SQL Homework

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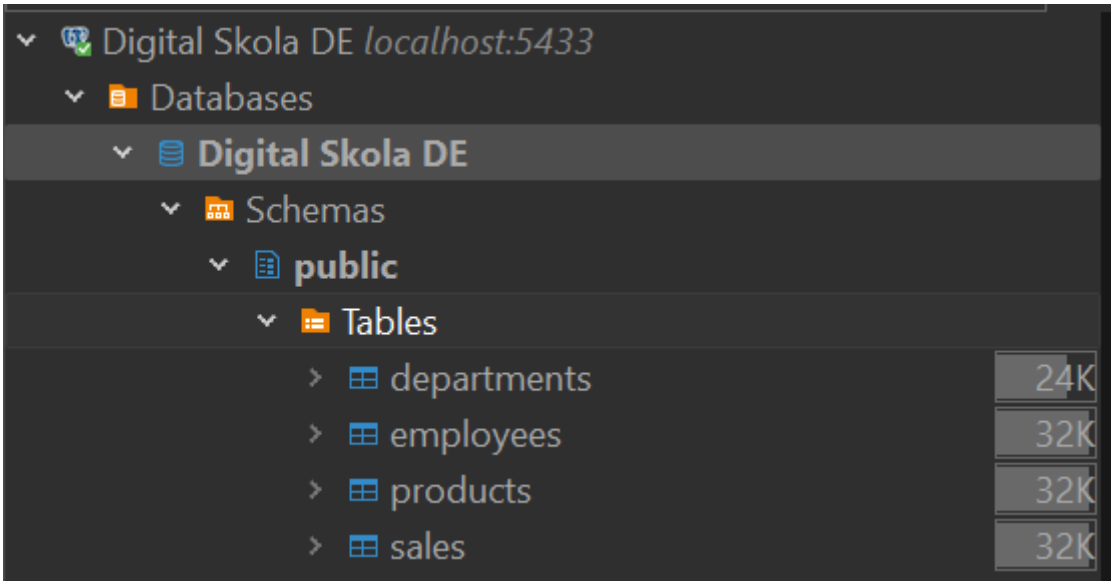
Group 4 – Garap Rendang



Tools: PostgreSQL Dbeaver

1. Buat query untuk menghitung total penjualan (dalam jumlah uang) yang dihasilkan oleh setiap produk.

Code:

```
select p.product_id, p.product_name, sum(s.quantity*s.price) as
total_sales_products
from sales s
join products p on s.product_id = p.product_id
group by p.product_id, p.product_name;
```

Result:

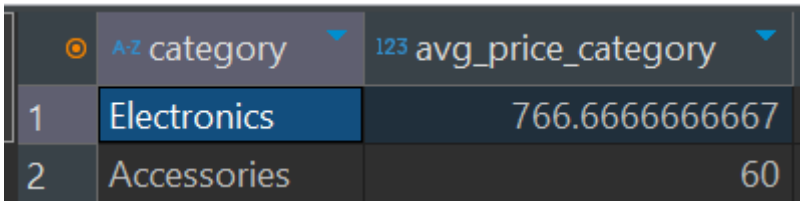
	product_id	product_name	total_sales_products
1	4	Headphones	1,500
2	2	Smartphone	8,000
3	3	Tablet	3,500
4	1	Laptop	5,000
5	5	Charger	400

2. Buat query untuk menghitung rata-rata harga produk per kategori.

Code:

```
select category, avg(price) as avg_price_category
from products
group by category;
```

Result:



