# **Practical No: 2**

### Practical 2.1

Enter password: \*\*\*\*\*\*\*

Welcome to the MySQL monitor. Commands end with ; or \g.

Your MySQL connection id is 11

Server version: 8.0.43 MySQL Community Server - GPL

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> use demo

Database changed

mysql> create table student(rollno int, name varchar(10));

Query OK, 0 rows affected (0.05 sec)

mysql> desc student;

+--------+-------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+--------+-------------+------+-----+---------+-------+

| rollno | int | YES | | NULL | |

| name | varchar(10) | YES | | NULL | |

+--------+-------------+------+-----+---------+-------+

2 rows in set (0.03 sec)

mysql> create table stud(student\_id int, name varchar(20), email\_id varchar(20), date\_of\_birth date);

Query OK, 0 rows affected (0.01 sec)

mysql> alter table stud;

Query OK, 0 rows affected (0.01 sec)

mysql> add column dept\_id int;

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 'add column dept\_id int' at line 1

mysql> alter table stud

-> add column dept\_id int;

Query OK, 0 rows affected (0.07 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> alter table stud

-> add primary key (student\_id);

Query OK, 0 rows affected (0.03 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> alter table stud

-> modify column name varchar(50);

Query OK, 0 rows affected (0.01 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> alter table stud

-> drop column email\_id;

Query OK, 0 rows affected (0.02 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> desc stud;

+---------------+-------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+---------------+-------------+------+-----+---------+-------+

| student\_id | int | NO | PRI | NULL | |

| name | varchar(50) | YES | | NULL | |

| date\_of\_birth | date | YES | | NULL | |

| dept\_id | int | YES | | NULL | |

+---------------+-------------+------+-----+---------+-------+

4 rows in set (0.00 sec)

mysql> create table courses(course\_id int primary key, course\_name varchar(20));

Query OK, 0 rows affected (0.01 sec)

mysql> show databases;

+--------------------+

| Database |

+--------------------+

| demo |

| information\_schema |

| mysql |

| performance\_schema |

| sys |

+--------------------+

5 rows in set (0.01 sec)

mysql> show tables;

+----------------+

| Tables\_in\_demo |

+----------------+

| courses |

| stud |

| student |

+----------------+

3 rows in set (0.01 sec)

mysql> desc courses;

+-------------+-------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+-------------+-------------+------+-----+---------+-------+

| course\_id | int | NO | PRI | NULL | |

| course\_name | varchar(20) | YES | | NULL | |

+-------------+-------------+------+-----+---------+-------+

2 rows in set (0.00 sec)

mysql> desc student;

+--------+-------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+--------+-------------+------+-----+---------+-------+

| rollno | int | YES | | NULL | |

| name | varchar(10) | YES | | NULL | |

+--------+-------------+------+-----+---------+-------+

2 rows in set (0.00 sec)

mysql> desc stud;

+---------------+-------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+---------------+-------------+------+-----+---------+-------+

| student\_id | int | NO | PRI | NULL | |

| name | varchar(50) | YES | | NULL | |

| date\_of\_birth | date | YES | | NULL | |

| dept\_id | int | YES | | NULL | |

+---------------+-------------+------+-----+---------+-------+

4 rows in set (0.00 sec)

mysql>

## Practical 2.2

Enter password: \*\*\*\*\*\*\*

Welcome to the MySQL monitor. Commands end with ; or \g.

Your MySQL connection id is 13

Server version: 8.0.43 MySQL Community Server - GPL

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> use demo;

Database changed

mysql> create table enrollment (enrollment\_id int primary key, student\_id int, course\_id int, foreign key(student\_id) references stud(student\_id), foreign key(course\_id) references courses(course\_id));

Query OK, 0 rows affected (0.03 sec)

mysql> desc enrollment;

+---------------+------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+---------------+------+------+-----+---------+-------+

| enrollment\_id | int | NO | PRI | NULL | |

| student\_id | int | YES | MUL | NULL | |

| course\_id | int | YES | MUL | NULL | |

+---------------+------+------+-----+---------+-------+

3 rows in set (0.00 sec)

mysql> desc students;

mysql> desc student;

