

self-joins

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Questions – To Consider

- What weather conditions lead to the most flight delays?
- Which airline had the most flight delays? The highest percentage of flight delays?
- Do we know how many passengers flew Delta out of NYC area airports in 2013?
- Suppose we are also given data for 2014 and 2015. How would we combine the data for the three years into a single table?

QUERY LOGICAL PROCESSING

```
SELECT    [DISTINCT] Customer, COUNT(*) AS NumOrders
FROM      Orders
WHERE     OrderDate > '20180101'
GROUP BY  Customer
HAVING    COUNT(*) > 1
ORDER BY  NumOrders DESC
OFFSET 0 ROWS FETCH NEXT 2 ROWS ONLY
```

Orders



Order ID	Customer	Order Date
1	Dave	2018-01-01
2	John	2018-01-02
3	Gerald	2018-01-03
4	John	2018-01-09

QUERY LOGICAL PROCESSING

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SELECT    [DISTINCT] Customer, COUNT(*) AS NumOrders
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Orders



Order ID	Customer	Order Date
1	Dave	2018-01-01
2	John	2018-01-02
3	Gerald	2018-01-03
4	John	2018-01-09

In what order are the clauses of the SQL SELECT statement executed?

QUERY LOGICAL PROCESSING

6

```
5 SELECT      [DISTINCT] Customer, COUNT(*) AS NumOrders
1 FROM        Orders
2 WHERE       OrderDate > '20180101'
3 GROUP BY    Customer
4 HAVING       COUNT(*) > 1
7 ORDER BY    NumOrders DESC
8 OFFSET 0 ROWS FETCH NEXT 2 ROWS ONLY
```

Orders

Order ID	Customer	Order Date
1	Dave	2018-01-01
2	John	2018-01-02
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4	John	2018-01-09

Can I use aliases from my SELECT clause in my WHERE CLAUSE? In my ORDER BY clause?

QUERY LOGICAL PROCESSING

6

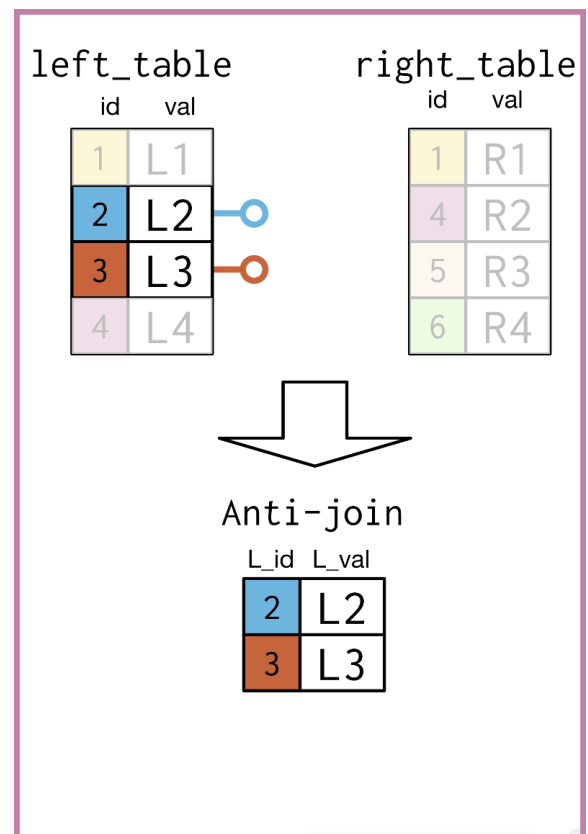
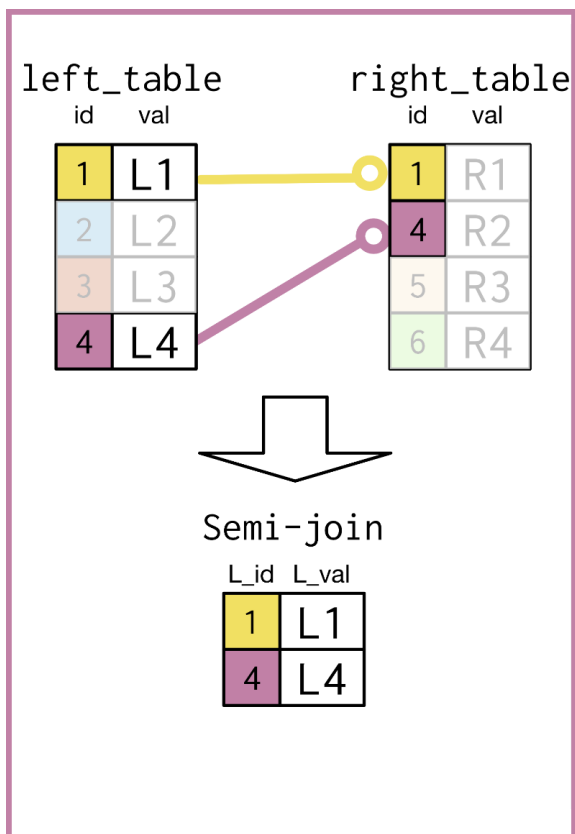
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Orders

