

```
SQL 8.0 Command Line CL
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```
mysql> insert into sms_tch(ID,Name,Age,YOE,DOJ,Salary) values (13546,'Priyadevi',45,'16 years','2013-05-15',100000),(18245,'Abhi',38,'10 years','2018-06-01',80000),(22534,'Shri',42,'5 years','2022-10-20',70000);
```

```
mysql> select * from sms_tch;
```

ID	Name	Age	YOE	DOJ	Salary
10246	Karthick	47	20 years	2010-03-17	120000
13546	Priyadevi	45	16 years	2013-05-15	100000
18245	Abhi	38	10 years	2018-06-01	80000
22534	Shri	42	5 years	2022-10-20	70000

```
mysql> insert into sms_tch(ID,Name,Age,YOE,DOJ,Salary) values (12131,'John',32,'13 years','2012-02-02',100000),(15276,'Devi',37,'15 years','2015-06-12',90000),(16626,'Ranidevi',35,'11 years','2016-04-04',80000);
```

```
Query OK, 6 rows affected (0.01 sec)
```

```
Records: 6 Duplicates: 0 Warnings: 0
```

```
mysql> select * from sms_tch;
```

ID	Name	Age	YOE	DOJ	Salary
10235	Varshini	40	15 years	2010-05-15	120000
10246	Karthick	47	20 years	2010-03-17	120000
11216	Samdev	42	18 years	2011-09-11	120000
12131	John	32	13 years	2012-02-02	100000
13546	Priyadevi	45	16 years	2013-05-15	100000
15276	Devi	37	15 years	2015-06-12	90000
16626	Ranidevi	35	11 years	2016-04-04	80000
18245	Abhi	38	10 years	2018-06-01	80000
20213	Sham	38	10 years	2020-01-06	70000
22534	Shri	42	5 years	2022-10-20	70000

```
mysql>
```

```
Database changed
```

```
mysql> show tables;
```

Tables_in_sms
sms_tch

```
mysql> desc sms_tch;
```

Field	Type	Null	Key	Default	Extra
ID	int	NO	PRI	NULL	auto_increment
Name	varchar(20)	YES		NULL	
Age	int	YES		NULL	
YOE	varchar(20)	YES		NULL	
DOJ	date	YES		NULL	
Salary	int	YES		NULL	

```
mysql> select (Name,Salary) from sms_tch;
```

```
ERROR 1241 (21000): Operand should contain 1 column(s)
```

```
mysql> select Name from sms_tch;
```

Name
Varshini
Karthick
Samdev
John
Priyadevi
Devi
Ranidevi
Abhi
Sham
Shri

```
mysql>
```

```

1 row in set (0.00 sec)

mysql> update sms_tch set Age=32,Salary=70000 where id=22534;
Query OK, 1 row affected (0.04 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> select * from sms_tch;
+----+-----+-----+-----+-----+-----+
| ID | Name   | Age | YOE | DOJ       | Salary |
+----+-----+-----+-----+-----+-----+
| 10246 | Karthick | 47 | 20 years | 2010-03-17 | 120000 |
| 12342 | Joe      | 32 | 13 years | 2012-02-02 | 100000 |
| 13546 | Priyadevi | 45 | 16 years | 2013-05-15 | 100000 |
| 18245 | Abhi     | 38 | 10 years | 2018-06-01 | 80000 |
| 22534 | Shri     | 32 | 5 years  | 2022-10-20 | 70000 |
+----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> delete from sms_tch where id=12342;
Query OK, 1 row affected (0.02 sec)

mysql> select * from sms_tch;
+----+-----+-----+-----+-----+-----+
| ID | Name   | Age | YOE | DOJ       | Salary |
+----+-----+-----+-----+-----+-----+
| 10246 | Karthick | 47 | 20 years | 2010-03-17 | 120000 |
| 13546 | Priyadevi | 45 | 16 years | 2013-05-15 | 100000 |
| 18245 | Abhi     | 38 | 10 years | 2018-06-01 | 80000 |
| 22534 | Shri     | 32 | 5 years  | 2022-10-20 | 70000 |
+----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> insert into sms_tch(ID,Name,Age,YOE,DOJ,Salary) values (13546,'Priyadevi',45,'16 years','2013-05-15',100000),(18245,'Abhi',38,'10 years','2018-06-01',80000),(12131,'John',32,'13 years','2022-10-20',60000);
ERROR 1062 (23000): Duplicate entry '13546' for key 'sms_tch.PRIMARY'

mysql> select * from sms_tch;

