CODTECH Internship

TASK 2

Data Analysis With Complex Queries

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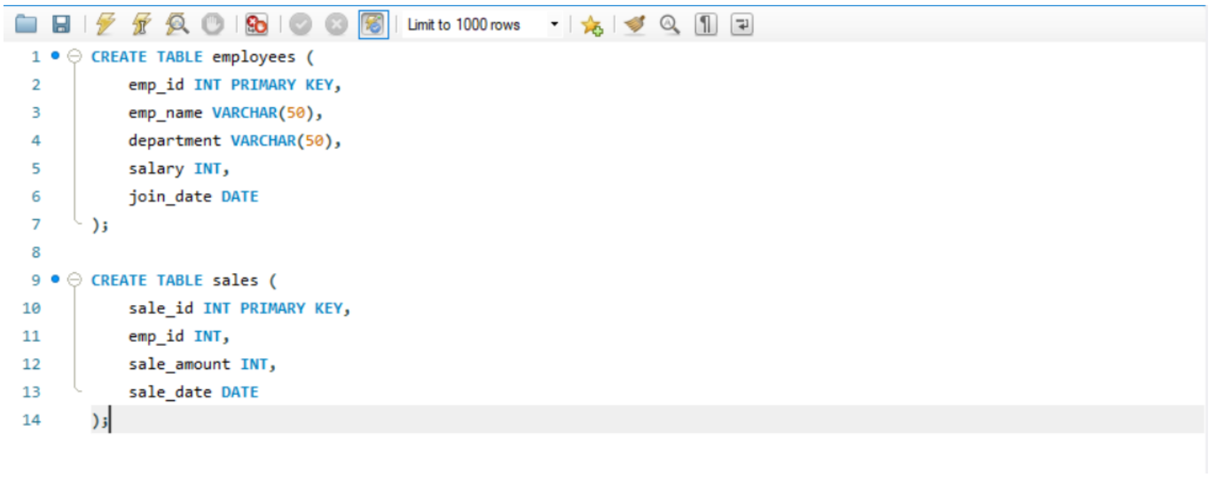
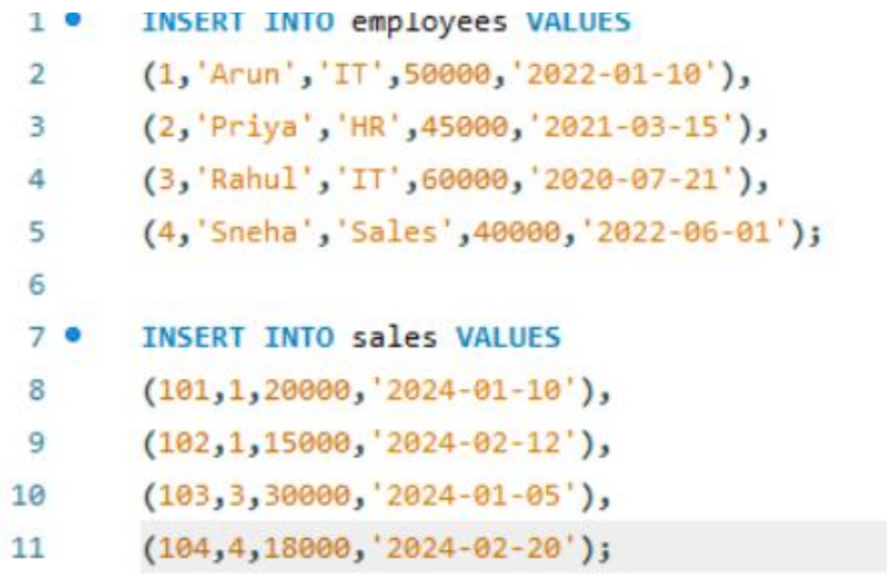
1.Table Creation



```sql
CREATE TABLE employees (
    emp_id INT PRIMARY KEY,
    emp_name VARCHAR(50),
    department VARCHAR(50),
    salary INT,
    join_date DATE
);

CREATE TABLE sales (
    sale_id INT PRIMARY KEY,
    emp_id INT,
    sale_amount INT,
    sale_date DATE
);
```

2. Insertion values

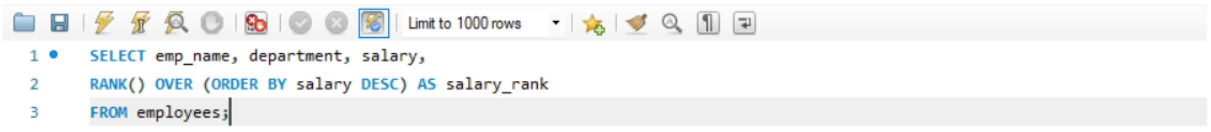


```
INSERT INTO employees VALUES
(1,'Arun','IT',50000,'2022-01-10'),
(2,'Priya','HR',45000,'2021-03-15'),
(3,'Rahul','IT',60000,'2020-07-21'),
(4,'Sneha','Sales',40000,'2022-06-01');

INSERT INTO sales VALUES
(101,1,20000,'2024-01-10'),
(102,1,15000,'2024-02-12'),
(103,3,30000,'2024-01-05'),
(104,4,18000,'2024-02-20');
```

