Data Mining Lab 2

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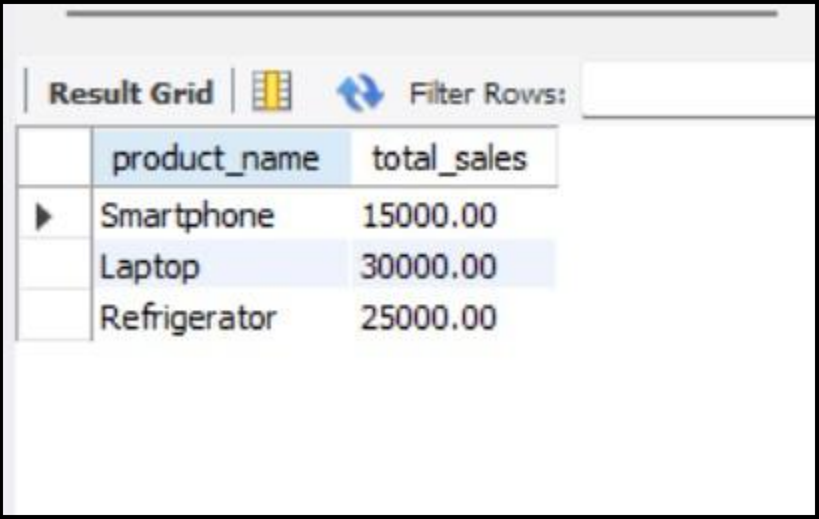
Query for Creating and Inserting values into to table

```
-- Create the table
CREATE TABLE products_sales (
product_id INT PRIMARY KEY,
product_name VARCHAR(255),
sales_amount DECIMAL(10, 2),     region
VARCHAR(100),     product_category
VARCHAR(100),     store_id INT,
   store_name VARCHAR(255)
);


-- Insert sample values
INSERT INTO products_sales (product_id, product_name, sales_amount, region, product_category, store_id, store_name)
VALUES
(1, 'Smartphone', 15000.00, 'North', 'Electronics', 101, 'Tech Store'),
(2, 'Laptop', 30000.00, 'South', 'Electronics', 102, 'Gadget Hub'),
(3, 'Shoes', 5000.00, 'East', 'Fashion', 103, 'Style Mart'),
(4, 'T-shirt', 2000.00, 'West', 'Fashion', 104, 'Apparel Corner'),
(5, 'Refrigerator', 25000.00, 'North', 'Home Appliances', 105, 'Home Goods Store');
```

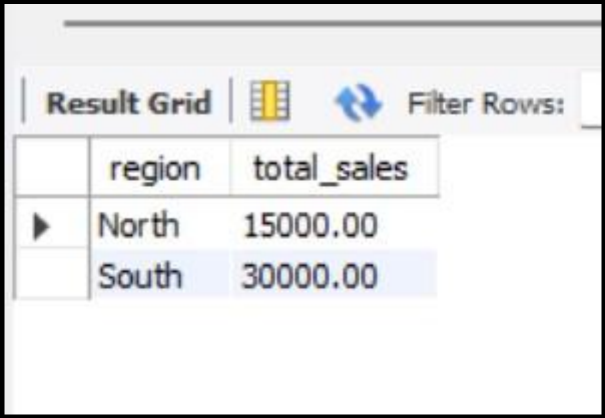
Iceberg Query

```
SELECT product_name, SUM(sales_amount) as total_sales
FROM Products_sales
GROUP BY product_name
HAVING SUM(sales_amount) > 10000;
```



