

# SQL Note

*SQL (Structured Query Language)*

## Most Important SQL Commands

1. **Select** – extracts data
2. **Select into** – copies data from one table into a new table
3. **Update** – updates data
4. **Delete** – deletes data
5. **Insert into** – inserts new data
6. **Create Database** – creates a new database
7. **Alter Database** – modifies a table
8. **Drop Table** – deletes a table
9. **Create index** – creates an index
10. **Drop index** – deletes an index

## 1. Select

**Select Distinct|Top** number|percent column1, **Min|Max|Count|Avg|Sum**(column2), ...

---Top for SQL server, check for different system---

---Date\_trunc( 'day|month|year' ,column)---

---calculation can be used in other condition---

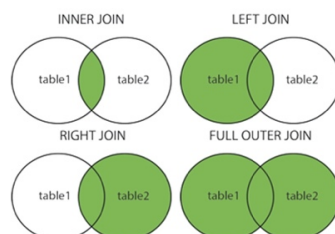
---alias\_name(for table).column1 | **As** alias\_name---

**From** table name1,... ---**As** alias\_name (for first two statement)---

### Different Types of SQL JOINS

Here are the different types of the JOINS in SQL:

- **(INNER) JOIN**: Returns records that have matching values in both tables
- **LEFT (OUTER) JOIN**: Returns all records from the left table, and the matched records from the right table
- **RIGHT (OUTER) JOIN**: Returns all records from the right table, and the matched records from the left table
- **FULL (OUTER) JOIN**: Returns all records when there is a match in either left or right table



**From** table name A, table name B

---self join---

---**Inner Join|Left Join|Right Join|Full Join** table name2 **on**  
table1.column\_name=table2.column\_name ---

**Where** condition, ---where clause can be used in Update, Delete also---

---**Where exists** (*select* statement)---

---**Where** column\_name *Standard comparison operator* **All/Any** (*select* statement)---

----*check Operators*---

**Union|Union all** ----union select distinct values, union all allow duplicate values---  
**Select** statement

**Group by** column1,...

**Having** condition

**Order by** column1, ... **ASC|DESC**; ---ASC as default, column can be used by numbers---

### Operators

Operator	Note
=	Standard comparison operator
>	Standard comparison operator
<	Standard comparison operator
>=	Standard comparison operator
<=	Standard comparison operator
<>	Standard comparison operator
Between	<b>Between</b> value1 <b>and</b> value2
Like	a%, %a, %a%, _a% ( <i>a as second position</i> ), a_% ( <i>at least 2 characters</i> ), a_% ( <i>at least 3 characters</i> ), a%b
In	( value1, value2, ... )   ( <b>select</b> statement)
And Or Not	
Lower Upper	

### Conditions

Statement	Syntax/Note
<b>Case</b>	<b>Case</b> <b>When</b> condition1 <b>Then</b> result1 ... <b>Else</b> result <b>End;</b>
<b>IFNULL( )   COALESCE( )</b>	Return an alternative value if an expression is NULL - <i>MYSQL</i> <b>ISNULL( )</b> - <i>SQL Server</i> <b>NVL( )</b> - <i>Oracle</i>

## 2. Select into

**Select** column1,...

**Into** newtable **in** externaldb

*---in clause for copy the table into a new table in another database---*

**From** oldtable

**Where** condition;

## 3. Update

**Update** table\_name

**Set** column1 = value1,...

**Where** condition;

## 4. Delete

**Delete from** table\_name

**where** condition;

## 5. Insert Into

**Insert Into** table\_name (column1, ...)

**Values** (value1, ...);|**Select** statement

## 6. Create Database

**Create Database** databasename;

*---Drop Database databasename;---*

*---Create Table table\_name (column1 datatype,...);---*

## 7. Alter Database

**Alter table** table\_name

**Add** column\_name datatype;|**Drop Column** column\_name;

## 8. Drop Table

**Drop Table** table\_name;

## 9. Create index

**Create unique index** index\_name

**On** table\_name(column1,...);

## 10. Drop index

**Drop index** table\_name.index\_name;

*---SQL server, check more for others---*

*Note: Notes just sort out the most common statements*

*Reference: w3schools.com*

*2020-06-27*