

MYSQL COMMANDS

Alias: (with as keyword and without as keyword)

```
mysql> select eid as "Employee Id", ename "Employee Name" from
tbl_employee;
```

Employee Id	Employee Name
101	madhan
102	Aravind
103	NULL
104	kumar
105	dom
106	domnic

6 rows in set (0.00 sec)

Display current time:

```
mysql> select now();
```

now()
2023-10-03 09:54:10

1 row in set (0.00 sec)

TABLE CREATION:

```
mysql> create table tbl_dept (dno int (3),dname varchar(10));
```

Query OK, 0 rows affected, 1 warning (0.02 sec)

```
mysql> insert into tbl_dept (dno,dname ) values
(10,"LD"),(20,"PROJECT");
```

Query OK, 2 rows affected (0.01 sec)

Records: 2 Duplicates: 0 Warnings: 0

```
mysql> select *from tbl_dept;
```

```
+-----+-----+
| dno   |  dname   |
+-----+-----+
|    10 | LD       |
|    20 | PROJECT  |
+-----+-----+
2 rows in set (0.00 sec)
```

```
mysql> select * from tbl_employee;
```

```
+-----+-----+-----+-----+
| eid   |  ename   | esalary | edno |
+-----+-----+-----+-----+
|   101 | madhan   |    2000 |   10 |
|   102 | Aravind  |    2000 |   10 |
|   103 | NULL     |    2000 |   10 |
|   104 | kumar    |    2000 |   20 |
|   105 | dom      |    2000 |   20 |
|   106 | domnic   |    2000 |   20 |
+-----+-----+-----+-----+
6 rows in set (0.00 sec)
```

Subqueries:query inside another query (inner query execute first)

SINGLE ROW/VALUE SUBQUERY:

```
mysql> select dno from tbl_dept where dname="LD";
```

```
+-----+
| dno   |
+-----+
|    10 |
+-----+
1 row in set (0.00 sec)
```

Subquery :1

```
mysql> select * from tbl_employee where edno=(select dno from tbl_dept
where dname="LD");
```

```
+-----+-----+-----+-----+
| eid  |  ename   | esalary |  edno |
+-----+-----+-----+-----+
|  101 | madhan   |    2000 |    10 |
|  102 | Aravind  |    2000 |    10 |
|  103 | NULL     |    2000 |    10 |
+-----+-----+-----+-----+
```

3 rows in set (0.00 sec)

Subquery :2

```
mysql> select dname from tbl_dept where dno=(select edno from
tbl_employee where ename ="domnic");
```

```
+-----+
| dname |
+-----+
| PROJECT |
+-----+
```

1 row in set (0.00 sec)

Subquery :3

```
mysql> select dname from tbl_dept where dno=(select edno from
tbl_employee where ename is null);
```

```
+-----+
| dname |
+-----+
| LD     |
+-----+
```

1 row in set (0.00 sec)

Subquery :4

```
mysql> update tbl_employee set esalary=esalary+200 where edno=(select
dno from tbl_dept where dname ="LD");
```

Query OK, 3 rows affected (0.00 sec)

Rows matched: 3 Changed: 3 Warnings: 0

```
mysql> SELECT * FROM tbl_employee;
+-----+-----+-----+-----+
| eid   | ename   | esalary | edno   |
+-----+-----+-----+-----+
| 101   | madhan  | 2200    | 10     |
| 102   | Aravind | 2200    | 10     |
| 103   | NULL    | 2200    | 10     |
| 104   | kumar   | 2000    | 20     |
| 105   | dom     | 2000    | 20     |
| 106   | domnic  | 2000    | 20     |
+-----+-----+-----+-----+
6 rows in set (0.00 sec)
```

MULTIPLE ROW/VALUE SUBQUERY:

Subquery :5

```
mysql> select dno,dname from tbl_dept where dno in(select edno from
tbl_employee where eid in(101,102,104,105));
+-----+-----+
| dno   | dname   |
+-----+-----+
| 10    | LD      |
| 20    | PROJECT |
+-----+-----+
2 rows in set (0.01 sec)
```

Subquery :6

```
mysql> select dname as "Department",dno as "Department No:" from
tbl_dept where dno in (select edno from tbl_employee where
esalary>2000);
+-----+-----+
| Department | Department No: |
+-----+-----+
| LD         | 10             |
+-----+-----+
1 row in set (0.00 sec)
```

CONSTRAINTS:

```
mysql> create table tbl_student (rno int(5) primary key,sname
varchar(20) not null,smarks int (3) check(smarks >0),smno int(10)
unique,age int(3) default 15);
```

Query OK, 0 rows affected, 4 warnings (0.02 sec)

```
mysql> desc tbl_student;
```

Field	Type	Null	Key	Default	Extra
rno	int	NO	PRI	NULL	
sname	varchar(20)	NO		NULL	
smarks	int	YES		NULL	
smno	int	YES	UNI	NULL	
age	int	YES		15	

5 rows in set (0.00 sec)