```

```

ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 't' at line 2
mysql> select * from sms_tch order by Salary asc;
+----+-----+-----+-----+-----+-----+
| ID | Name   | Age | YOE | DOJ       | Salary |
+----+-----+-----+-----+-----+-----+
| 20213 | Sham   | 38 | 10 years | 2020-01-06 | 70000 |
| 16626 | Ranidevi | 35 | 11 years | 2022-10-20 | 70000 |
| 18245 | Abhi     | 38 | 10 years | 2018-06-01 | 80000 |
| 12131 | John    | 32 | 13 years | 2022-10-20 | 60000 |
| 13546 | Priyadevi | 45 | 16 years | 2013-05-15 | 100000 |
| 10246 | Karthick | 47 | 20 years | 2010-03-17 | 120000 |
| 11216 | Samdev  | 42 | 18 years | 2011-09-11 | 120000 |
+----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql> select Salary,max(Salary) from sms_tch group by Salary;
+-----+-----+
| Salary | max(Salary) |
+-----+-----+
| 120000 | 120000 |
| 100000 | 100000 |
| 80000  | 80000 |
| 70000  | 70000 |
+-----+-----+
5 rows in set (0.02 sec)

mysql> select YOE,max(Salary) from sms_tch group by YOE;
+-----+-----+
| YOE | max(Salary) |
+-----+-----+
| 15 years | 120000 |
| 20 years | 120000 |
| 18 years | 120000 |
| 13 years | 120000 |
| 16 years | 100000 |
| 11 years | 100000 |
| 10 years | 80000 |
| 5 years  | 70000 |
+-----+-----+
8 rows in set (0.00 sec)

mysql> select max(Salary) from sms_tch;
+-----+
| max(Salary) |
+-----+
| 120000 |
+-----+
1 row in set (0.00 sec)

mysql> select min(Salary) from sms_tch;
+-----+
| min(Salary) |
+-----+
| 70000 |
+-----+
1 row in set (0.00 sec)

mysql> select avg(Salary) from sms_tch;
+-----+
| avg(Salary) |
+-----+
| 95000.0000 |
+-----+
1 row in set (0.00 sec)

```

```

5 rows in set (0.02 sec)

mysql> select YOE,max(Salary) from sms_tch group by YOE;
+-----+-----+
| YOE | max(Salary) |
+-----+-----+
| 15 years | 120000 |
| 20 years | 120000 |
| 18 years | 120000 |
| 13 years | 120000 |
| 16 years | 100000 |
| 11 years | 100000 |
| 10 years | 80000 |
| 5 years  | 70000 |
+-----+-----+
8 rows in set (0.00 sec)

mysql> select max(Salary) from sms_tch;
+-----+
| max(Salary) |
+-----+
| 120000 |
+-----+
1 row in set (0.00 sec)

mysql> select min(Salary) from sms_tch;
+-----+
| min(Salary) |
+-----+
| 70000 |
+-----+
1 row in set (0.00 sec)

mysql> select avg(Salary) from sms_tch;
+-----+
| avg(Salary) |
+-----+
| 95000.0000 |
+-----+
1 row in set (0.00 sec)

