

**CSLR 51**  
**DBMS LAB - SESSION 1**

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**1. Write SQL queries in MySQL for the following.**

**a. Write an SQL Query to find the year from date.**

```
SELECT YEAR('2021-10-14');
```

**b. Check whether date passed to Query is the date of a given format or not.**

```
SELECT DATE('2021-12-15');
```

**c. Find the size of the SCHEMA/USER.**

```
SELECT SUM(ROUND(((DATA_LENGTH + INDEX_LENGTH) / 1024 / 1024), 2)) AS "SIZE IN MB"  
FROM INFORMATION_SCHEMA.TABLES WHERE TABLE_SCHEMA = "sys";
```

**d. Display the current time.**

```
SELECT CURRENT_TIME;
```

**e. Given a date, retrieve the next day's date.**

```
SELECT DATE_ADD('2021-10-15', interval 1 day);
```

**f. Get database's date.**

```
SELECT CURRENT_DATE;
```

**g. Returns the default(current) database name.**

SELECT DATABASE();

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

SELECT user, host, authentication\_string, plugin from mysql.user;

```
mysql> SELECT user, authentication_string FROM mysql.user;
+-----+-----+
| user          | authentication_string |
+-----+-----+
| debian-sys-maint | $A$005$0qAQ19x] 1q5," :4VmuaHo8Ch5q7MsFve4qGnt7J3SbKclcjQGZX231fZH/ |
| mysql.infoschema | $A$005$THISISACOMBINATIONOFINVALIDSALTANDPASSWORDTHATMUSTNEVERBRBEUSED |
| mysql.session   | $A$005$THISISACOMBINATIONOFINVALIDSALTANDPASSWORDTHATMUSTNEVERBRBEUSED |
| mysql.sys       | $A$005$THISISACOMBINATIONOFINVALIDSALTANDPASSWORDTHATMUSTNEVERBRBEUSED |
| root           |                       |
+-----+-----+
5 rows in set (0.00 sec)
```

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

SELECT VERSION();

**j. Perform Bitwise OR, Bitwise XOR and Bitwise AND.**

SELECT 5|6 as ANS;

SELECT 5&6 as ANS;

SELECT 5^6 as ANS;

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

SELECT DATEDIFF('2020-06-25', '2020-06-15');

**l. Add one day to the current date.**

```
SELECT DATE_ADD('2021-10-15', interval 1 day);
```

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

```
SELECT DATE_ADD(DATE_ADD(NOW(), INTERVAL 2 HOUR), INTERVAL 5000 MINUTE) AS  
new_date;
```

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

```
SELECT floor(2.8) as floor;
```

```
SELECT ceil(2.8) as ceil;
```

```
SELECT POWER(3,2) AS POW;
```

```
SELECT LOG(2.81) AS LOG_VAL;
```

```
SELECT MOD(10,5) AS MOD_VAL;
```

```
SELECT ROUND(5.4) AS round_off_value;
```

```
SELECT TRUNCATE(10.8461561, 2) AS truncate_value;
```

**o. Compare two strings and print the value 'yes' if they are equal, else print 'no'.**

```
SELECT IF('hello' = 'hello', 'yes', 'no') AS result;
```

**p. Simulate the “IF... ELSE” construct in MySQL for a mark and grade setup.**

```
CREATE TABLE students (  
    id INT AUTO_INCREMENT PRIMARY KEY,  
    name VARCHAR(100),  
    marks INT  
);  
  
INSERT INTO students (name, marks) VALUES  
(  
    'Alice', 95),  
    ('Bob', 85),  
    ('Charlie', 75),  
    ('David', 65),  
    ('Eve', 55);  
  
SELECT  
    name,  
    marks,  
    IF(marks >= 90, 'A',  
        IF(marks >= 80, 'B',  
            IF(marks >= 70, 'C',  
                IF(marks >= 60, 'D', 'F')  
            )  
        )  
    ) AS grade  
FROM  
    students;
```

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

```
SELECT IFNULL(1/NULL, 'Expression is NULL') AS result;
```

```
mysql> SELECT IFNULL(1 / NULL, 'Expression is NULL') AS result;
+-----+
| result          |
+-----+
| Expression is NULL |
+-----+
1 row in set (0.00 sec)
```