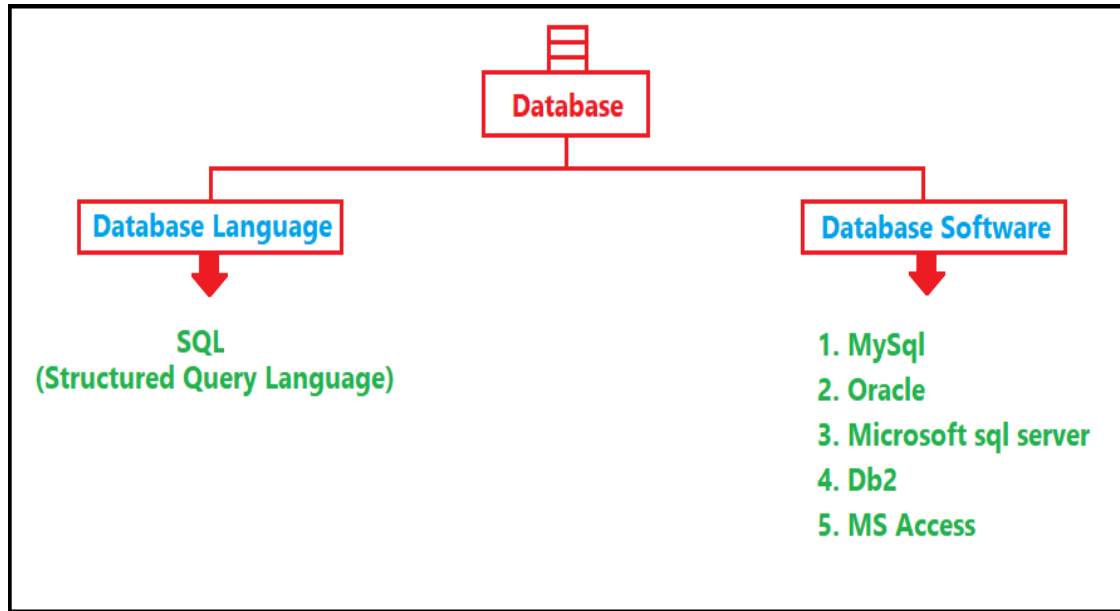


SQL in one video



- **DATABASE SOFTWARE**

WE USE DATABASE SOFTWARE TO STORE DATA

- **DATABASE LANGUAGE**

WE USE DATABASE LANGUAGE (SQL) TO CONTROL THE BEHAVIOR OF DATABASE SOFTWARE (MYSQL)

RDBMS PROGRAM
(RELATIONAL DATABASE MANAGEMENT
SYSTEM) RDBMS PROGRAM STORES THE
DATA AS TABLE FORMAT

No	Name	Data-1	Data-1
1	A	--	--
2	B	--	--

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SQL SQL STATEMENTS ARE KNOWN AS SQL QUERY

1. Create database

```
CREATE DATABASE demo;  
or  
create database demo;
```

2. Delete database

```
drop database demo;
```

3. Create table

```
CREATE TABLE admission(  
    adm_no int(10),  
    student`s_name varchar(50),  
    mobile_no int(12)  
);
```

4. Insert data in table

```
INSERT INTO admission(adm_no,student`s_name,mobile_no)  
VALUES(1,"Arsil Malek",12454889)
```

5. How to display data from database?

```
SELECT * FROM admission;  
adm_no,students_name FROM admission;
```

6. How to apply conditions in select query ?

```
SELECT * FROM admission WHERE no = "1";  
SELECT students_name FROM admission WHERE no = "1";
```

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7. How to update data in table ?

```
UPDATE admission  
SET no = "1";
```

8. How to update data with conditions in table ?

```
UPDATE admission  
SET students_name = "Arsil Malek"  
WHERE no = "1";
```

9. How to delete all row from table ?

```
DELETE FROM admission;
```

10. How to delete specific row from table ?

```
DELETE FROM  
admission WHERE  
no = "1";
```

11. How to set limit during select ?

```
SELECT * FROM  
admission LIMIT 2;
```

12. How to sort table data in descending order?

```
SELECT * FROM  
admission ORDER BY no  
DESC;
```

13. How to sort table data in ascending order?

```
SELECT * FROM  
admission ORDER BY no  
ASC;
```

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14. How to display last row data?

```
SELECT * FROM admission  
ORDER BY  
no DESC LIMIT 1;
```

15. How to add column data?

```
SELECT SUM(adm_no)  
FROM admission;
```

16. How to count column data ?

```
SELECT COUNT(adm_no)  
FROM admission;
```

17. How to do duplication data sorting ?

```
SELECT DISTINCT students_name FROM admission;
```

18. How to do count duplication data sorting ?

```
SELECT COUNT(DISTINCT students_name) FROM admission;
```

OPERATORS FOR WHERE QUERY

- | | |
|-------------------|-----------------------|
| 1. = | equal to |
| 2. > greater than | |
| 3. < smaller than | |
| 4. >= | greater than or equal |
| 5. <= | smaller than or equal |
| 6. <> | is not equal |
| 7. BETWEEN | |
| 8. IN() | |
| 9. AND | |
| 10. OR | |
| 11. NOT | |
| 12. IN | |

