Solution Excercise SQL

- *Title of all lectures the student Schopenhauer attends.*
  
  \[
  \text{Select Title} \\
  \text{From Lectures l, attend a, Students s} \\
  \text{Where l.LectNr = a.LectNr and a.StudNr = s.StudNr and} \\
  \quad \text{s.Name = ‘Schopenhauer‘}
  \]

- *Average Grade of the student Carnap.*
  
  \[
  \text{Select avg(Grade)} \\
  \text{From Students s, test t} \\
  \text{Where s.StudNr = t.StudNr and s.Name = ‘Carnap‘}
  \]

- *Name of all professors who give at least 2 lectures.*
  
  \[
  \text{Select p.Name} \\
  \text{From Professors p, Lectures l} \\
  \text{Where p.PersNr = l.Given_by} \\
  \text{Group By p.Name} \\
  \text{Having Count(*) > 1}
  \]
Solution Exercise SQL (cont.)

SELECT Persnr, Name, COUNT(LectureNr) AS NumberOfLectures
FROM Professors LEFT OUTER JOIN Lectures
ON Persnr = Given_by
WHERE Persnr = 2127 OR Persnr = 2137
GROUP BY Persnr, Name
ORDER BY NumberOfLectures DESC

Result:

<table>
<thead>
<tr>
<th>Persnr</th>
<th>Name</th>
<th>NumberOfLectures</th>
</tr>
</thead>
<tbody>
<tr>
<td>2137</td>
<td>Kant</td>
<td>2</td>
</tr>
<tr>
<td>2127</td>
<td>Kopernikus</td>
<td>0</td>
</tr>
</tbody>
</table>

COUNT(*)??
### Quiz

#### Table Airplane:

<table>
<thead>
<tr>
<th>Producer</th>
<th>Type</th>
<th>NumberSeats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boeing</td>
<td>B747-400</td>
<td>550</td>
</tr>
<tr>
<td>Boeing</td>
<td>B737-300</td>
<td>380</td>
</tr>
<tr>
<td>Airbus</td>
<td>A340-600</td>
<td>380</td>
</tr>
<tr>
<td>Airbus</td>
<td>A320-200</td>
<td>179</td>
</tr>
<tr>
<td>Airbus</td>
<td>A380</td>
<td>NULL</td>
</tr>
</tbody>
</table>

Every producer together with its type of airplane with the most seats

#### Result:

<table>
<thead>
<tr>
<th>Producer</th>
<th>Type</th>
<th>SeatsMax</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boeing</td>
<td>B747-400</td>
<td>550</td>
</tr>
<tr>
<td>Airbus</td>
<td>A340-600</td>
<td>380</td>
</tr>
</tbody>
</table>
Quiz: Solution

with GroupProducer (Producer, SeatsMax) as

(select Producer, max (NumberSeats) from Airplane
group by Producer)

select A.Producer, Type, SeatsMax
from Airplane A, GroupProducer G
where A.Producer = G.Producer and
A.Seats = G.SeatsMax