	Demira	Ramnani	demira.ramnani@abc.com	9876543212	2023-02-01	3	3	3
4	Anaya	Verma	anaya.verma@abc.com	9876543213	2023-02-15	4	4	4
5	Ishaan	Gupta	ishaan.gupta@abc.com	9876543214	2023-03-01	5	5	5
6	Vihaan	Joshi	vihaan.joshi@abc.com	9876543215	2023-03-15	1	6	6
7	Saisha	Kumar	saisha.kumar@abc.com	9876543216	2023-04-01	2	7	7
8	Reyansh	Shah	reyansh.shah@abc.com	9876543217	2023-04-15	3	8	8

390
391 •
392
393
394
395
396

```
SELECT *
FROM Employee
NATURAL JOIN Department;
```

Result Grid								
Filter Rows: Export: Wrap Cell Content:								
department_id	employee_id	first_name	last_name	email	phone_number	hire_date	department_name	
1	1	Keya	Shah	keya.shah@abc.com	9876543210	2023-01-01	HR Department	
2	2	Aryan	Desai	aryan.desai@abc.com	9876543211	2023-01-15	IT Department	
3	3	Demira	Ramnani	demira.ramnani@abc.com	9876543212	2023-02-01	Finance Department	
4	4	Anaya	Verma	anaya.verma@abc.com	9876543213	2023-02-15	Marketing Department	
5	5	Ishaan	Gupta	ishaan.gupta@abc.com	9876543214	2023-03-01	Operations Department	
1	6	Vihaan	Joshi	vihaan.joshi@abc.com	9876543215	2023-03-15	HR Department	
2	7	Saisha	Kumar	saisha.kumar@abc.com	9876543216	2023-04-01	IT Department	
3	8	Reyansh	Shah	reyansh.shah@abc.com	9876543217	2023-04-15	Finance Department	

Result 26 x

Read Only

394

```
395 • SELECT Employee.employee_id, Employee.first_name, Employee.last_name, Attendance.attendance, Attendance.
396 FROM Employee
397 RIGHT OUTER JOIN Attendance ON Employee.employee_id = Attendance.employee_id;
398
```

Result Grid					
Filter Rows: Export: Wrap Cell Content:					
employee_id	first_name	last_name	attendance	date	
1	Keya	Shah	present	2024-03-22	
2	Aryan	Desai	absent	2024-03-22	
3	Demira	Ramnani	present	2024-03-22	
4	Anaya	Verma	absent	2024-03-22	
5	Ishaan	Gupta	present	2024-03-22	
6	Vihaan	Joshi	absent	2024-03-22	
7	Saisha	Kumar	present	2024-03-22	
8	Reyansh	Shah	absent	2024-03-22	
9	Prisha	Singhania	present	2024-03-22	

Result 27 x

Read On

413

414 • `SELECT MAX(project_id) AS max_project_id`

415 `FROM Project;`

416

417

Result Grid



Filter Rows:

Export:



Wrap Cell Content:

	max_project_id
▶	120

398

399 • `SELECT *`

400 `FROM Department`

401 `ORDER BY manager_id ASC;`

402

Result Grid



Filter Rows:

Edit:



Export/Import:



Wrap Cell Content:

	department_id	department_name	manager_id	Comp_city	Comp_State
▶	1	HR Department	101	Mumbai	Maharashtra
	2	IT Department	102	Bangalore	Karnataka
	3	Finance Department	103	Delhi	Delhi
	4	Marketing Department	104	Kolkata	West Bengal
	6	Marketing Department	104	Kolkata	West Bengal
	5	Operations Department	105	Chennai	Tamil Nadu
	7	Operations Department	105	Chennai	Tamil Nadu
	8	Sales Department	106	Hyderabad	Telangana
	9	Production Department	107	Pune	Maharashtra

Department 28 x

Output

```

402
403 • SELECT *
404 FROM Salary
405 ORDER BY salary DESC;
406

```

Result Grid | Filter Rows: | Edit: | Export/Imp

	salary_id	employee_id	salary	start_date	end_date
▶	25	25	29000.00	2022-01-01	2022-12-31
	24	24	28000.00	2022-01-01	2022-12-31
	23	23	27000.00	2022-01-01	2022-12-31
	22	22	26000.00	2022-01-01	2022-12-31
	21	21	25000.00	2022-01-01	2022-12-31
	20	20	24000.00	2022-01-01	2022-12-31
	19	19	23000.00	2022-01-01	2022-12-31
	18	18	22000.00	2022-01-01	2022-12-31
	17	17	21000.00	2022-01-01	2022-12-31