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Example

CREATE A TABLE product_list AND STORE THESE ITEMS

products	price
HP	25000
DELL	20000
Samsung	54000
Apple	100000
acer	33000

Q1 * : how to display 20000 products ?

```
SELECT * FROM product_list  
WHERE price = "20000";
```

```
SELECT * FROM product_list  
WHERE price IN ('30000','20000');
```

LIKE

Pattern

'w%'

'%w'

'%w%'

Meaning

watfirstposition

watlastposition

watanyposition

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'_w%'

w at second position

'w%p'

w at first position and p at last position

'*abc+%'

find string who starts from a, b and c

'*a-s+%'

find string who starts from a to s

Example :

```
SELECT * FROM product_list WHERE product_name LIKE 'w%'
```

19. How to create auto_increment column ?

```
CREATE TABLE demo(  
  adm_no INT(6) NOT NULL AUTO_INCREMENT,  
  s_name VARCHAR(50), PRIMARY KEY(adm_no)  
);
```

20. How to apply case conditions ?

```
SELECT *, CASE  
  WHEN marks < 10 THEN "marks is  
  less than 10" WHEN marks > 10  
  THEN "marks is greater than 10"  
  WHEN marks = 10 THEN "marks is  
  equal to 10" ELSE : "some wrong"  
END AS result  
FROM result;
```

21. How to calculate min and max?

```
SELECT s_name, MIN(marks) AS poor_student;  
SELECT s_name, MAX(marks) AS amazing_student;
```

CONCAT()

CREATE A STUDENT TABLE

name	town	district	state	country	pincode
------	------	----------	-------	---------	---------

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Arsil	Gazipur	baroda	Gujarat	India	387001
-------	---------	--------	---------	-------	--------

22. How to combined each other ?

Arsil,Gazipur, baroda, Gujarat, India 387001

```
SELECT CONCAT(name," ",town," ",district," ",state," ",country," ",pincode) AS  
permanent_address FROM students;
```

COPY TABLE DATA

```
INSERT INTO admission(s_name)  
SELECT name FROM data;
```

COPY TABLE DATA WITH COLUMN NAME

```
CREATE TABLE new AS  
SELECT * FROM admission;
```

INSERT MULTIPLE VALUES IN A COLUMN AT ONE TIME

```
INSERT INTO admission(s_name) VALUES("arsil"),("humayu");
```

TABLE RELATION

Admission

adm_no	name
1	Arsil Malek
2	Humayu Shaikh
4	Montu
8	Dipak

Fee

adm_no	fee
1	500
2	400
3	600
6	700

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JOIN OPERATIONS

1. INNER JOIN

```
SELECT admission.name,  
fee.fee FROM admission  
INNER JOIN fee  
ON admission.adm_no = fee.adm_no;
```

name	fee
a	500
b	200

2. LEFT JOIN

```
SELECT admission.name,  
fee.fee FROM admission  
LEFT JOIN fee  
ON admission.adm_no = fee.adm_no;
```

name	fee
a	500
b	NULL

3. RIGHT JOIN

```
SELECT admission.name,  
fee.fee FROM admission  
RIGHT JOIN fee  
ON admission.adm_no = fee.adm_no;
```

name	fee
a	500
NULL	200

4. FULL JOIN (not supported in mysql)

```
SELECT admission.name, fee.fee FROM admission  
FULL OUTER JOIN fee  
ON admission.adm_no=fee.adm_no;
```

name	fee
a	500
NULL	NULL

5. SELF JOIN

Mem_id	Mem_name	Rel_id
1	Arsil	2
2	Montu	3
3	Humayu	1

Output :-

Mem_name	Rel_member
Arsil	Montu
Montu	Humayu
Humayu	Arsil

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```
SELECT a.mem_name AS member_name,b.mem_name AS related_member  
  
FROM members  
  
AS a INNER JOIN  
members AS b ON  
  
a.rel_id=  
  
b.mem_id
```

GROUP DUPLICATE DATA

CREATE TABLE classes

adm_no	s_name	course
1	Salman	bca
2	Arsil	mca
3	Misbah	bca

→ SELECT
course
FROM
admission
GROUP
BY course

(Apply conditions in group)

- SELECT
count(adm_no),course
FROM admission
GROUP BY course
HAVING COUNT(adm_no) > 6

CONSTRAINTS

1. **NOT NULL** : remove null when field is empty
2. **PRIMARY KEY** : create unique key when auto_increment
3. **UNIQUE** : it also creates unique key
4. **FOREIGN KEY** : works on the basis of primary key

Ex : FOREIGN KEY (adm_no) REFERENCES admission(adm_no)

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5. **CHECK** : apply conditions for a particular column [**not supported in mysql**]
6. **DEFAULT** : set default value in column

PRIMARY KEY VS UNIQUE KEY

PRIMARY KEY	UNIQUE KEY
ONLY ONE IN TABLE	YOU CAN MORE THAN ONE
ONLY NOT NULL ACCEPTED	ACCEPTED NULL VALUES

Mysql DATA TYPES

DATA TYPE	MAX LENGTH
VARCHAR	65535
BLOB	65535 BYTES
MEDIUMBLOB	16MB
LOB	4GB
INT	255
FLOAT	0 – 23
DOUBLE	24 - 53
DATE	YYYY-MM-DD
DATETIME	YYYY-MM-DD HH:MM:SS
TIME	HH:MM:SS
YEAR	YYYY

THANK YOU

