

Interactive - 20 - delete with in based sub-query

Let's use some of our joins to delete some data.

We will recreate the data from homework 17 again. The file is hw17_1.sql

```
DROP TABLE if exists employee;
DROP TABLE if exists department;

CREATE TABLE employee (
    employee_id serial not null primary key,
    name text not null,
    department_id int,
    pay numeric(12,2) not null default 0
);

CREATE TABLE department (
    department_id serial not null primary key,
    dept_name text not null
);

INSERT INTO department ( department_id, dept_name ) values
    ( 1, 'Sales' ),
    ( 2, 'Development' ),
    ( 3, 'Execuatie' ),
    ( 4, 'Maintenance' )
;

INSERT INTO employee ( name, department_id, pay ) values
    ( 'Bob', 1, 36000 ),
    ( 'Jane', 1, 140000 ),
    ( 'Sally', 2, 121000 ),
    ( 'Liz', 2, 101000 ),
    ( 'Dave', 1, 51000 ),
    ( 'CEO Kelly', 3, 1 ),
    ( 'Uncle Bob', NULL, 96000 ),
    ( 'Brother Charley', NULL, 48000 )
;
```

Let's get rid of the people that are not in a department.

```
DELETE FROM employee as t0
    WHERE t0.employee_id in (
        SELECT t1.employee_id
        FROM employee as t1
```

```
        LEFT OUTER join department as t2 on ( t1.department_id = t2.department_id )
        WHERE t1.department_id is null
    )
;
```

It should delete 2 rows.

There are performance reasons to use either exists or in. Exists combines the queries and is better when the tables are similar in size. In is usually better when the left table is much smaller than the parent table. In results in the inside query running to completion before the outside query.