Interactive - 48 - window functions

Window functions allow operations of a set of data. First let's setup an example.

```
DROP TABLE if exists emp_sal;

CREATE TABLE emp_sal (
    emp_id serial primary key not null,
    dept text not null,
    salary numeric
);

INSERT INTO emp_sal ( dept, emp_id, salary ) values
    ( 'Dev'     ,    11 ,   5200 ),
    ( 'Dev'     ,     7 ,   4200 ),
    ( 'Dev'     ,     9 ,   4500 ),
    ( 'Dev'     ,     8 ,   6000 ),
    ( 'Dev'     ,    10 ,   5200 ),
    ( 'H.R.'    ,     5 ,   3500 ),
    ( 'H.R.'    ,     2 ,   3900 ),
    ( 'sales'   ,     3 ,   4800 ),
    ( 'sales'   ,     1 ,   5000 ),
    ( 'sales'   ,     4 ,   4800 )
;
```

A window function can be used to calculate the sum of salary across each department. This start with the `OVER` operator and a expression of how the data is to be grouped.

```
SELECT
        dept,
        emp_id,
        salary,
        sum(salary) OVER (PARTITION BY dept)  as  dept_total
    FROM emp_sal
;
```