NOT NULL CONSTRAINT:

```
mysql> insert into tbl_student (rno,smarks, smno) values(101,60,123);
ERROR 1364 (HY000): Field 'sname' doesn't have a default value
```

```
mysql> insert into tbl_student (rno,sname,smarks, smno)
values(101,"Aravind",60,123);
Query OK, 1 row affected (0.00 sec)
```

DEFAULT CONSTRAINTS:

```
mysql> select *from tbl_student;
```

rno	sname	smarks	smno	age
101	Aravind	60	123	15

1 row in set (0.00 sec)

PRIMARY KEY CONSTRAINTS:

```
mysql> insert into tbl_student (rno,sname,smarks, smno)
values(101,"Aravind",60,123);
ERROR 1062 (23000): Duplicate entry '101' for key
'tbl_student.PRIMARY'
```

UNIQUE CONSTRAINT:

```
mysql> insert into tbl_student (rno,sname,smarks, smno)
values(102,"madhan",65,123);
ERROR 1062 (23000): Duplicate entry '123' for key 'tbl_student.smno'
```

```
mysql> select *from tbl_student;
+-----+-----+-----+-----+-----+
| rno | sname  | smarks | smno | age |
+-----+-----+-----+-----+-----+
| 101 | Aravind | 60     | 123  | 15  |
| 102 | madhan  | 65     | 1234 | 15  |
+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

CHECK CONSTRAINTS:

```
mysql> insert into tbl_student (rno,sname,smarks, smno)
values(101,"Aravind",-60,123);
ERROR 3819 (HY000): Check constraint 'tbl_student_chk_1' is violated.
```

AUTO_INCREMENT:

```
mysql> create table tbl_student (rno int(5) primary key
auto_increment,sname varchar(20),smarks int(3));
Query OK, 0 rows affected, 2 warnings (1.52 sec)
```

```
mysql> insert into tbl_student (sname,smarks) values ("aravind",30);
Query OK, 1 row affected (0.00 sec)
```

```
mysql> select *from tbl_student;
```

```
+-----+-----+-----+
| rno | sname  | smarks |
+-----+-----+-----+
|  1  | aravind |    30  |
+-----+-----+-----+
1 row in set (0.00 sec)
```

```
mysql> select *from tbl_student;
```

```
+-----+-----+-----+
| rno | sname  | smarks |
+-----+-----+-----+
|  1  | aravind |    30  |
|  2  | Madhan  |    40  |
+-----+-----+-----+
2 rows in set (0.00 sec)
```

COMBINATION OF TWO COLUMN AS PRIMARY KEY:

```
mysql> CREATE TABLE tbl_check (rno int(3),eid int(10),primary
key(rno,eid));
```

```
Query OK, 0 rows affected, 2 warnings (0.01 sec)
```

```
mysql> insert into tbl_check values (1,2);
```

```
Query OK, 1 row affected (0.00 sec)
```

```
mysql> insert into tbl_check values (1,2);
```

```
ERROR 1062 (23000): Duplicate entry '1-2' for key 'tbl_check.PRIMARY'
```

```
mysql> insert into tbl_check values (1,3);
```

```
Query OK, 1 row affected (0.00 sec)
```

```
mysql> select * from tbl_check;
```

```
+-----+-----+
| rno | eid |
+-----+-----+
|  1  |  2  |
|  1  |  3  |
+-----+-----+
2 rows in set (0.00 sec)
```

TABLE RELATIONSHIP:

CREATING DEPT1 TABLE:

```
mysql> create table tbl_dept1 (dno int primary key, dname
varchar(20));
Query OK, 0 rows affected (0.01 sec)
```

CREATING TBL_EMPLOYEE TABLE:

```
mysql> create table tbl_employee(id int primary key,name
varchar(20),salary int,dno int, foreign key (dno) references
tbl_dept1(dno));
Query OK, 0 rows affected (0.02 sec)
```

```
mysql> DESC tbl_dept1;
```

Field	Type	Null	Key	Default	Extra
dno	int	NO	PRI	NULL	
dname	varchar(20)	YES		NULL	

2 rows in set (0.00 sec)

```
mysql> desc tbl_employee;
```

Field	Type	Null	Key	Default	Extra
id	int	NO	PRI	NULL	
name	varchar(20)	YES		NULL	
salary	int	YES		NULL	
dno	int	YES	MUL	NULL	

4 rows in set (0.00 sec)

FOREIGN KEY CONSTRAINT:

```
mysql> insert into tbl_employee values (101,"aravind",3000,10);  
ERROR 1452 (23000): Cannot add or update a child row: a foreign key  
constraint fails (`mydp`.`tbl_employee`, CONSTRAINT  
`tbl_employee_ibfk_1` FOREIGN KEY (`dno`) REFERENCES `tbl_dept1`  
(`dno`))
```

FIRST WE HAVE TO FIRST INSERT VALUE TO THE DEPARTMENT TABLE:

```
mysql> insert into tbl_dept1 values (10,"LD");  
Query OK, 1 row affected (0.01 sec)
```

AND THEN ONLY WE INSERT INTO EMPLOYEE TABLE:

```
mysql> insert into tbl_employee values (101,"aravind",3000,10);  
Query OK, 1 row affected (0.00 sec)
```