```



```

mysql> select min(Salary) from sms_tch;
+-----+
| min(Salary) |
+-----+
| 70000       |
+-----+
1 row in set (0.00 sec)

mysql> select avg(Salary) from sms_tch;
+-----+
| avg(Salary) |
+-----+
| 95000.0000  |
+-----+
1 row in set (0.00 sec)

mysql> select sum(Salary) from sms_tch;
+-----+
| sum(Salary) |
+-----+
| 950000      |
+-----+
1 row in set (0.00 sec)

mysql> select count(Salary) from sms_tch;
+-----+
| count(Salary) |
+-----+
| 10            |
+-----+
1 row in set (0.00 sec)

mysql> start transaction;
Query OK, 0 rows affected (0.00 sec)

mysql> update sms_tch set Salary=125000 where name='Varshini';
Query OK, 1 row affected (0.02 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> select * from sms_tch;
+----+-----+-----+-----+-----+-----+
| ID  | Name  | Age  | YOE  | DOJ      | Salary |
+----+-----+-----+-----+-----+-----+
| 13546 | Priyadevi | 45  | 16 years | 2013-05-15 | 100000 |
| 18245 | Abhi    | 38  | 10 years | 2018-06-01 | 80000  |
| 22534 | Shri    | 42  | 5 years  | 2022-10-20 | 60000  |
+----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> truncate table sms_tch_demo;
Query OK, 0 rows affected (0.12 sec)

mysql> select * from sms_tch_demo;
Empty set (0.01 sec)

mysql> desc sms_tch_demo;
+----+-----+-----+-----+-----+-----+
| Field | Type      | Null | Key | Default | Extra |
+----+-----+-----+-----+-----+-----+
| ID    | int       | NO   | PRI | NULL    | auto_increment |
| Name  | varchar(20) | YES  |     | NULL    |                |
| Age   | int       | YES  |     | NULL    |                |
| YOE   | varchar(20) | YES  |     | NULL    |                |
| DOJ   | date      | YES  |     | NULL    |                |
| Salary | int       | YES  |     | NULL    |                |
+----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> drop table sms_tch_demo;
Query OK, 0 rows affected (0.07 sec)

mysql> desc sms_tch_demo;
ERROR 1146 (42502): Table 'sms.sms_tch_demo' doesn't exist

mysql> show tables;
+-----+
| Tables_in_sms |
+-----+
| sms_tch       |
+-----+
1 row in set (0.00 sec)

mysql>

```

```

mysql> create table sms_tch_copy like sms_tch;
Query OK, 0 rows affected (0.09 sec)

mysql> show tables;
+-----+
| Tables_in_sms |
+-----+
| sms_tch       |
| sms_tch_copy  |
+-----+
2 rows in set (0.05 sec)

mysql>

```

```

mysql> create table sms_tch_copy like sms_tch;
Query OK, 0 rows affected (0.09 sec)

mysql> show tables;
+-----+
| Tables_in_sms |
+-----+
| sms_tch       |
| sms_tch_copy  |
+-----+
2 rows in set (0.05 sec)

mysql>

```

```

mysql> select * from sms_tch_demo;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version 5.7.26
mysql> select * from sms_tch_demo;
+----+-----+-----+-----+-----+-----+
| ID | Name   | Age | YOE | DOJ       | Salary |
+----+-----+-----+-----+-----+-----+
| 13546 | Priyadevi | 45 | 16 years | 2013-05-15 | 100000 |
| 18245 | Abhi     | 38 | 10 years | 2018-06-01 | 80000  |
| 22534 | Shri     | 42 | 5 years  | 2022-10-20 | 60000  |
+----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> truncate table sms_tch_demo;
Query OK, 0 rows affected (0.12 sec)

mysql> select * from sms_tch_demo;
Empty set (0.01 sec)

mysql> desc sms_tch_demo;
+----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra          |
+----+-----+-----+-----+-----+-----+
| ID     | int           | NO   | PRI | NULL    | auto_increment |
| Name   | varchar(20)   | YES  |     | NULL    |                |
| Age    | int           | YES  |     | NULL    |                |
| YOE    | varchar(20)   | YES  |     | NULL    |                |
| DOJ    | date          | YES  |     | NULL    |                |
| Salary | int           | YES  |     | NULL    |                |
+----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> drop table sms_tch_demo;
Query OK, 0 rows affected (0.07 sec)

mysql> desc sms_tch_demo;
ERROR 1146 (42S02): Table 'sms.sms_tch_demo' doesn't exist
mysql> show tables;

