

SQL(PRACTICE AND TASKS)

1.SHOW DATABASE

```
mysql> show databases;
+-----+
| Database |
+-----+
| db       |
| dbm      |
| dbms     |
| ecotourism |
| information_schema |
| mysql    |
| performance_schema |
| sakila   |
| sys      |
| world    |
+-----+
10 rows in set (0.04 sec)
```

2.TO CREATE A DATABASE

```
mysql> create database classroom;
Query OK, 1 row affected (0.02 sec)
```

3.TO CREATE TABLE

```
mysql> create table student(sid int,sname varchar(50),dept varchar(10),mark1 int,mark2 int);
Query OK, 0 rows affected (0.06 sec)
```

4.TO INSERT VALUES IN TABLE

```
mysql> insert into student values(1,'AAA','CSE',99,98);
Query OK, 1 row affected (0.02 sec)

mysql> insert into student values(2,'BBB','ECE',90,91);
Query OK, 1 row affected (0.01 sec)

mysql> insert into student values(3,'CCC','EEE',92,95);
Query OK, 1 row affected (0.02 sec)

mysql> insert into student values(4,'DDD','CSE',90,93);
Query OK, 1 row affected (0.02 sec)

mysql> insert into student values(5,'EEE','ECE',94,97);
Query OK, 1 row affected (0.01 sec)
```

5.TO VIEW THE COMPLETE TABLE

```
mysql> select * from student;
+-----+-----+-----+-----+-----+
| sid  | sname | dept  | mark1 | mark2 |
+-----+-----+-----+-----+-----+
| 1    | AAA   | CSE   | 99    | 98    |
| 2    | BBB   | ECE   | 90    | 91    |
| 3    | CCC   | EEE   | 92    | 95    |
| 4    | DDD   | CSE   | 90    | 93    |
| 5    | EEE   | ECE   | 94    | 97    |
+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```

6.TO VIEW A PARTICULAR FIELD

```
mysql> select dept from student;
+-----+
| dept |
+-----+
| CSE  |
| ECE  |
| EEE  |
| CSE  |
| ECE  |
+-----+
5 rows in set (0.00 sec)
```

7.TO VIEW WITH A PARTICULAR CONDITION

```
mysql> select * from student where dept='CSE';
```

sid	sname	dept	mark1	mark2
1	AAA	CSE	99	98
4	DDD	CSE	90	93

```
2 rows in set (0.00 sec)
```

8.CONDITION USING BETWEEN

```
mysql> select * from student where sid between 1 and 3;
```

sid	sname	dept	mark1	mark2
1	AAA	CSE	99	98
2	BBB	ECE	90	91
3	CCC	EEE	92	95

9.CONDITION USING IN

```
mysql> select * from student where mark1 in (90);
```

sid	sname	dept	mark1	mark2
2	BBB	ECE	90	91
4	DDD	CSE	90	93

2 rows in set (0.00 sec)

```
mysql> select * from student where mark1 in (90) and mark2 in(97);  
Empty set (0.00 sec)
```

```
mysql> select * from student where mark1 in (90) or mark2 in(97);
```

sid	sname	dept	mark1	mark2
2	BBB	ECE	90	91
4	DDD	CSE	90	93
5	EEE	ECE	94	97

3 rows in set (0.00 sec)

10.TO ALTER THE TABLE NAME

```
mysql> alter table student rename students;  
Query OK, 0 rows affected (0.02 sec)
```

11.TO ADD A NEW FIELD

```
mysql> alter table students add mark3 int;  
Query OK, 0 rows affected (0.02 sec)  
Records: 0 Duplicates: 0 Warnings: 0
```

```
mysql> select * from students;  
+-----+-----+-----+-----+-----+-----+  
| sid | sname | dept | mark1 | mark2 | mark3 |  
+-----+-----+-----+-----+-----+-----+  
| 1 | AAA | CSE | 99 | 98 | NULL |  
| 2 | BBB | ECE | 90 | 91 | NULL |  
| 3 | CCC | EEE | 92 | 95 | NULL |  
| 4 | DDD | CSE | 90 | 93 | NULL |  
| 5 | EEE | ECE | 94 | 97 | NULL |  
+-----+-----+-----+-----+-----+-----+  
5 rows in set (0.00 sec)
```

12.TO MODIFY THE VALUES IN TABLE

```
mysql> update students set mark3=90 where dept in('CSE','ECE','EEE');  
Query OK, 5 rows affected (0.00 sec)  
Rows matched: 5 Changed: 5 Warnings: 0
```

```
mysql> SELECT * FROM STUDENTS;  
+-----+-----+-----+-----+-----+-----+  
| sid | sname | dept | mark1 | mark2 | mark3 |  
+-----+-----+-----+-----+-----+-----+  
| 1 | AAA | CSE | 99 | 98 | 90 |  
| 2 | BBB | ECE | 90 | 91 | 90 |  
| 3 | CCC | EEE | 92 | 95 | 90 |  
| 4 | DDD | CSE | 90 | 93 | 90 |  
| 5 | EEE | ECE | 94 | 97 | 90 |  
+-----+-----+-----+-----+-----+-----+  
5 rows in set (0.00 sec)
```

13.TO DELETE A RECORD IN A TABLE

