



# This Topic

ROW\_NUMBER

LEAD


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# ROW NUMBER



- Assigns a sequential number to each row based on a partition of a result set.
- Syntax:

```
ROW_NUMBER() OVER (PARTITION BY column_name1 ORDER BY column_name2)
```

- Let's say we want to see each customers orders in a result set, ordered by date from oldest to newest.
  - We would use row\_number to number each customers' order.
- 

# ROW\_NUMBER

```
select  
customernumber,  
t1.ordernumber,  
  
row_number() over (partition by customernumber order  
by orderdate) as purchase_number  
  
from classicmodels.orders t1  
  
order by customernumber, t1.ordernumber
```

customernumber	ordernumber	purchase_number
103	10123	1
103	10298	2
103	10345	3
112	10124	1
112	10278	2
112	10346	3
114	10120	1
114	10125	2
114	10223	3
114	10342	4
114	10347	5

# ROW\_NUMBER

```
select distinct  
t3.customername,  
t1.customernumber,  
t1.ordernumber,  
orderdate,  
productcode,  
row_number() over (partition by t3.customernumber order by orderdate) as  
purchase_number  
from classicmodels.orders t1  
join classicmodels.orderdetails t2 on t1.ordernumber = t2.ordernumber  
join classicmodels.customers t3 on t1.customernumber = t3.customernumber  
order by t3.customername
```

customername	customernumber	ordernumber	orderdate	productcode	purchase_number
Alpha Cognac	242	10136	2003-07-04	S18_1129	1
Alpha Cognac	242	10136	2003-07-04	S18_1984	2
Alpha Cognac	242	10136	2003-07-04	S18_3232	3
Alpha Cognac	242	10178	2003-11-08	S10_4757	4
Alpha Cognac	242	10178	2003-11-08	S18_1662	5
Alpha Cognac	242	10178	2003-11-08	S18_3029	6
Alpha Cognac	242	10178	2003-11-08	S18_3856	7
Alpha Cognac	242	10178	2003-11-08	S24_2841	8
Alpha Cognac	242	10178	2003-11-08	S24_3420	9
Alpha Cognac	242	10178	2003-11-08	S24_3816	10
Alpha Cognac	242	10178	2003-11-08	S24_3949	11
Alpha Cognac	242	10178	2003-11-08	S700_2047	12
Alpha Cognac	242	10178	2003-11-08	S700_2466	13
Alpha Cognac	242	10178	2003-11-08	S700_4002	14
Alpha Cognac	242	10178	2003-11-08	S72_1253	15
Alpha Cognac	242	10397	2005-03-28	S700_1938	16
Alpha Cognac	242	10397	2005-03-28	S700_2610	17
Alpha Cognac	242	10397	2005-03-28	S700_3505	18
Alpha Cognac	242	10397	2005-03-28	S700_3962	19



# ROW\_NUMBER

```
with main_cte as
(
select
customernumber,
t1.ordernumber,

row_number() over (partition by customernumber order by
orderdate) as purchase_number

from classicmodels.orders t1

order by customernumber, t1.ordernumber
)

select * from main_cte where purchase_number = 2
```

- Cannot include windowed functions like row\_number in a where clause without making the query a CTE or subquery, and then adding it to the where clause.
- This query now shows each customer and the second order they placed.