```

```

mysql> select user();
+-----+
| user() |
+-----+
| root@localhost |
+-----+
1 row in set (0.00 sec)

mysql> create user 'Abhi'@'localhost' identified by '18245';
Query OK, 0 rows affected (0.05 sec)

mysql> select user,host from mysql.user;
+-----+-----+
| user          | host |
+-----+-----+
| root          | %    |
| Abhi          | localhost |
| mysql.infoschema | localhost |
| mysql.session | localhost |
| mysql.sys     | localhost |
| root         | localhost |
+-----+-----+
6 rows in set (0.00 sec)

mysql> grant select on sms.sms_tch to 'Abhi'@'localhost';
Query OK, 0 rows affected (0.02 sec)

mysql> revoke select on sms.sms_tch from 'Abhi'@'localhost';
Query OK, 0 rows affected (0.02 sec)

mysql> select user,host from mysql.user;
+-----+-----+
| user          | host |
+-----+-----+
| root          | %    |
| Abhi          | localhost |
| mysql.infoschema | localhost |
| mysql.session | localhost |
| mysql.sys     | localhost |
| root         | localhost |
+-----+-----+
6 rows in set (0.00 sec)

```

```

mysql> select user,host from mysql.user;
+-----+-----+
| user          | host |
+-----+-----+
| root          | %    |
| Abhi          | localhost |
| mysql.infoschema | localhost |
| mysql.session | localhost |
| mysql.sys     | localhost |
| root         | localhost |
+-----+-----+
6 rows in set (0.00 sec)

mysql> show grants for 'Abhi'@'localhost';
+-----+
| Grants for Abhi@localhost |
+-----+
| GRANT USAGE ON *.* TO 'Abhi'@'localhost' |
+-----+
1 row in set (0.00 sec)

mysql> grant select on sms.sms_tch to 'Abhi'@'localhost';
Query OK, 0 rows affected (0.02 sec)

mysql> show grants for 'Abhi'@'localhost';
+-----+
| Grants for Abhi@localhost |
+-----+
| GRANT USAGE ON *.* TO 'Abhi'@'localhost' |
| GRANT SELECT ON 'sms'.'sms_tch' TO 'Abhi'@'localhost' |
+-----+
2 rows in set (0.00 sec)

mysql> revoke select on sms.sms_tch from 'Abhi'@'localhost';
Query OK, 0 rows affected (0.01 sec)

mysql> show grants for 'Abhi'@'localhost';
+-----+
| Grants for Abhi@localhost |
+-----+
| GRANT USAGE ON *.* TO 'Abhi'@'localhost' |
+-----+
1 row in set (0.00 sec)