3.Window Function

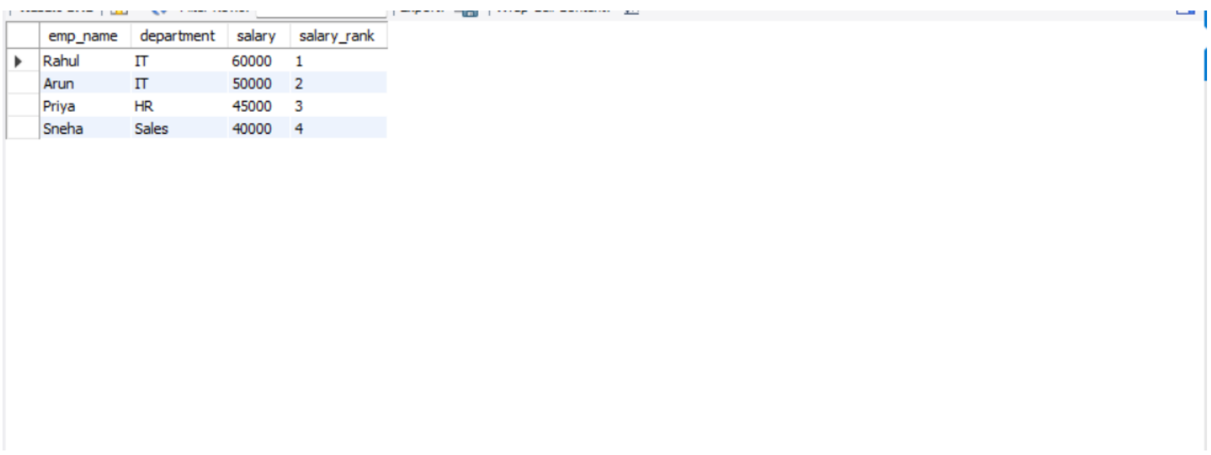
Qurey:



Limit to 1000 rows

```
SELECT emp_name, department, salary,
RANK() OVER (ORDER BY salary DESC) AS salary_rank
FROM employees;
```

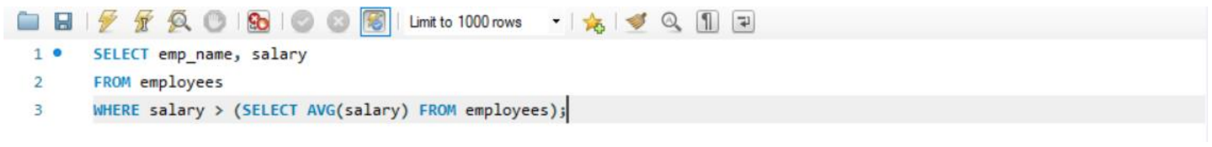
Output:



emp_name	department	salary	salary_rank
Rahul	IT	60000	1
Arun	IT	50000	2
Priya	HR	45000	3
Sneha	Sales	40000	4

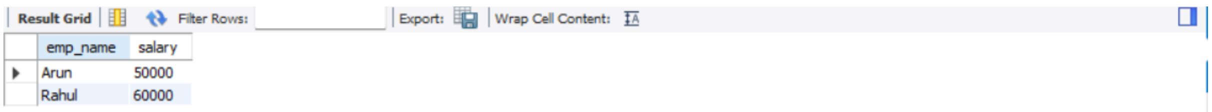
4.Subquery

Query:



```
SELECT emp_name, salary
FROM employees
WHERE salary > (SELECT AVG(salary) FROM employees);
```

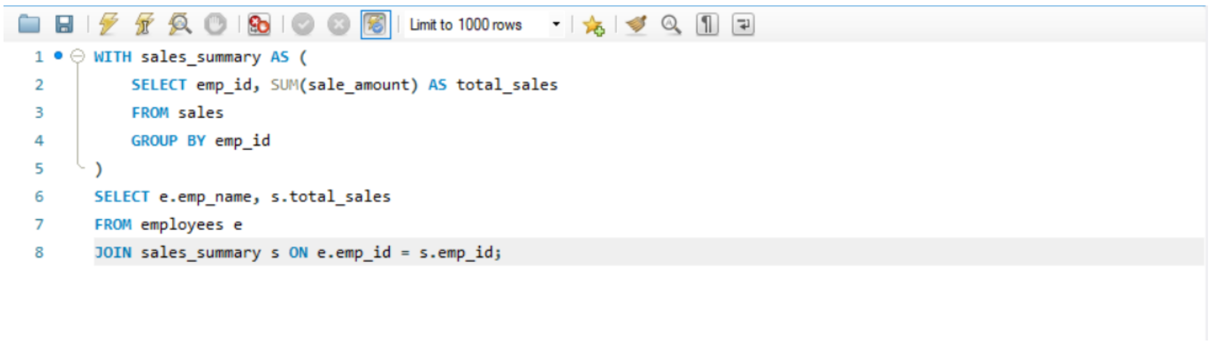
Output:



