

While LEFT and RIGHT OUTER JOIN are nearly identical in the way that they function, as in by displaying all the information from one table and only the information that satisfies the join condition from the other, they work differently in that LEFT OUTER JOIN only takes all of the information from the table to the left of the JOIN statement, while RIGHT OUTER JOIN only takes all the information from the table on the right of the JOIN statement. While this difference may seem relatively minor, the output of one can be drastically different from one another. For example, if we wanted to perform an OUTER JOIN on the Customers and Agents tables of the cap3 database where we return all customers and only agents that are from the same city as a customer, we could write:

```
SELECT c.name, c.city, a.name, a.city
FROM customers c LEFT OUTER JOIN agents a ON c.city = a.city;
```

This query would then return the names and cities of all customers while only returning the names and cities of agents that reside in common cities. In the case that a customer resides in a city where an agent does not, the query would return NULL for agent name in city in such rows. As such, the above query would return a table looking like this:

Customer Name	Customer City	Agent Name	Agent City
Tiptop	Duluth	Otasi	Duluth
Tyrell	Dallas	Smith	Dallas
Allied	Dallas	Smith	Dallas
ACME	Duluth	Otasi	Duluth
Weyland	Archeron	NULL	NULL
ACME	Kyoto	NULL	NULL

Conversely, if we wanted to return all agents and only customers that are from the same city as an agent, we would write the query:

```
SELECT c.name, c.city, a.name, a.city
FROM customers c RIGHT OUTER JOIN agents a ON c.city = a.city;
```

While the syntax of the above query is nearly identical to the first, the returned rows will actually be very different, since by changing LEFT to RIGHT the query will return all rows from agents in addition to rows from customers only where the customer resides in the same city as an agent. Furthermore, since multiple customers reside in cities like Dallas or Duluth, agents from these cities will appear as many times as there are customers that satisfy the JOIN condition. Thus, the query will return the following:

Customer Name	Customer City	Agent Name	Agent City
NULL	NULL	Smith	New York
NULL	NULL	Jones	Newark
NULL	NULL	Perry	Tokyo

NULL	NULL	Gray	New York
Tiptop	Duluth	Otasi	Duluth
ACME	Duluth	Otasi	Duluth
Tyrell	Dallas	Smith	Dallas
Allied	Dallas	Smith	Dallas
NULL	NULL	Bond	London