```



```
mysql> grant select on sms.sms_tch to 'Abhi'@'localhost';
Query OK, 0 rows affected (0.02 sec)

mysql> show grants for 'Abhi'@'localhost';
+-----+
| Grants for Abhi@localhost |
+-----+
| GRANT USAGE ON *.* TO 'Abhi'@'localhost' |
| GRANT SELECT ON 'sms'.'sms_tch' TO 'Abhi'@'localhost' |
+-----+
2 rows in set (0.00 sec)

mysql> revoke select on sms.sms_tch from 'Abhi'@'localhost';
Query OK, 0 rows affected (0.01 sec)

mysql> show grants for 'Abhi'@'localhost';
+-----+
| Grants for Abhi@localhost |
+-----+
| GRANT USAGE ON *.* TO 'Abhi'@'localhost' |
+-----+
1 row in set (0.00 sec)

mysql> desc sms;
ERROR 1146 (2552): Table 'sms.sms' doesn't exist
mysql> desc sms_tch;
+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+
| ID | int | NO | PRI | NULL | auto_increment |
| Name | varchar(20) | YES | | NULL | |
| Age | int | YES | | NULL | |
| DOB | varchar(20) | YES | | NULL | |
| Salary | int | YES | | NULL | |
+-----+
6 rows in set (0.01 sec)

mysql>
```

```
MySQL 8.0 Command Line Cl...
| world |
+-----+
7 rows in set (0.03 sec)

mysql> use sms;
Database changed
mysql> create table sms_tt(Class VARCHAR(20),Subject VARCHAR(20),Day VARCHAR(20),Period INT);
Query OK, 0 rows affected (0.03 sec)

mysql> INSERT INTO sms_tt (Class, Subject, Day, Period) VALUES
-> ('10A', 'Maths', 'Monday', 1),
-> ('9B', 'English', 'Tuesday', 1),
-> ('10A', 'Science', 'Monday', 2),
-> ('9B', 'Maths', 'Tuesday', 2),
-> ('8A', 'Science', 'Wednesday', 1),
-> ('8A', 'English', 'Wednesday', 2),
-> ('7C', 'History', 'Thursday', 1),
-> ('7C', 'Geography', 'Thursday', 2),
-> ('6B', 'Maths', 'Friday', 1),
-> ('6B', 'Science', 'Friday', 2);
Query OK, 10 rows affected (0.02 sec)
Records: 10 Duplicates: 0 Warnings: 0

mysql> select * from sms_tt;
+-----+
| Class | Subject | Day | Period |
+-----+
| 10A | Maths | Monday | 1 |
| 9B | English | Tuesday | 1 |
| 10A | Science | Monday | 2 |
| 9B | Maths | Tuesday | 2 |
| 8A | Science | Wednesday | 1 |
| 8A | English | Wednesday | 2 |
| 7C | History | Thursday | 1 |
| 7C | Geography | Thursday | 2 |
| 6B | Maths | Friday | 1 |
| 6B | Science | Friday | 2 |
+-----+
10 rows in set (0.00 sec)

mysql>
```

```
mysql> select * from sms_tt;
+-----+
| Class | Subject | Day | Period | ID |
+-----+
| 10A | Maths | Monday | 1 | 10235 | |
| 9B | English | Tuesday | 1 | 11216 |
| 10A | Science | Monday | 2 | 10246 |
| 9B | Maths | Tuesday | 2 | 12131 |
| 8A | Science | Wednesday | 1 | 13546 |
| 8A | English | Wednesday | 2 | 15276 |
| 7C | History | Thursday | 1 | 16626 |
| 7C | Geography | Thursday | 2 | NULL |
| 6B | Maths | Friday | 1 | NULL |
| 6B | Science | Friday | 2 | NULL |
| 10B | | | | 1 | NULL |
+-----+
11 rows in set (0.00 sec)

mysql> select sms_tch.ID,sms_tch.Name,sms_tt.Class,sms_tt.Subject from sms_tch right join sms_tt on sms_tch.ID=sms_tt.ID;
+-----+
| ID | Name | Class | Subject |
+-----+
| 10235 | Varshini | 10A | Maths |
| 11216 | Samdev | 9B | English |
| 10246 | Karthick | 10A | Science |
| 12131 | John | 9B | Maths |
| 13546 | Priyadevi | 8A | Science |
| 15276 | Devi | 8A | English |
| 16626 | Ranidevi | 7C | History |
| NULL | NULL | 7C | Geography |
| NULL | NULL | 6B | Maths |
| NULL | NULL | 6B | Science |
| NULL | NULL | 10B | |
+-----+
11 rows in set (0.01 sec)

mysql> select sms_tch.ID,sms_tch.Name,sms_tt.Class,sms_tt.Subject from sms_tch left join sms_tt on sms_tch.ID=sms_tt.ID;
+-----+
| ID | Name | Class | Subject |
+-----+
+-----+
1 row in set (0.00 sec)
```

```

MySQL 8.0 Command Line C#
+
13546 | Priyadevi | 8A | Science |
15276 | Devi | 8A | English |
16626 | Ranidevi | 7C | History |
NULL | NULL | 7C | Geography |
NULL | NULL | 6B | Maths |
NULL | NULL | 6B | Science |
NULL | NULL | 10B |
-----
11 rows in set (0.01 sec)

mysql> select sms_tch.ID,sms_tch.Name,sms_tt.Class,sms_tt.Subject from sms_tch left join sms_tt on sms_tch.ID=sms_tt.ID;
+----+-----+-----+-----+
| ID | Name | Class | Subject |
+----+-----+-----+-----+
| 10235 | Varshini | 10A | Maths |
| 10246 | Karthick | 10A | Science |
| 11216 | Saadev | 9B | English |
| 12131 | John | 9B | Maths |
| 13546 | Priyadevi | 8A | Science |
| 15276 | Devi | 8A | English |
| 16626 | Ranidevi | 7C | History |
| 18245 | Abhi | NULL | NULL |
| 20213 | Sham | NULL | NULL |
| 25213 | Shamini | NULL | NULL |
+----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql> select sms_tch.ID,sms_tch.Name,sms_tt.Class,sms_tt.Subject from sms_tch inner join sms_tt on sms_tch.ID=sms_tt.ID;
+----+-----+-----+-----+
| ID | Name | Class | Subject |
+----+-----+-----+-----+
| 10235 | Varshini | 10A | Maths |
| 11216 | Saadev | 9B | English |
| 10246 | Karthick | 10A | Science |
| 12131 | John | 9B | Maths |
| 13546 | Priyadevi | 8A | Science |
| 15276 | Devi | 8A | English |
| 16626 | Ranidevi | 7C | History |
+----+-----+-----+-----+
7 rows in set (0.01 sec)