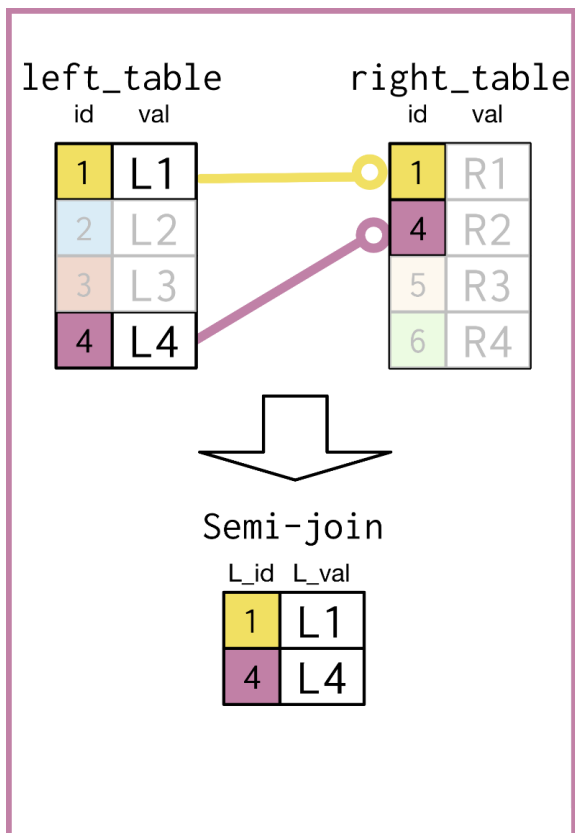
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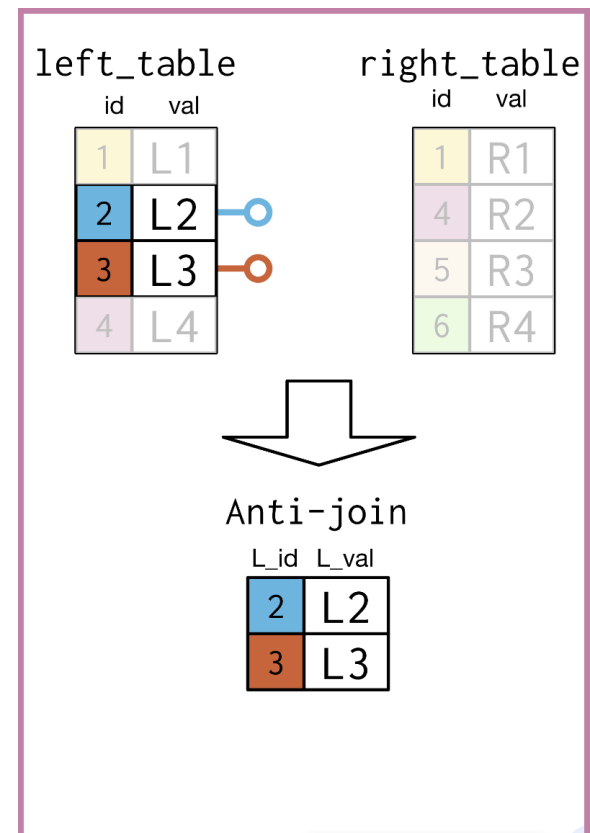
Can I use aggregations in my WHERE clause? In my ORDER BY clause?



WHERE IN (SELECT ...)



WHERE NOT IN (SELECT...)



List of assets owned by General Electric

From Wikipedia, the free encyclopedia

List of assets owned by **General Electric**: ✓

Primary business units [edit]

- **GE Capital** ✓
 - **GE Capital Aviation Services** ✓
 - **GE Energy Financial Services** ✓
 - **GE Real Estate**
 - **GE Americas**
 - **GE Asia**
 - **GE Europe, Middle East & Africa**
- **GE Energy Management** ✓
 - Industrial Solutions
 - **GE Power Electronics** ✓
 - **GE Power Components** ✓
 - **GE Critical Power**
 - **GE Intelligent Platforms**
 - **Power Conversion**
 - **Digital Energy**
- **GE Oil & Gas** ✓
 - **GE Power & Water**
 - **GE Home & Business Solutions**

