



Fundamental Concepts

SQL Syntax

SQL statements are not case sensitive:
select is the same as SELECT

Some DBMS require a semi-colon at
the end of a statement

Oracle SQL developer requires a semi-
colon at the end

Important SQL Statements

Statement	Meaning
SELECT	Extracts data from the database
UPDATE	Updates data in the database
DELETE	Deletes data from the database
INSERT INTO	Inserts new data into a database
CREATE DATABASE	Creates a new database
ALTER DATABASE	Modifies a database
CREATE TABLE	Creates a new table
ALTER TABLE	Modifies a table
DROP TABLE	Deletes a table
CREATE INDEX	Creates an index
DROP INDEX	Deletes an index

SQL Strings Types

The SQL Server has many in-built string functions

Statement	Meaning
ASCII()	Returns the ASCII values for the specific character
CHAR()	Returns the Characters based on the ASCII value
CHARINDEX()	Returns the position of a substring in a string
CONCAT()	Adds multiple strings together
REPLICATE()	Replicates a string a specified number of times
STR()	Returns a number as a string

CONCAT_WS for with a separator

SQL Numeric Types

The SQL Server has many in-built numeric functions

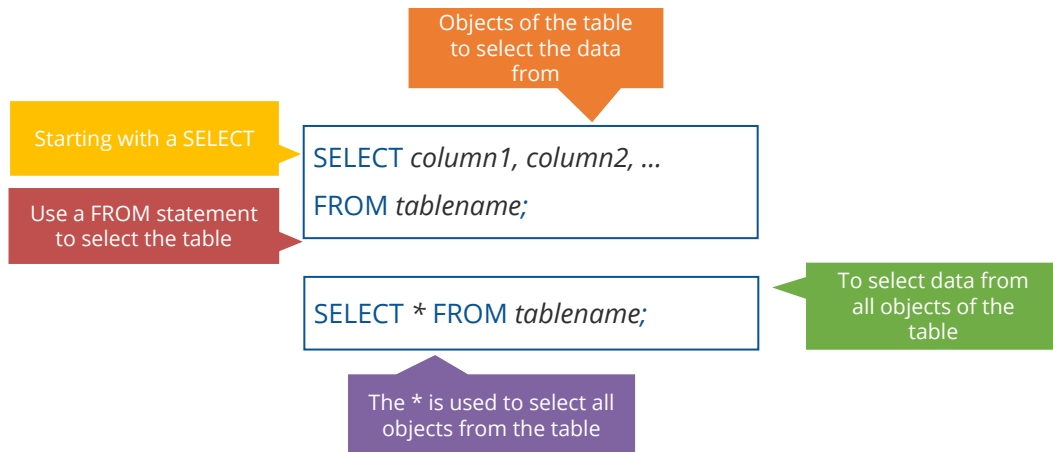
Statement	Meaning
ABS()	Returns the absolute value of a number
AVG()	Returns the average value of a subset of selected data
COUNT()	Returns the number of records of a selected query
MAX()	Returns the maximum value in a set of values
MIN()	Returns the minimum value in a set of values
SUM()	Returns the sum of a set of values

SELECT Statement

The SELECT statement is used to select data from a database

The returned data is stored in a result table, called the result-set

SELECT Statement



SELECT DISTINCT Statement

The SELECT DISTINCT statement is used to return only different values from the table

The tables contain duplicate values; and this statement just return distinct values

SELECT DISTINCT Statement

Starting with a SELECT

```
SELECT DISTINCT column1, column2, ...  
FROM tablename;
```

Objects of the table
to select the data
from

Use COUNT(DISTINCT)
to get the number

Use a FROM statement
to select the table