+--------+-------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+--------+-------------+------+-----+---------+-------+

| rollno | int | YES | | NULL | |

| name | varchar(10) | YES | | NULL | |

+--------+-------------+------+-----+---------+-------+

2 rows in set (0.00 sec)

mysql> desc stud;

+---------------+-------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+---------------+-------------+------+-----+---------+-------+

| student\_id | int | NO | PRI | NULL | |

| name | varchar(50) | YES | | NULL | |

| date\_of\_birth | date | YES | | NULL | |

| dept\_id | int | YES | | NULL | |

+---------------+-------------+------+-----+---------+-------+

4 rows in set (0.00 sec)

mysql> desc courses;

+-------------+-------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+-------------+-------------+------+-----+---------+-------+

| course\_id | int | NO | PRI | NULL | |

| course\_name | varchar(20) | YES | | NULL | |

+-------------+-------------+------+-----+---------+-------+

2 rows in set (0.00 sec)

mysql> create view student\_view1 as select student\_id, name from stud;

Query OK, 0 rows affected (0.01 sec)

mysql> select \* from student\_view1;

Empty set (0.00 sec)

mysql> insert into stud (student\_id, name, date\_of\_birth, department\_id) values (101, 'sarthak, '27-02-2006', 101);

'> values (101, 'sarthak, '27-02-2006', 101);

mysql> (101, 'sarthak, '27-02-2006', 101);

'> (101, 'sarthak, '27-02-2006', 101);

mysql>

mysql>

mysql>

mysql>

mysql>

mysql> insert into stud values (101, "sarthak", 27-02-2006, 101);

mysql> insert into stud values (101, "sarthak", 2006-02-27, 101);

mysql> insert into stud values (101, "sarthak", 2006-27-02, 101);

mysql> insert into stud values (101, 'sarthak', '2006-02-27', 101);

Query OK, 1 row affected (0.01 sec)

mysql> select \* from student\_view1;

+------------+---------+

| student\_id | name |

+------------+---------+

| 101 | sarthak |

+------------+---------+

1 row in set (0.00 sec)

mysql> select name from student\_view1 where student\_id=101;

+---------+

| name |

+---------+

| sarthak |

+---------+

1 row in set (0.00 sec)

mysql> insert into student\_view1 (student\_id, name) values (102, 'heramb');

Query OK, 1 row affected (0.01 sec)

mysql> delete from student\_view1 where student\_id = 101;

Query OK, 1 row affected (0.01 sec)

mysql> select \* from student\_view1;

+------------+--------+

| student\_id | name |

+------------+--------+

| 102 | heramb |

+------------+--------+

1 row in set (0.00 sec)

mysql> update student\_view1 set name = 'jaydeep' where student\_id = 102;

Query OK, 1 row affected (0.01 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> select \* from student\_view1;

+------------+---------+

| student\_id | name |

+------------+---------+

| 102 | jaydeep |

+------------+---------+

1 row in set (0.00 sec)

mysql> create view enroll\_view as select student\_name, c.course\_name, e.year as academic\_year from stud s join enrollment e on s.student\_id = e.student\_id join courses c on e.course\_id = c.course\_id;

mysql> create view enroll\_view as select name, c.course\_name, e.year as academic\_year from stud s join enrollment e on s.student\_id = e.student\_id join courses c on e.course\_id = c.course\_id;

mysql> alter table enrollment

-> add column year int;

Query OK, 0 rows affected (0.05 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> create view enroll\_view as select name, c.course\_name, e.year as academic\_year from stud s join enrollment e on s.student\_id = e.student\_id join courses c on e.course\_id = c.course\_id;

Query OK, 0 rows affected (0.01 sec)

mysql> insert into courses (course\_id, course\_name, credit) values (1, 'dbms', 5);

mysql> insert into courses (course\_id, course\_name) values (1, 'dbms');

Query OK, 1 row affected (0.00 sec)

mysql> into students (student\_id, name, date\_of\_birth, department\_id) values (103, 'ritesh', '2006-02-27', 101);

mysql> insert into students (student\_id, name, date\_of\_birth, department\_id) values (103, 'ritesh', '2006-02-27', 101);

mysql> insert into stud (student\_id, name, date\_of\_birth, department\_id) values (103, 'ritesh', '2006-02-27', 101);

mysql> insert into stud (student\_id, name, date\_of\_birth, dept\_id) values (103, 'ritesh', '2006-02-27', 101);

