# **SQL TOP, LIMIT, FETCH FIRST or ROWNUM Clause**

**SQL TOP, LIMIT, FETCH FIRST or ROWNUM Clause:**

1. The SELECT TOP clause is used to specify the number of records to return.
2. The SELECT TOP clause is useful on large tables with thousands of records. Returning a large number of records can impact performance.
3. Example:

|  |
| --- |
| SELECT TOP 3 \* FROM Customers; |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CustomerID** | **CustomerName** | **ContactName** | **Address** | **City** | **PostalCode** | **Country** |
| 1 | Alfreds Futterkiste | Maria Anders | Obere Str. 57 | Berlin | 12209 | Germany |
| 2 | Ana Trujillo Emparedados y helados | Ana Trujillo | Avda. de la Constitución 2222 | México D.F. | 05021 | Mexico |
| 3 | Antonio Moreno Taquería | Antonio Moreno | Mataderos 2312 | México D.F. | 05023 | Mexico |

1. SQL Server / MS Access Syntax:

|  |
| --- |
| SELECT TOP number|percent column\_name(s)  FROM table\_name  WHERE condition; |

1. MySQL Syntax:

|  |
| --- |
| SELECT column\_name(s)  FROM table\_name  WHERE condition  LIMIT number; |

1. Oracle 12 Syntax:

|  |
| --- |
| SELECT column\_name(s)  FROM table\_name  ORDER BY column\_name(s)  FETCH FIRST number ROWS ONLY; |

1. Older Oracle Syntax:

|  |
| --- |
| SELECT column\_name(s)  FROM table\_name  WHERE ROWNUM <= number; |

1. Older Oracle Syntax (with ORDER BY):

|  |
| --- |
| SELECT \*  FROM (SELECT column\_name(s) FROM table\_name ORDER BY column\_name(s))  WHERE ROWNUM <= number; |

**LIMIT:**

1. The following SQL statement shows the equivalent example for MySQL:

|  |
| --- |
| SELECT \* FROM Customers  LIMIT 3; |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CustomerID** | **CustomerName** | **ContactName** | **Address** | **City** | **PostalCode** | **Country** |
| 1 | Alfreds Futterkiste | Maria Anders | Obere Str. 57 | Berlin | 12209 | Germany |
| 2 | Ana Trujillo Emparedados y helados | Ana Trujillo | Avda. de la Constitución 2222 | México D.F. | 05021 | Mexico |
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**FETCH FIRST:**

1. The following SQL statement shows the equivalent example for Oracle:  
   Select the first 3 records of the Customers table:

|  |
| --- |
| SELECT \* FROM Customers  FETCH FIRST 3 ROWS ONLY; |

**SQL TOP PERCENT:**

1. The following SQL statement selects the first 50% of the records from the "Customers" table (for SQL Server/MS Access):

|  |
| --- |
| SELECT TOP 50 PERCENT \* FROM Customers; |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CustomerID** | **CustomerName** | **ContactName** | **Address** | **City** | **PostalCode** | **Country** |
| 1 | Alfreds Futterkiste | Maria Anders | Obere Str. 57 | Berlin | 12209 | Germany |
| 2 | Ana Trujillo Emparedados y helados | Ana Trujillo | Avda. de la Constitución 2222 | México D.F. | 05021 | Mexico |
| 3 | Antonio Moreno Taquería | Antonio Moreno | Mataderos 2312 | México D.F. | 05023 | Mexico |
| 4 | Around the Horn | Thomas Hardy | 120 Hanover Sq. | London | WA1 1DP | UK |
| 5 | Berglunds snabbköp | Christina Berglund | Berguvsvägen 8 | Luleå | S-958 22 | Sweden |

1. The following SQL statement shows the equivalent example for Oracle:

|  |
| --- |
| SELECT \* FROM Customers  FETCH FIRST 50 PERCENT ROWS ONLY; |

**ADD a WHERE CLAUSE:**

1. The following SQL statement selects the first three records from the "Customers" table, where the country is "Germany" (for SQL Server/MS Access):

|  |
| --- |
| SELECT TOP 3 \* FROM Customers  WHERE Country='Germany'; |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CustomerID** | **CustomerName** | **ContactName** | **Address** | **City** | **PostalCode** | **Country** |
| 1 | Alfreds Futterkiste | Maria Anders | Obere Str. 57 | Berlin | 12209 | Germany |
| 6 | Blauer See Delikatessen | Hanna Moos | Forsterstr. 57 | Mannheim | 68306 | Germany |
| 17 | Drachenblut Delikatessend | Sven Ottlieb | Walserweg 21 | Aachen | 52066 | Germany |

1. The following SQL statement shows the equivalent example for MySQL:

|  |
| --- |
| SELECT \* FROM Customers  WHERE Country='Germany'  LIMIT 3; |

1. The following SQL statement shows the equivalent example for Oracle:

|  |
| --- |
| SELECT \* FROM Customers  WHERE Country='Germany'  FETCH FIRST 3 ROWS ONLY; |

**ADD the ORDER BY Keyword:**

1. Add the ORDER BY keyword when you want to sort the result, and return the first 3 records of the sorted result.
2. For SQL Server and MS Access:

|  |
| --- |
| SELECT TOP 3 \* FROM Customers  ORDER BY CustomerName DESC; |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CustomerID** | **CustomerName** | **ContactName** | **Address** | **City** | **PostalCode** | **Country** |
| 91 | Wolski | Zbyszek | ul. Filtrowa 68 | Walla | 01-012 | Poland |
| 90 | Wilman Kala | Matti Karttunen | Keskuskatu 45 | Helsinki | 21240 | Finland |
| 89 | White Clover Markets | Karl Jablonski | 305 - 14th Ave. S. Suite 3B | Seattle | 98128 | USA |

1. The following SQL statement shows the equivalent example for MySQL:

|  |
| --- |
| SELECT \* FROM Customers  ORDER BY CustomerName DESC  LIMIT 3; |

1. The following SQL statement shows the equivalent example for Oracle:

|  |
| --- |
| SELECT \* FROM Customers  ORDER BY CustomerName DESC  FETCH FIRST 3 ROWS ONLY; |