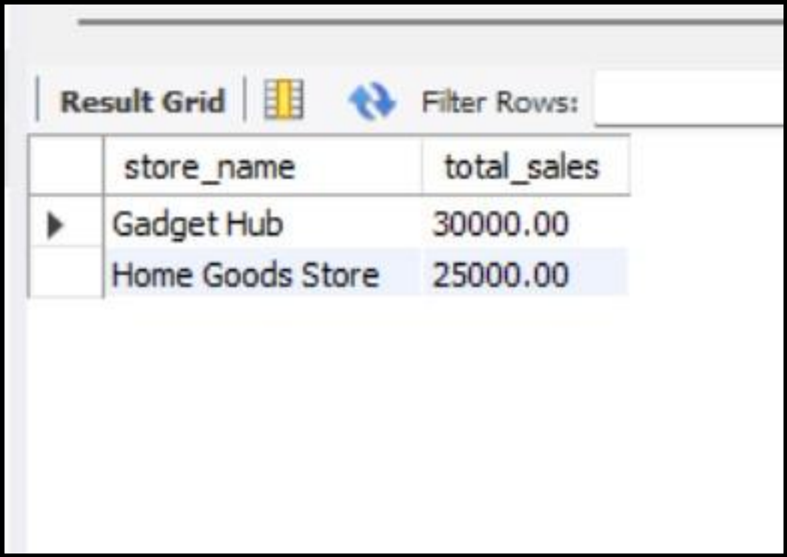
product_name	total_sales
Smartphone	15000.00
Laptop	30000.00
Refrigerator	25000.00

```
SELECT region, SUM(sales_amount) AS total_sales
FROM products_sales
WHERE product_category = 'Electronics'
GROUP BY region
HAVING SUM(sales_amount) > 5000;
```



region	total_sales
North	15000.00
South	30000.00

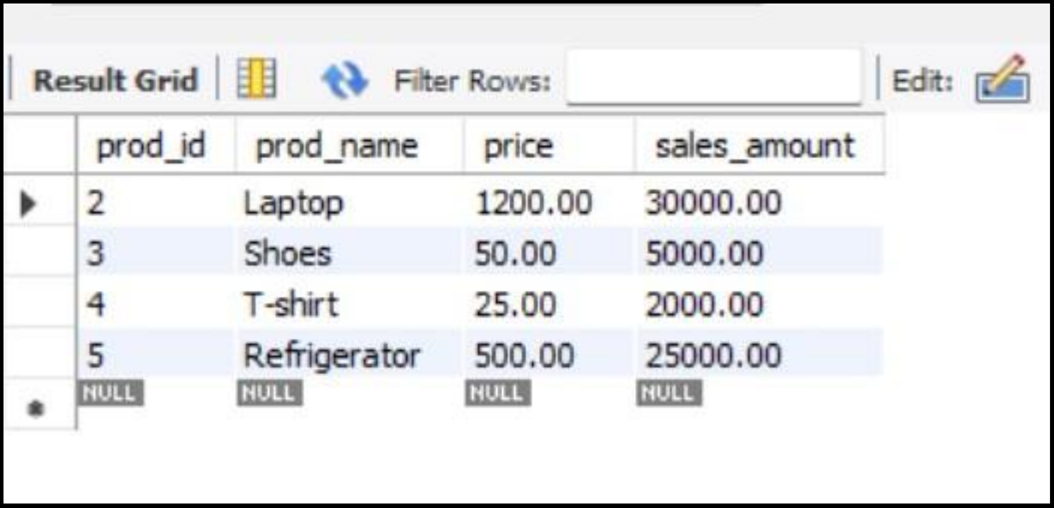
```
SELECT store_name, SUM(sales_amount) AS total_sales
FROM products_sales
GROUP BY store_name
HAVING SUM(sales_amount) > 20000;
```



store_name	total_sales
Gadget Hub	30000.00
Home Goods Store	25000.00

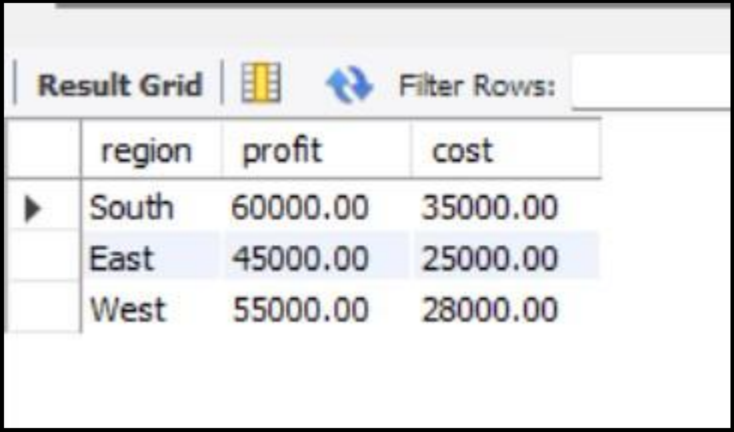
Skyline Query

```
SELECT prod_id, prod_name, price, sales_amount
FROM salesData
GROUP BY prod_id, prod_name, price
HAVING not exists(SELECT 1 FROM salesData AS S2 WHERE S2.price < salesData.price AND
S2.sales_amount > (SELECT SUM(sales_amount) FROM salesData AS S1 WHERE S1.prod_id =
salesData.prod_id))
```