```

```

mysql> select sms_tch.ID,sms_tch.Name,sms_tt.Class,sms_tt.Subject from sms_tch left join sms_tt on sms_tch.ID=sms_tt.ID union select sms_tch.ID,sms_tch.Name,sms_tt.Class,sms_tt.Subject from sms_tch right join sms_tt on sms_tch.ID=sms_tt.ID;
+----+-----+-----+-----+
| ID | Name | Class | Subject |
+----+-----+-----+-----+
| 10235 | Varshini | 10A | Maths |
| 10246 | Karthick | 10A | Science |
| 11216 | Saadev | 9B | English |
| 12131 | John | 9B | Maths |
| 13546 | Priyadevi | 8A | Science |
| 15276 | Devi | 8A | English |
| 16626 | Ranidevi | 7C | History |
| 18245 | Abhi | NULL | NULL |
| 20213 | Sham | NULL | NULL |
| 25213 | Shamini | NULL | NULL |
| NULL | NULL | 7C | Geography |
| NULL | NULL | 6B | Maths |
| NULL | NULL | 6B | Science |
| NULL | NULL | 10B |
+----+-----+-----+-----+
14 rows in set (0.00 sec)

```

```

mysql> DELIMITER //
mysql> CREATE TRIGGER trg_salary_check
-> BEFORE INSERT
-> ON sms_tch
-> FOR EACH ROW
-> BEGIN
-> IF NEW.Salary < 50000 THEN
-> SIGNAL SQLSTATE '45000'
-> SET MESSAGE_TEXT = 'Salary cannot be less than 50000';
-> END IF;
-> END;
-> //
Query OK, 0 rows affected (0.02 sec)

mysql>
mysql> DELIMITER ;
mysql> insert into sms_tch values(26110,'Dev',26,'3 years','2026-02-01',40000);
ERROR 1644 (45000): Salary cannot be less than 50000
mysql>

```