Note/Reminder on Joining More Than 2 Tables

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Recall that each join needs a join condition -- for example:

```
select empl_last_name, dept_name
from   empl e, dept d
where  e.dept_num = d.dept_num;
```

```
select cust_lname, empl_last_name helped_by
from   empl e join customer c
       on e.empl_num = c.empl_rep;
```

As we have mentioned a few times in class, you can join any number of relations -- as long as you make sure, when joining *N* relations, that you have *N-1* join conditions!

Because `empl` has a foreign key `dept_num` referencing `dept`,

and `cust` has a foreign key `empl_rep` referencing `empl(empl_num)`,

you can project a customer's last name, the last name of the employee helping them, and the name of that employee's department using:

```
select cust_lname, empl_last_name repd_by, dept_name their_dept
from   empl e, dept d, customer c
where  e.dept_num = d.dept_num
       and e.empl_num = c.empl_rep
order by cust_lname;
```

or, if you prefer:

```
select cust_lname, empl_last_name repd_by, dept_name their_dept
from   empl e
       join dept d on e.dept_num = d.dept_num
       join customer c on e.empl_num = c.empl_rep
order by cust_lname;
```

Oddly enough, using the ANSI-join style, the order of the `JOIN`s is less sensitive than I expected -- this also works!:

```
select cust_lname, empl_last_name repd_by, dept_name their_dept
from   dept d
       join empl e on e.dept_num = d.dept_num
       join customer c on e.empl_num = c.empl_rep
order by cust_lname;
```

BUT -- that said, there are SOME ordering requirements; this ordering did NOT work when I tried it:

```
select cust_lname, empl_last_name repd_by, dept_name their_dept
from   dept d
       join customer c on e.empl_num = c.empl_rep
       join empl e on e.dept_num = d.dept_num
order by cust_lname;
```

...SO it does appear that the first table appearing MIGHT need to be involved in the FIRST join condition.