Query OK, 1 row affected (0.00 sec)

mysql> insert into enrollment (enrollment\_id, student\_id, course\_id, year) values (1, 103, 1, 2025);

Query OK, 1 row affected (0.00 sec)

mysql> select \* from enroll\_view;

+--------+-------------+---------------+

| name | course\_name | academic\_year |

+--------+-------------+---------------+

| ritesh | dbms | 2025 |

+--------+-------------+---------------+

1 row in set (0.00 sec)

mysql> insert into enroll\_view (student\_name, course\_name, academic\_year) values ('amol', 'cns', 2025);

mysql> insert into enroll\_view (name, course\_name, academic\_year) values ('amol', 'cns', 2025);

mysql> insert into enroll\_view (name, course\_name, academic\_year) values ('amol', 'cns', 2025);

mysql> update enroll\_view set academic\_year = 2028 where student\_name = 'ritesh';

mysql> update enroll\_view set academic\_year = 2028 where name = 'ritesh';

Query OK, 1 row affected (0.00 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> select \* from enroll\_view;

+--------+-------------+---------------+

| name | course\_name | academic\_year |

+--------+-------------+---------------+

| ritesh | dbms | 2028 |

+--------+-------------+---------------+

1 row in set (0.00 sec)

mysql>

## Practical 2.3

microsoft windows [version 10.0.22000.2538]

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c:\program files\mysql\mysql server 8.0\bin>mysql -h localhost -u root -p

enter password: \*\*\*\*\*\*\*

welcome to the mysql monitor. commands end with ; or \g.

your mysql connection id is 21

server version: 8.0.32 mysql community server - gpl

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owners.

type 'help;' or '\h' for help. type '\c' to clear the current input statement.

mysql> show databases;

+--------------------+

| database |

+--------------------+

| demo |

| information\_schema |

| mysql |

| performance\_schema |

| sys |

+--------------------+

5 rows in set (0.00 sec)

mysql> use demo;

database changed

mysql> select abs(-45);

+----------+

| abs(-45) |

+----------+

| 45 |

+----------+

1 row in set (0.00 sec)

mysql> round and ceil

-> ;

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 'round and ceil' at line 1

mysql> select ceil(6.3), floor(6.7);

+-----------+------------+

| ceil(6.3) | floor(6.7) |

+-----------+------------+

| 7 | 6 |

+-----------+------------+

1 row in set (0.00 sec)

mysql> select 15 div 4;

+-----------+

| 15 div 4 |

+-----------+

| 3 |

+-----------+

1 row in set (0.00 sec)

mysql> select 15 % 4;

+--------+

| 15 % 4 |

+--------+

| 3 |

+--------+

1 row in set (0.00 sec)

mysql> select sign(-20), sign(0), sign(10);

+------------+----------+-----------+

| sign(-20) | sign(0) | sign(10) |

+------------+----------+-----------+

| -1 | 0 | 1 |

+------------+----------+-----------+

1 row in set (0.00 sec)

mysql> select round(234.789, 2);

+--------------------+

| round(234.789, 2) |

+--------------------+

| 234.79 |

+--------------------+

1 row in set (0.00 sec)

mysql> select truncate(234.789, 2);

+-----------------------+

| truncate(234.789, 2) |

+-----------------------+

| 234.78 |

+-----------------------+

1 row in set (0.00 sec)

mysql> select concat('sarthak', '123');

+--------------------------+

| concat('sarthak', '123') |

+--------------------------+

| sarthak123 |

+--------------------------+

1 row in set (0.00 sec)

mysql> select repeat('sarthak', 2);

+----------------------+

| repeat('sarthak', 2) |

+----------------------+

| sarthaksarthak |

+----------------------+

1 row in set (0.00 sec)

mysql> select reverse('sarthak');