prod_id	prod_name	price	sales_amount
2	Laptop	1200.00	30000.00
3	Shoes	50.00	5000.00
4	T-shirt	25.00	2000.00
5	Refrigerator	500.00	25000.00
NULL	NULL	NULL	NULL

```
SELECT region, profit, cost
FROM region_finances AS R1
WHERE NOT EXISTS (
    SELECT 1
    FROM region_finances AS R2
    WHERE R2.region <> R1.region
   AND R2.profit > R1.profit
   AND R2.cost < R1.cost
);
```

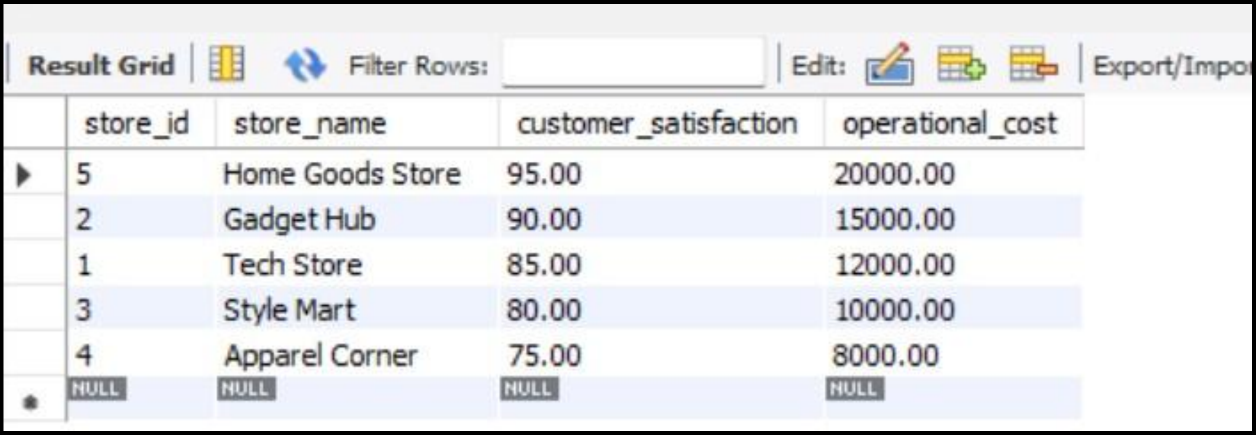


region	profit	cost
South	60000.00	35000.00
East	45000.00	25000.00
West	55000.00	28000.00

```
-- Create the table for stores
CREATE TABLE store_performance (     store_id INT PRIMARY KEY,
store_name VARCHAR(255),     customer_satisfaction DECIMAL(5, 2),  --
Assuming it's on a scale of 0-100     operational_cost DECIMAL(10, 2)
);

-- Insert sample values
INSERT INTO store_performance (store_id, store_name, customer_satisfaction, operational_cost)
VALUES
(1, 'Tech Store', 85.00, 12000.00),
(2, 'Gadget Hub', 90.00, 15000.00),
(3, 'Style Mart', 80.00, 10000.00),
(4, 'Apparel Corner', 75.00, 8000.00),
(5, 'Home Goods Store', 95.00, 20000.00);

SELECT store_id, store_name, customer_satisfaction, operational_cost
FROM store_performance
WHERE NOT EXISTS (
    SELECT 1
    FROM store_performance AS S2
    WHERE S2.customer_satisfaction > store_performance.customer_satisfaction
AND S2.operational_cost < store_performance.operational_cost
)
ORDER BY customer_satisfaction DESC, operational_cost ASC;
```



store_id	store_name	customer_satisfaction	operational_cost
5	Home Goods Store	95.00	20000.00
2	Gadget Hub	90.00	15000.00
1	Tech Store	85.00	12000.00
3	Style Mart	80.00	10000.00
4	Apparel Corner	75.00	8000.00
NULL	NULL	NULL	NULL