emp_name	salary
Arun	50000
Rahul	60000

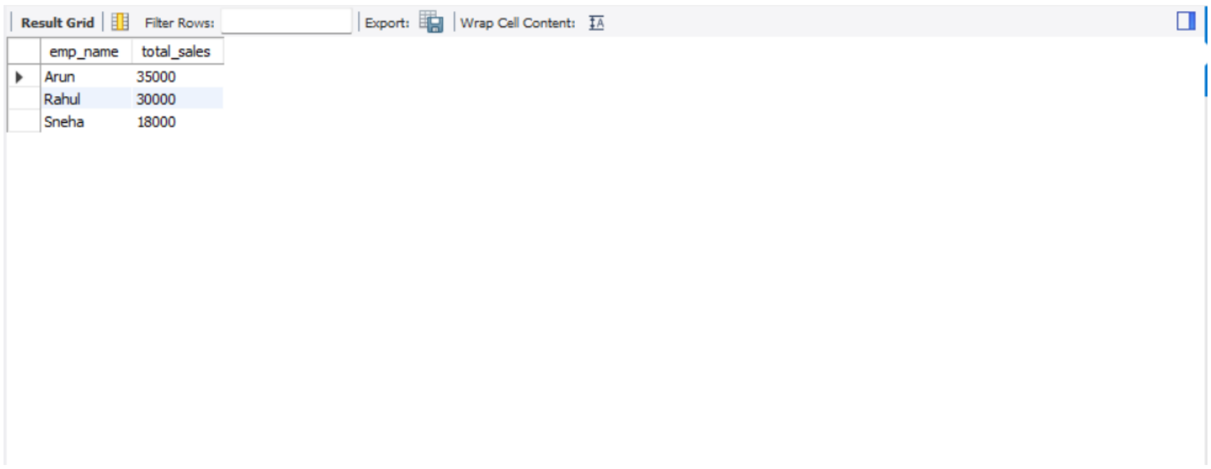
5.CTE (Common Table Expression)

Query:



```
WITH sales_summary AS (
    SELECT emp_id, SUM(sale_amount) AS total_sales
    FROM sales
    GROUP BY emp_id
)
SELECT e.emp_name, s.total_sales
FROM employees e
JOIN sales_summary s ON e.emp_id = s.emp_id;
```

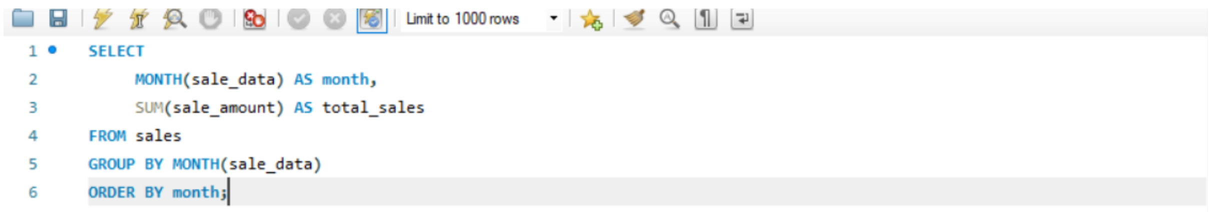
Output:



emp_name	total_sales
Arun	35000
Rahul	30000
Sneha	18000

6. Trend or Pattern Analysis

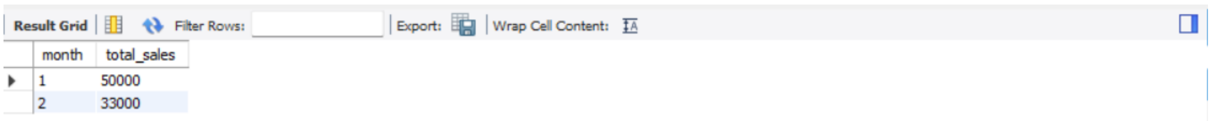
Query:



Limit to 1000 rows

```
SELECT
    MONTH(sale_data) AS month,
    SUM(sale_amount) AS total_sales
FROM sales
GROUP BY MONTH(sale_data)
ORDER BY month;
```

Output:



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

month	total_sales
1	50000
2	33000