Agregate functions

Function	*description*
AVG	Average
COUNT	Number of rows
COUNT (*)	Number of rows
MAX	Maximum
MIN	Minimum
SUM	Sum, total value

Aggregate Functions

```
SELECT COUNT (*)
 FROM employees
```

```
SELECT COUNT(reportsto)
 FROM employees
```

Aggregate Functions

```
SELECT AVG(unitprice)
FROM products
```

```
SELECT SUM(quantity)
FROM orderdetails
WHERE product_id = 1
```

GROUP BY

```
SELECT productid, orderid
      ,quantity
 FROM orderhist
```

```
SELECT productid
   ,SUM(quantity) AS total_quantity
 FROM orderhist
 GROUP BY productid
```

productid	orderid	quantity
1	1	5
1	2	10
2	1	10
2	2	25
3	1	15
3	2	30

Only rows that satisfy the WHERE clause are grouped

productid	total_quantity
1	15
2	35
3	45

productid	total_quantity
2	35

```
SELECT productid
   ,SUM(quantity) AS total_quantity
 FROM orderhist
 WHERE productid = 2
 GROUP BY productid
```

GROUP BY

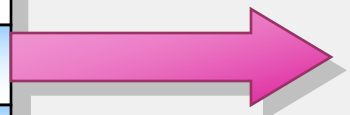
```
SELECT productid, SUM(quantity) AS total_quantity
FROM orderdetails
GROUP BY productid
```

GROUP BY Clause with the HAVING Clause

```
SELECT productid, orderid
      ,quantity
 FROM orderhist
```

```
SELECT productid, SUM(quantity)
   AS total_quantity
 FROM orderhist
 GROUP BY productid
 HAVING SUM(quantity)>=30
```

productid	orderid	quantity
1	1	5
1	1	10
2	1	10
2	2	25
3	1	15
3	2	30



productid	total_quantity
2	35
3	45

Using the GROUP BY Clause with the HAVING Clause

```
SELECT productid, SUM(quantity) AS total_quantity
FROM orderdetails
GROUP BY productid
HAVING SUM(quantity) > 1200
```

Exercise

- Show the number of orders ordered by each customer
- Show the number of products in each category
- Show the average price fo products in each category
- Show the ammount of the order 10250

Exercise

- Show the total amount for each order
- How many orders was shipped by each shipper in 1997
- Which shipper was most active in 1997