Source: http://en.wikipedia.org/wiki/List_of_assets_owned_by_General_Electric

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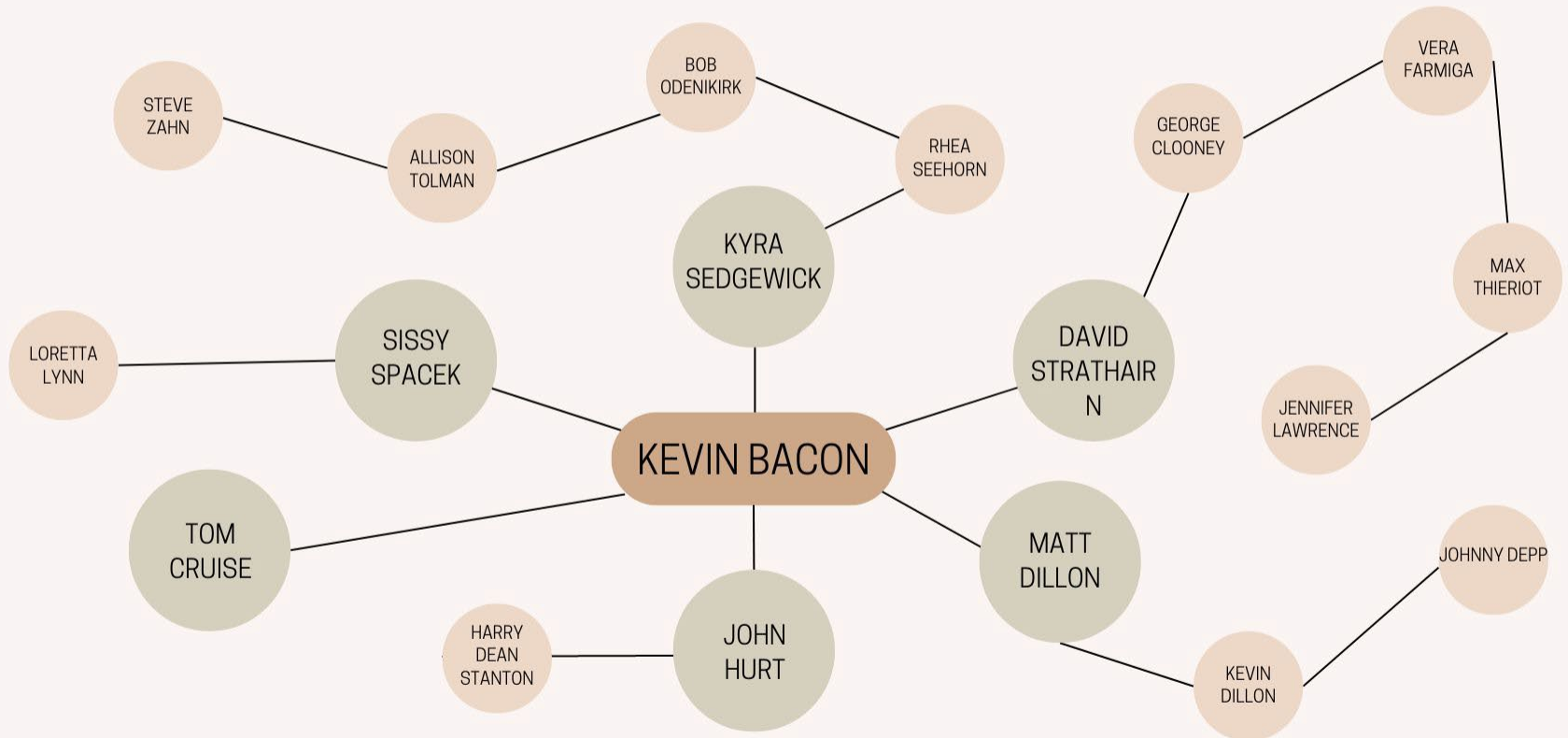
List of assets owned by **General Electric**: ✓

Primary business units [\[edit\]](#)

- **GE Capital** ✓
 - GE Capital Aviation Services ✓
 - GE Energy Financial Services ✓
 - GE Real Estate
 - GE Americas
 - GE Asia
 - GE Europe, Middle East & Africa
- **GE Energy Management** ✓
 - Industrial Solutions
 - GE Power Electronics ✓
 - GE Power Components ✓
 - GE Critical Power
 - GE Intelligent Platforms
 - Power Conversion
 - Digital Energy
- **GE Oil & Gas** ✓
 - GE Power & Water
 - GE Home & Business Solutions

	parent character varying	subsidiary character varying
1	GE Capital	GE Capital Aviation Services
2	GE Capital	GE Energy Financial Services
3	GE Energy Management	GE Power Components
4	GE Energy Management	GE Power Electronics
5	General Electric	GE Capital
6	General Electric	GE Energy Management
7	General Electric	GE Oil and Gas

Six Degrees of Kevin Bacon



Query Times for Bacon Numbers

Bacon Number	SQL	Cogito
1	00:00:24	0.172 ms
2	00:02:06	00:00:13
3	00:12:52	00:00:01
4	00:14:03	00:00:13
5	00:14:55	00:00:16
6	00:14:47	00:00:43