```
--
-- Let's see what's in the took table:

csc343h-dianeh=> select * from took;
  sid   | oid | grade
--------+-----+-------
 99132 |   1 |    79
 99132 |  16 |    98
 99132 |  31 |    82
 99132 |  11 |    99
 99132 |  14 |    39
 99132 |  15 |    62
 99132 |  34 |    75
 98000 |  11 |    79
 98000 |   1 |    82
 98000 |   5 |    89
 98000 |   6 |    72
 98000 |   7 |    89
 98000 |   8 |    93
 98000 |  13 |    98
 98000 |  16 |    79
 98000 |  17 |    79
 98000 |  22 |    54
 98000 |  27 |    89
 98000 |  31 |    78
 98000 |  38 |    92
 98000 |  39 |    97
 98000 |   9 |    78
 99999 |  11 |    99
 99999 |   1 |    89
 99999 |   5 |    76
 . . . more rows omitted here
 11111 |  34 |    45
 11111 |  35 |    88
(55 rows)

-- SQL allows us to "aggregate" (collect together) all the data from a column
-- and apply things to it, like average, min, max.  Here we use that to get
-- the average of all the grades in took.  Notice that the result has just one
-- tuple now:

csc343h-dianeh=> select avg(grade) from took;
         avg
---------------------
 75.8545454545454545
(1 row)

-- SQL invented a name for this column.  It will do this for us when we simply
-- call a function to aggregate, but not if we do some fancier calculation:

csc343h-dianeh=> select max(grade) - min(grade) from took;
 ?column?
----------
      100

-- Let's give the column a better name:
csc343h-dianeh=> select max(grade) - min(grade) as range from took;
 range
-------
   100
(1 row)

-- Back to aggregation.
-- We can do a bunch of aggregations in on query. Notice that we get a table
```

```
-- with one tuple.  The elements of the tuple are unrelated facts, although
-- they are about the same table. We can glue them together into a row
-- because there is one max(grade) in took and on avg(grade), and one of
-- everything else.

csc343h-dianeh=> select max(grade), avg(grade), count(*), min(sid) from took;
 max |         avg         | count |  min
-----+---------------------+-------+-------
 100 | 82.4000000000000000 |    15 | 12345
(1 row)
```