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- [SQL ■■■](#)

SQL 入门

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SQL 入门

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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;
```



```
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() 8

4

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

Access 8

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

4

WHERE

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

e.g:

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

- = < > <= >= <> 8
- BETWEEN >= <= BETWEEN 50 AND 60
- LIKE pat LIKE s% s 8
- IN IN("Los Angeles", "San Diego") Los Angeles San Diego
- AND OR NOT 16
- NOT BETWEEN LIKE IN 8

AS

AS Column 8

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

(temp_hi+temp_lo)/2 Column temp_avg

2

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

- `ORDER BY` clause
- `ASC` | `DESC` keyword
- `ORDER BY <column_name> ASC, <column_name2> DESC`

SQL RDBMS specify

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

`IS NULL` | `IS NOT NULL` `Column`

```
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