

SQL 入門

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Database

SQL

```
CREATE DATABASE <database_name>;
```

SQL

```
DROP DATABASE <database_name>;
```

SQL Database

```
SHOW DATABASES;
```

SQL

```
BACKUP DATABASE <database_name>  
TO DISK = <filepath>;
```

SQL

```
BACKUP DATABASE <database_name>  
TO DISK = <filepath>  
WITH DIFFERENTIAL;
```



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......

- MySQL
 -
- Kotlin
- SQL Server ...
- (



```
CREATE TABLE <table_name>(  
    <column1> <datatype>,  
    <column2> <datatype>,  
    ...  
);
```



```
DROP TABLE <table_name>;
```



```
TRUNCATE TABLE <table_name>;
```



```
ALTER TABLE <table_name>  
ADD <column_name> <datatype>;
```



```
ALTER TABLE <table_name>
DROP COLUMN <column_name>;
```





```
ALTER TABLE <table_name>
RENAME COLUMN <old_column_name> to <new_column_name>;
```


SQL Server:

```
EXEC sp_rename "table_name.old", "new_name", "COLUMN";
```



```
--- MS 
ALTER TABLE <table_name>
ALTER COLUMN <column_name> <datatype>;

--- MySQL,  Oracle
ALTER TABLE <table_name>
MODIFY COLUMN <column_name> <datatype>;

---  Oracle
ALTER TABLE <table_name>
MODIFY <column_name> <datatype>;
```



```
SELECT <column_name>, <column_name2>, ... FROM <table_name>;
```

- From  



```
SELECT DISTINCT <column_name>, <column_name2>, ... FROM <table_name>;
```

- `COUNT()` `|||||`

`|||`

```
SELECT COUNT(*) AS <CustomName> FROM (SELECT DISTINCT <column_name>, <column_name2>, ... FROM <table_name>);
```

`Access |||`

```
SELECT COUNT(DISTINCT <column_name>, <column_name2>, ...) FROM <table_name>;
```

`|||`

`WHERE`

```
SELECT <column_name> FROM <table_name> WHERE <condition>;
```

e.g:

```
SELECT * FROM Customers  
WHERE CustomerID > 80;
```

- `= < > <= >= <>` `|||||`
- `BETWEEN` `>=` `<=` `BETWEEN 50 AND 60`
- `LIKE` `|||||` `pat` `LIKE s%` `|||||` `s` `|||||`
- `IN` `IN("Los Angeles", "San Diego")` `Los Angeles` `San Diego` `|||`
- `AND` `OR` `NOT` `|||||`
- `NOT` `BETWEEN` `LIKE` `IN` `|||||`

`AS`

`AS` `|||||` Column `|||||`

```
SELECT city, (temp_hi+temp_lo)/2 AS temp_avg, date FROM weather;
```

`(temp_hi+temp_lo)/2` Column `temp_avg`

`||`

```
SELECT <column_name>, <column_name2>, ... FROM <table_name>
ORDER BY <column_name>, <column_name2>, ... ASC|DESC;
```

- `ORDER BY` clause
- `ASC` | `DESC` keyword
- `ORDER BY` clause

SQL RDBMS specify

- SQL Server/MS Access `SELECT TOP` `PERCENT` clause
- MySQL `LIMIT` `WHERE` clause
- Oracle 12 `ORDER BY` `FETCH First` `<number> ROWS ONLY` `WHERE` clause
 - `WHERE ROWNUM <= <number>`
- `ORDER BY` clause



```
INSERT INTO <table_name>(<column_name>, <column_name2> ...)
VALUES (<value1>, <value2>, ...);
```

- `column_name` Column
- `Column`
- `Column`

```
INSERT INTO <table_name>(<column_name>, <column_name2> ...)
VALUES
(<value1>, <value2>, ...),
(<value1>, <value2>, ...),
...;
```

NULL

`NULL` clause

`IS NULL` | `IS NOT NULL` clause

```
SELECT <column_name>
FROM <table_name>
WHERE <column_name> IS NULL | IS NOT NULL;
```

NULL [] NULL []



```
UPDATE <table_name>
SET <column1> = <value1>, <column2> = <value2>, ...
WHERE <condition>
```

- [WHERE] **WHERE** []



```
DELETE FROM <table_name> WHERE <condition>
```

- [UPDATE] **WHERE** []
- [] DROP TABLE <table_name> [DELETE FROM]

SQL Functions



MAX() [MIN()] []

```
SELECT MAX(<column_name>) | MIN(<column_name>) FROM <table_name> WHERE <condition>;
```

- [AS] []

```
SELECT MAX(<column_name>) AS <CustomName> FROM ...;
```

- [GROUP BY] []

```
SELECT MAX(<column1>) AS <CustomName>, <column2>
FROM <table_name>
```

```
GROUP BY <column2>;
```



```
COUNT() ██████████
```

```
SELECT COUNT(<column_name>) FROM <table_name> WHERE <condition>;
```

- `[*] [] [] [] (`
- `[DISTINCT] [SELECT COUNT(DISTINCT <column_name> FROM ...)`
- `[WHERE] [AS] [GROUP BY`



```
[ SUM() ] [ ] [ ]
```

```
SELECT SUM(<column_name>) FROM <table_name> WHERE <condition>;
```

- `AS WHERE GROUP BY [] [] [] []`



```
[ AVG() ] [ ] [ ]
```

```
SELECT AVG(<column_name>) FROM <table_name> WHERE <condition>;
```

- `[AS WHERE] [GROUP BY`
- `[] [] [] [] [] [] [] [] [] []`

```
SELECT * FROM <table_name> WHERE <column1> > (SELECT AVG(<column1>) FROM <table_name>)
```



`[] [] Pattern LIKE)`

```
[ LIKE ] :
```




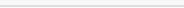






```
SELECT <column> FROM <table_name> WHERE <column> LIKE <pattern>;
```

- [illegible]

--	--	--	--

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□□□□□□ RDBMS specify):

- PostgreSQL MySQL Oracle DB
- DB System SQL script
- MS Access

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