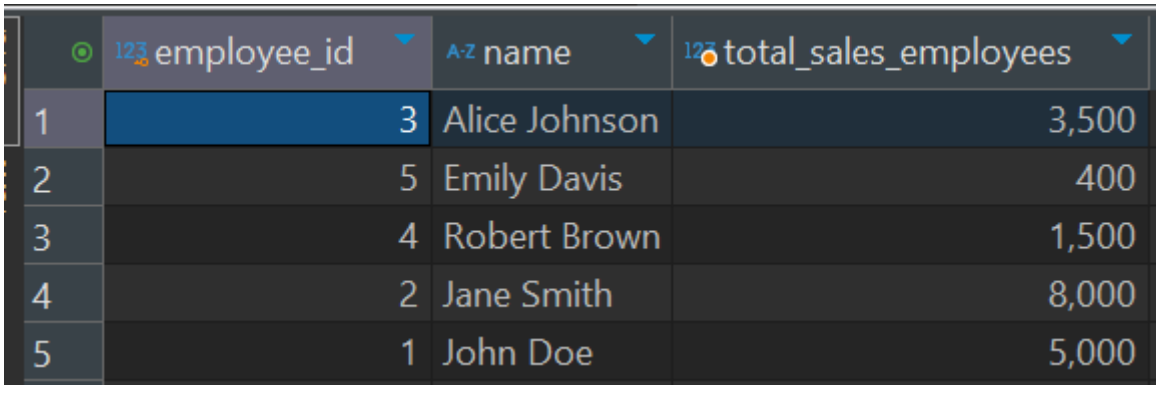
	category	avg_price_category
1	Electronics	766.6666666667
2	Accessories	60

3. Buat query untuk menghitung total penjualan yang dihasilkan oleh setiap karyawan.

Code:

```
select e.employee_id, e.name, sum(s.quantity*s.price) as
total_sales_employees
from sales s
join employees e on s.employee_id = e.employee_id
group by e.employee_id, e.name;
```

Result:



	employee_id	name	total_sales_employees
1	3	Alice Johnson	3,500
2	5	Emily Davis	400
3	4	Robert Brown	1,500
4	2	Jane Smith	8,000
5	1	John Doe	5,000

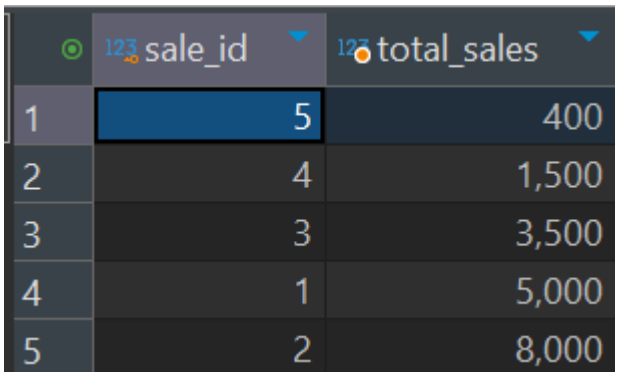
4. Buat query untuk mencari penjualan terbesar dan terkecil yang pernah terjadi.

Code:

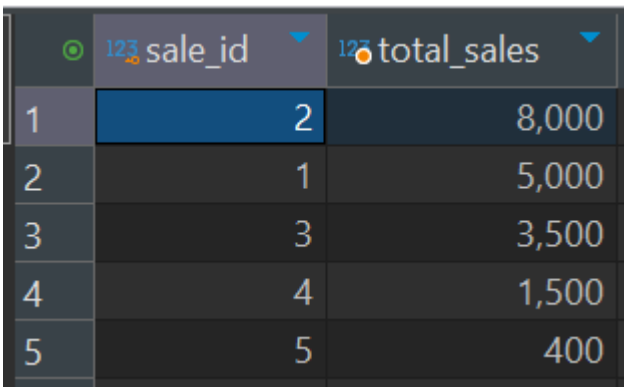
```
-- terkecil
select sale_id, sum(quantity*price) as total_sales
from sales
group by sale_id
order by total_sales asc;
```

```
-- terbesar
select sale_id, sum(quantity*price) as total_sales
from sales
group by sale_id
order by total_sales desc;
```