```
mysql> delete from students where sid=5;  
Query OK, 1 row affected (0.00 sec)
```

```
mysql> SELECT * FROM STUDENTS;
```

sid	sname	dept	mark1	mark2	mark3
1	AAA	CSE	99	98	90
2	BBB	ECE	90	91	90
3	CCC	EEE	92	95	90
4	DDD	CSE	90	93	90

4 rows in set (0.00 sec)

AGGREGATE FUNCTIONS

14.COUNT

```
mysql> select count(sname) from students where dept='cse';
```

count(sname)
2

1 row in set (0.01 sec)

15.ORDER BY(ascending)

```
mysql> select * from students order by mark1;
```

sid	sname	dept	mark1	mark2	mark3
2	BBB	ECE	90	91	90
4	DDD	CSE	90	93	90
3	CCC	EEE	92	95	90
1	AAA	CSE	99	98	90

4 rows in set (0.00 sec)

ORDER BY(descending)

```
mysql> select * from students order by mark2 desc;
+-----+-----+-----+-----+-----+-----+
| sid  | sname | dept | mark1 | mark2 | mark3 |
+-----+-----+-----+-----+-----+-----+
| 1    | AAA   | CSE  | 99    | 98    | 90    |
| 3    | CCC   | EEE  | 92    | 95    | 90    |
| 4    | DDD   | CSE  | 90    | 93    | 90    |
| 2    | BBB   | ECE  | 90    | 91    | 90    |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```

16.AVERAGE

```
mysql> select avg(mark1) from students;
+-----+
| avg(mark1) |
+-----+
| 92.7500    |
+-----+
1 row in set (0.00 sec)
```

17.SUM

```
mysql> select sum(mark3) from students;
+-----+
| sum(mark3) |
+-----+
| 360        |
+-----+
1 row in set (0.00 sec)
```

JOINS

THE TWO TABLES ARE STUDENTS AND COURSES:

```
mysql> select * from students;
```

sid	sname	dept	mark1	mark2	mark3
1	AAA	CSE	99	98	90
2	BBB	ECE	90	91	90
3	CCC	EEE	92	95	90
4	DDD	CSE	90	93	90

4 rows in set (0.00 sec)

```
mysql> select * from courses;
```

cid	sid	cname	staff	exp
101	1	C	XX	2
102	3	C++	YY	5
103	5	DBMS	ZZ	9

3 rows in set (0.00 sec)

1.INNER JOIN

```
mysql> select * from students inner join courses where courses.sid=students.sid;
```

sid	sname	dept	mark1	mark2	mark3	cid	sid	cname	staff	exp
1	AAA	CSE	99	98	90	101	1	C	XX	2
3	CCC	EEE	92	95	90	102	3	C++	YY	5

2 rows in set (0.00 sec)

2.RIGHT JOIN

```
mysql> select * from students right join courses on students.sid=courses.sid;
```

sid	sname	dept	mark1	mark2	mark3	cid	sid	cname	staff	exp
1	AAA	CSE	99	98	90	101	1	C	XX	2
3	CCC	EEE	92	95	90	102	3	C++	YY	5
NULL	NULL	NULL	NULL	NULL	NULL	103	5	DBMS	ZZ	9

3 rows in set (0.00 sec)

3.LEFT JOIN

```
mysql> select * from students left join courses on students.sid=courses.sid;
```

sid	sname	dept	mark1	mark2	mark3	cid	sid	cname	staff	exp
1	AAA	CSE	99	98	90	101	1	C	XX	2
2	BBB	ECE	90	91	90	NULL	NULL	NULL	NULL	NULL
3	CCC	EEE	92	95	90	102	3	C++	YY	5
4	DDD	CSE	90	93	90	NULL	NULL	NULL	NULL	NULL

4 rows in set (0.00 sec)

4.FULL JOIN

```
mysql> select * from students left join courses on students.sid=courses.sid union select * from students right join courses on students.sid=courses.sid;
```

sid	sname	dept	mark1	mark2	mark3	cid	sid	cname	staff	exp
1	AAA	CSE	99	98	90	101	1	C	XX	2
2	BBB	ECE	90	91	90	NULL	NULL	NULL	NULL	NULL
3	CCC	EEE	92	95	90	102	3	C++	YY	5
4	DDD	CSE	90	93	90	NULL	NULL	NULL	NULL	NULL
NULL	NULL	NULL	NULL	NULL	NULL	103	5	DBMS	ZZ	9

5 rows in set (0.00 sec)

DROP COMMAND(TO DELETE WHOLE TABLE)

```
mysql> drop table courses;
Query OK, 0 rows affected (0.02 sec)

mysql> select * from courses;
ERROR 1146 (42S02): Table 'classroom.courses' doesn't exist
mysql>
```