+--------------------+

| reverse('sarthak') |

+--------------------+

| kahtrahs |

+--------------------+

1 row in set (0.00 sec)

mysql> select instr('sarthak', 't');

+-----------------------+

| instr('sarthak', 't') |

+-----------------------+

| 4 |

+-----------------------+

1 row in set (0.00 sec)

mysql> select elt(3, 'heramb', 'ritesh', 'jaydeep');

+---------------------------------------+

| elt(3, 'heramb', 'ritesh', 'jaydeep') |

+---------------------------------------+

| jaydeep |

+---------------------------------------+

1 row in set (0.00 sec)

mysql> select lpad('heramb', 10, '\*');

+--------------------------+

| lpad('heramb', 10, '\*') |

+--------------------------+

| \*\*\*\*heramb |

+--------------------------+

1 row in set (0.00 sec)

mysql> select rpad('heramb', 10, '\*');

+--------------------------+

| rpad('heramb', 10, '\*') |

+--------------------------+

| heramb\*\*\*\* |

+--------------------------+

1 row in set (0.00 sec)

mysql> select insert('ritesh', 3, 2, 'xyz');

+------------------------------+

| insert('ritesh', 3, 2, 'xyz')|

+------------------------------+

| rixyzsh |

+------------------------------+

1 row in set (0.00 sec)

mysql> select left('jaydeep', 4);

+---------------------+

| left('jaydeep', 4) |

+---------------------+

| jayd |

+---------------------+

1 row in set (0.00 sec)

mysql> select right('jaydeep', 3);

+----------------------+

| right('jaydeep', 3) |

+----------------------+

| eep |

+----------------------+

1 row in set (0.00 sec)

mysql> select power(3, 4);

+------------+

| power(3,4) |

+------------+

| 81 |

+------------+

1 row in set (0.00 sec)

mysql> select sqrt(225);

+-----------+

| sqrt(225) |

+-----------+

| 15 |

+-----------+

1 row in set (0.00 sec)

mysql> select concat('hello', null, 'world');

+-------------------------------+

| concat('hello', null, 'world') |

+-------------------------------+

| null |

+-------------------------------+

1 row in set (0.00 sec)

mysql> create table emp (

-> empid int primary key,

-> ename varchar(50),

-> salary decimal(10,2),

-> dept varchar(50)

-> );

query ok, 0 rows affected (0.03 sec)

mysql> insert into emp (empid, ename, salary, dept) values

-> (1, 'shivam', 54000, 'sales'),

-> (2, 'harshad', 62000, 'hr'),

-> (3, 'om', 51000, 'sales'),

-> (4, 'amol', 72000, 'it'),

-> (5, 'sarthak', 47000, 'hr');

query ok, 5 rows affected (0.01 sec)

mysql> select \* from emp;

+-------+---------+----------+--------+

| empid | ename | salary | dept |

+-------+---------+----------+--------+

| 1 | shivam | 54000.00 | sales |

| 2 | harshad | 62000.00 | hr |

| 3 | om | 51000.00 | sales |

| 4 | amol | 72000.00 | it |

| 5 | sarthak | 47000.00 | hr |

+-------+---------+----------+--------+

5 rows in set (0.00 sec)

mysql> select count(\*) from emp;

+----------+

| count(\*) |

+----------+

| 5 |

+----------+

1 row in set (0.00 sec)

mysql> select sum(salary) from emp;

+--------------+

| sum(salary) |

+--------------+

| 286000.00 |

+--------------+

1 row in set (0.00 sec)

mysql> select avg(salary) from emp;

+----------------+

| avg(salary) |

+----------------+

| 57200.000000 |

+----------------+

1 row in set (0.00 sec)

mysql> select dept, count(\*) from emp group by dept;

+--------+----------+

| dept | count(\*) |

+--------+----------+

| sales | 2 |

| hr | 2 |

| it | 1 |

+--------+----------+

3 rows in set (0.00 sec)

mysql> select dept, avg(salary) from emp group by dept having avg(salary) > 50000;

+--------+----------------+

| dept | avg(salary) |

+--------+----------------+

| sales | 52500.00 |

| hr | 54500.00 |

| it | 72000.00 |

+--------+----------------+

3 rows in set (0.01 sec)