Salary 29 x

```

406
407 • SELECT COUNT(*) AS total_employees
408 FROM Employee;
409
410

```

Result Grid | Filter Rows: | Export:

	total_employees
▶	25

```
409
410 • SELECT AVG(manager_id) AS avg_manager_id
411     FROM Department;
412
413
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

	avg_manager_id
▶	109.0000

Procedures
15
commerce

Schemas

Selected

```
415     FROM Project;
416
417 • SELECT employee_id, COUNT(*) AS total_present
418     FROM Attendance
419     WHERE attendance = 'present'
420     GROUP BY employee_id;
421
422
423
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

	employee_id	total_present
▶	1	1
	3	1
	5	1
	7	1
	9	1
	11	1
	13	1
	15	1

421
422
423 • `SELECT department_id, AVG(manager_id) AS avg_manager_id`
424 `FROM Department`
425 `GROUP BY department_id`
426 `HAVING avg_manager_id > 105;`
427
428

Result Grid | Filter Rows: | **Export:** | **Wrap Cell Content:**

	department_id	avg_manager_id
▶	8	106.0000
	9	107.0000
	10	108.0000
	11	109.0000
	12	110.0000
	13	111.0000
	14	112.0000
	15	113.0000
	16	114.0000

Result 34 x

429
430
431 • `SELECT e.employee_id, e.first_name, e.last_name, e.email, e.phone_number, d.department_name, s.salary`
432 `FROM Employee e`
433 `INNER JOIN Department d ON e.department_id = d.department_id`
434 `INNER JOIN Salary s ON e.employee_id = s.employee_id`
435 `WHERE s.salary > 10000;`
436

Result Grid | Filter Rows: | **Export:** | **Wrap Cell Content:**

	employee_id	first_name	last_name	email	phone_number	department_name	salary
▶	7	Saisha	Kumar	saisha.kumar@abc.com	9876543216	IT Department	11000.00
	8	Reyansh	Shah	reyansh.shah@abc.com	9876543217	Finance Department	12000.00
	9	Prisha	Singhania	prisha.singhania@abc.com	9876543218	Marketing Department	13000.00
	10	Kabir	Mishra	kabir.mishra@abc.com	9876543219	Operations Department	14000.00
	11	Anika	Reddy	anika.reddy@abc.com	9876543220	HR Department	15000.00
	12	Atharva	Rajput	atharva.rajput@abc.com	9876543221	IT Department	16000.00
	13	Myra	Malhotra	myra.malhotra@abc.com	9876543222	Finance Department	17000.00
	14	Kian	Gupta	kian.gupta@abc.com	9876543223	Marketing Department	18000.00
	15	Sami	Chen	sami.chen@abc.com	9876543224	Operations Department	19000.00

Result 36 x

Read Only

436

437 • `SELECT DISTINCT department_name`

438 `FROM Department;`

439

440

Result Grid



Filter Rows:

Export:



Wrap Cell

	department_name
▶	HR Department
	IT Department
	Finance Department
	Marketing Department
	Operations Department
	Sales Department
	Production Department
	Customer Service Department
	Research & Development Department

439

440 • `SELECT SUM(salary) AS total_salary_expenditure`

441 `FROM Salary;`

442

443

Result Grid |  Filter Rows: | Export:  | Wrap Cell Content: 

	total_salary_expenditure
▶	425000.00

Result 39 x

439

440 • `SELECT e.employee_id, e.first_name, e.last_name, s.salary`

441 `FROM Employee e`

442 `INNER JOIN Salary s ON e.employee_id = s.employee_id`

443 `ORDER BY s.salary DESC`

444 `LIMIT 5;`

445

446

Result Grid |  Filter Rows: | Export:  | Wrap Cell Content: 

	employee_id	first_name	last_name	salary
▶	25	Aarav	Gandhi	29000.00
	24	Yash	Thakur	28000.00
	23	Ishita	Choudhary	27000.00
	22	Rohan	Sharma	26000.00
	21	Anika	Patel	25000.00