

DBMS Lab 1

a. Find year from date

```
mysql> SELECT YEAR('2024/07/16');
```

```
+-----+
| YEAR('2024/07/16') |
+-----+
|          2024        |
+-----+
```

b. Check whether date passed to query is of given format or not

```
mysql> SELECT DATE('07/07/2024');
```

```
+-----+
| DATE('07/07/2024') |
+-----+
| NULL                |
+-----+
```

c. Find the size of the SCHEMA/USER.

```
SELECT table_schema "DB Name",
       ROUND(SUM(data_length + index_length) / 1024 / 1024, 1) "DB Size in MB"
FROM information_schema.tables
GROUP BY table_schema;
```

d. Display the current time

```
mysql> SELECT CURTIME();
```

```
+-----+
| CURTIME() |
+-----+
| 15:08:25  |
+-----+
```

e. Given a date retrieve next day's date

```
mysql> select date_add('2003/12/11', interval 1 day);
```

```
+-----+
| date_add('2003/12/11', interval 1 day) |
+-----+
| 2003-12-12                             |
+-----+
```

f. Get database date

```
mysql> SELECT CURDATE();
```

```
+-----+  
| CURDATE() |  
+-----+  
| 2024-07-25 |  
+-----+
```

g. Returns the default(current) database name.

```
mysql> select database();
```

```
+-----+  
| database() |  
+-----+  
| NULL      |  
+-----+
```

h. Retrieve the current MySQL user name and host name.

```
mysql> SELECT USER() AS 'Current User',  
-> @@hostname AS 'Host Name';
```

```
+-----+-----+  
| Current User | Host Name |  
+-----+-----+  
| root@localhost | nitt-OptiPlex-7470-AIO |  
+-----+-----+
```

i. Find the string that tells the MySQL server version.

```
mysql> SELECT VERSION();
```

```
+-----+  
| VERSION() |  
+-----+  
| 8.0.36-0ubuntu0.20.04.1 |  
+-----+
```

j. Perform Bitwise OR, Bitwise XOR and Bitwise AND

```
mysql> select 3&4, 3|4, 3^4;
```

```
+---+---+---+  
| 3&4 | 3|4 | 3^4 |  
+---+---+---+  
| 0   | 7   | 7   |  
+---+---+---+
```

k. Find the difference between two dates and print in terms of the number of days.

```
mysql> select datediff('2003/12/12','2003/12/05');
```

```
+-----+
| datediff('2003/12/12','2003/12/05') |
+-----+
|              7              |
+-----+
```

l. Add one day to the current date.

```
mysql> SELECT DATE_ADD(CURDATE(), INTERVAL 1 DAY) AS NextDay;
```

```
+-----+
| NextDay      |
+-----+
| 2024-07-26   |
+-----+
```

m. Add two hours and 5000 minutes to the current date and print the new date.

```
mysql> SELECT ADDTIME(NOW(), "2:50");
```

```
+-----+
| ADDTIME(NOW(), "2:50") |
+-----+
| 2024-07-25 18:15:38    |
+-----+
```

n. Find the floor and ceil values of a floating point number. Also operate on the power, log, modulus, round off and truncate functions.

```
mysql> select floor(5.3), ceil(5.3);
```

```
+-----+-----+
| floor(5.3) | ceil(5.3) |
+-----+-----+
|          5 |          6 |
+-----+-----+
```

```
mysql> SELECT POWER(2, 3), LOG10(100);
```

```
+-----+-----+
| POWER(2, 3) | LOG10(100) |
+-----+-----+
|           8 |           2 |
+-----+-----+
```

```
mysql> SELECT MOD(10, 3), ROUND(3.14159, 2), TRUNCATE(3.14159, 2);
```

```
+-----+-----+-----+
| MOD(10, 3) | ROUND(3.14159, 2) | TRUNCATE(3.14159, 2) |
+-----+-----+-----+
```

1	3.14	3.14
---	------	------

o. In the first name of the employee, match the following using regular expressions.

```
mysql> SELECT
-> CASE
->   WHEN 'Alice' REGEXP '^a' THEN 'Name starts with a'
->   ELSE 'Name does not start with a'
-> END AS result;
```

result
Name starts with a

p. Compare two strings and print the value 'yes' if they are equal, else print 'no'. mysql>

```
SELECT CASE WHEN 'apple' = 'banana' THEN 'yes' ELSE 'no' END AS result;
```

result
no

q. Simulate the "IF... ELSE" construct in MySQL for a mark and grade setup.

```
mysql> SELECT
-> 85 AS marks,
-> CASE
->   WHEN 85 >= 90 AND 85 <= 100 THEN 'A'
->   WHEN 85 >= 80 AND 85 < 90 THEN 'B'
->   WHEN 85 >= 70 AND 85 < 80 THEN 'C'
->   WHEN 85 >= 60 AND 85 < 70 THEN 'D'
->   WHEN 85 >= 0 AND 85 < 60 THEN 'F'
->   ELSE 'Invalid marks'
-> END AS grade;
```

marks	grade
85	B

r. Use IFNULL to check whether a mathematical expression gives a NULL value or not.

```
mysql> SELECT IFNULL(10 / 5, 'Result is NULL') AS result;
```

```
+-----+
```

```
| result |
```

```
+-----+
```

```
| 2.0000 |
```

```
+-----+
```