Result:



	sale_id	total_sales
1	5	400
2	4	1,500
3	3	3,500
4	1	5,000
5	2	8,000



	sale_id	total_sales
1	2	8,000
2	1	5,000
3	3	3,500
4	4	1,500
5	5	400

5. Buat query untuk mencari produk yang memiliki total penjualan tertinggi (berdasarkan jumlah unit yang terjual).

Code:

```
select p.product_id, p.product_name, s.quantity
from sales s
join products p on s.product_id = p.product_id
order by s.quantity desc;
```

Result:

	product_id	product_name	quantity
1	5	Charger	20
2	4	Headphones	15
3	2	Smartphone	10
4	3	Tablet	7
5	1	Laptop	5

6. Buat query untuk mencari karyawan yang memiliki pendapatan di atas rata-rata.

Code:

```
select *
from employees
where salary >
      (
            select avg(salary)
            from employees
      );
```

Result:

	employee_id	name	department_id	salary
1	3	Alice Johnson	3	60,000
2	5	Emily Davis	5	70,000

7. Buat query untuk menampilkan semua penjualan beserta nama produk dan nama karyawan yang terlibat.

Code:

```
select s.sale_id, e.name, p.product_name, s.quantity, s.price,
s.sale_date
from sales s
join employees e on s.employee_id = e.employee_id
join products p on s.product_id = p.product_id ;
```

Result:

	sale_id	name	product_name	quantity	price	sale_date
1	1	John Doe	Laptop	5	1,000	2024-05-01
2	2	Jane Smith	Smartphone	10	800	2024-05-02
3	3	Alice Johnson	Tablet	7	500	2024-05-03
4	4	Robert Brown	Headphones	15	100	2024-05-04
5	5	Emily Davis	Charger	20	20	2024-05-05

8. Buat query untuk menghitung total penjualan yang dihasilkan oleh setiap departemen.

Code:

```
select d.department_name, sum(s.quantity*s.price) as
total_sales_dept
from sales s
join employees e on s.employee_id = e.employee_id
join departments d on e.department_id = d.department_id
group by d.department_name;
```

Result:

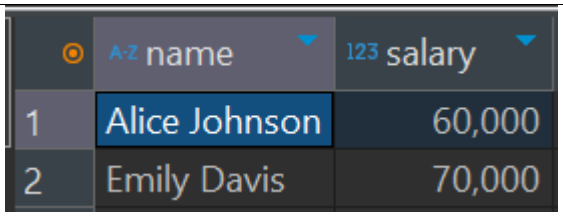
	department_name	total_sales_dept
1	Marketing	8,000
2	Finance	400
3	Sales	5,000
4	IT	3,500
5	HR	1,500

9. Buat query untuk menampilkan nama dan gaji karyawan yang gajinya di atas rata-rata.

Code:

```
select name, salary
from employees
where salary >
      (
            select avg(salary)
            from employees
      );
```

Result:



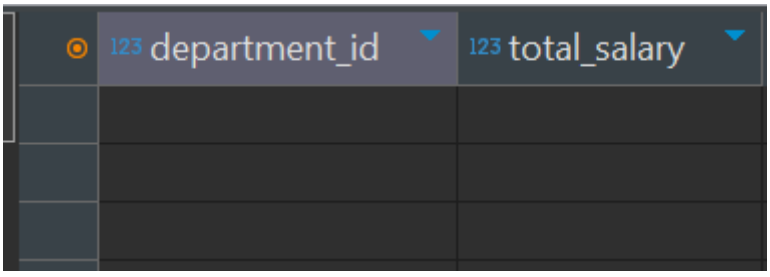
	name	salary
1	Alice Johnson	60,000
2	Emily Davis	70,000

10. Buat query menggunakan CTE untuk mengetahui jumlah total gaji per departemen dan menampilkan departemen yang total gajinya lebih tinggi dari 100000.

Code:

```
WITH DepartmentSalary AS (
    SELECT
        department_id,
        SUM(salary) AS total_salary
    FROM
        employees
    GROUP BY
        department_id
)
SELECT
    department_id,
    total_salary
FROM
    DepartmentSalary
WHERE
    total_salary > 100000;
```

Result:



	department_id	total_salary