# How to select a row based on its row number?

Asked 5 years, 11 months ago     Active 2 years ago     Viewed 50k times

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I'm working on a small project in which I'll need to select a record from a temporary table based on the actual row number of the record.

How can I select a record based on its row number?

sql    🐦 sql-server    sql-server-2008    tsql

edited Nov 17 '15 at 7:21

asked Oct 3 '13 at 16:43

Kehlan Krumme
**4,189**   11   45   91

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Did you Google for " `row_number()` function in sql"? What is your sql-server version? – Kaf Oct 3 '13 at 16:46 ✏

Actually records in tables do not have numbers. Until you set `ORDER BY` in your query row numbering does not apply. – PM 77-1 Oct 3 '13 at 16:51

If you're using SQL 2012 leverage the sequence command in a column. Trust me, it's a life saver. – Techie Joe Oct 3 '13 at 20:55

## 5 Answers

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A couple of the other answers touched on the problem, but this might explain. There really isn't an order implied in SQL (set theory). So to refer to the "fifth row" requires you to introduce the concept

```
Select *
From
(
    Select
        Row_Number() Over (Order By SomeField) As RowNum
        *
```

In the subquery, a row number is "created" by defining the order you expect. Now the outer query is able to pull the fifth entry out of that ordered set.

edited Oct 4 '15 at 22:15                     answered Oct 3 '13 at 16:57

jbaums                                        asantaballa
**22.1k**   5   57   94                       **3,199**   1   13   20

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4

Technically SQL Rows do not have "RowNumbers" in their tables. Some implementations (Oracle, I think) provide one of their own, but that's not standard and SQL Server/T-SQL does not. You can add one to the table (sort of) with an IDENTITY column.

Or you can add one (for real) in a query with the ROW_NUMBER() function, but unless you specify your own unique ORDER for the rows, the ROW_NUMBERS will be assigned non-deterministically.

edited Oct 3 '13 at 17:02                     answered Oct 3 '13 at 16:49

RBarryYoung
**45k**   12   83   119

1   You are probably referring to Oracle's `ROWID` which is not a row "number" but the physical address of the row. – a_horse_with_no_name Oct 3 '13 at 16:58

@a_horse_with_no_name Right, that was it. – RBarryYoung Oct 3 '13 at 17:01

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2

What you're looking for is the `row_number()` function, as Kaf mentioned in the comments.

Here is an example:

```
WITH MyCte AS
(
    SELECT    employee_id,
              RowNum = row_number() OVER ( order by employee_id )
    FROM      V_EMPLOYEE
    ORDER BY Employee_ID
)
```

```
FROM    MyCte
WHERE   RowNum > 0
```

answered Oct 3 '13 at 16:48

James Johnson
**41.3k**  6  64  102

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If using SQL Server 2012 you can now use offset/fetch:

1

```
declare @rowIndexToFetch int
set @rowIndexToFetch = 0

select
    *
from
    dbo.EntityA ea
order by
    ea.Id
offset @rowIndexToFetch rows
fetch next 1 rows only
```

answered Oct 3 '13 at 16:56

Moho
**11.7k**  1  18  23

Or you can just use the sequence command and create a column of unique numbers. – Techie Joe Oct 3 '13 at 20:53

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There are 3 ways of doing this.

1    Suppose u have an employee table with the columns as `emp_id` , `emp_name` , `salary` . You need the top 10 employees who has highest salary.

   1. Using `row_number()` analytic function

```
   from employee)
where rank<=10
```

## 2. Using `rank()` analytic function

```
Select * from
( select emp_id,emp_name,rank() over (order by salary desc) rank
from employee)
where rank<=10
```

## 3. Using `rownum`

```
select * from
(select * from employee order by salary desc)
where rownum<=10;
```

edited Sep 22 '17 at 9:51       answered Sep 22 '17 at 9:19

TT.       Amit Agarwal

**13.3k**   6   34   68       **19**   1