ROLL NO: 106122124

DATE: 25-07-2024

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1. Write SQL queries in MySQL for the following.

a.   Write an SQL Query to find the year from date. **SQL Query**: select year(current_date); **Output**:

```
+---------------------+
| year(current_date) |
+---------------------+
|               2024 |
+---------------------+
```

b.   Check whether date passed to Query is the date of a given format or not. **SQL Query**:
select if(date_format(current_date,'%d-%m-%Y') = current_date, 'Yes’, 'No'); **Output**:

```
+-----------------------------------------------------------------------+
| if(date_format(current_date,'%d-%m-%Y') = current_date, 'Yes' , 'No') |
+-----------------------------------------------------------------------+
| No  |
+-----------------------------------------------------------------------+ c.
```

Find the size of the SCHEMA/USER.

SQL Query: SELECT SUM(DATA_LENGTH + INDEX_LENGTH) AS size
FROM information_schema.TABLES
WHERE TABLE_SCHEMA = 'mysql'; **Output**:

```
+---------+
| size    |
+---------+
| 2752512 |
+---------+
```

d. Display the current time. **SQL Query**:
SELECT(CURRENT_TIME); **Output**:

```
+----------------+
| (current_time) |
+----------------+
| 16:20:18       |
+----------------+
```

e. Given a date, retrieve the next days date.

SQL Query: SELECT DATE_ADD(current_date,INTERVAL 1 DAY); **Output**:

```
+---------------------------------------+
| DATE_ADD(current_date,INTERVAL 1 DAY) |
+---------------------------------------+
| 2024-07-26                            |
+---------------------------------------+ f.
```

Get database date.

SQL Query: select curdate() as database_date; **Output**:

```
+---------------+
| database_date |
+---------------+
| 2024-07-25    |
+---------------+
```

g. Returns the default(current) database name.

SQL Query: select database();

Output:

```
+----------------+
| database()     |
+----------------+
|Lakshmi106122124 |
+----------------+
```

h. Retrieve the current MySQL user name and host name. **SQL Query**: SELECT USER() AS mysql_user_host; **Output**:

```
+-----------------+
| mysql_user_host |
+-----------------+
| root@localhost |
+-----------------+
```

i. Find the string that tells the MySQL server version. **SQL Query**: SELECT VERSION() AS mysql_server_version; **Output**:

```
+-----------------------+
| mysql_server_version | +--
-----------------------+ |
8.0.37-0ubuntu0.20.04.3 |
+-----------------------+
```

j. Perform Bitwise OR, Bitwise XOR and Bitwise AND.
SQL Query: SELECT 2 | 6 AS bitwise_or,2 ^ 6 AS bitwise_xor,2 & 6 AS bitwise_and;
Output:

```
+------------+-------------+-------------+
| bitwise_or | bitwise_xor | bitwise_and |
+------------+-------------+-------------+
|          6 |           4 |           2 |
+------------+-------------+-------------+
```

k. Find the difference between two dates and print in terms of the number of days. **SQL Query**: SELECT DATEDIFF('2004-12-31 23:59:59','2004-12-30'); **Output**:

```
+-----------------------------------------------+
| DATEDIFF('2004-12-31 23:59:59','2004-12-30') |
+-----------------------------------------------+
|                                             1 |
+-----------------------------------------------+ l.
```

Add one day to the current date.
SQL Query: SELECT DATE_ADD(current_date,INTERVAL 1 DAY); **Output**:

```
+-----------------------------------------+
| DATE_ADD(current_date,INTERVAL 1 DAY) |
+-----------------------------------------+
| 2024-07-26                              |
+-----------------------------------------+
```

m. Add two hours and 5000 minutes to the current date and print the new date.
SQL Query: SELECT DATE_ADD(current_date,INTERVAL '2:5000' HOUR_MINUTE); **Output**:

```
+-----------------------------------------------------+
| DATE_ADD(current_date,INTERVAL '2:5000' HOUR_MINUTE) |
+-----------------------------------------------------+
| 2024-07-28 13:20:00  | +-----------------------------------------------------+
```

n. Find the floor and ceil values of a floating point number. Also operate on the power, log, modulus, round off and truncate functions. **SQL Query**: select floor(5.3), ceil(5.3); **Output**:

```
+------------+-----------+
| floor(6.3) | ceil(6.3) |
+------------+-----------+
|      6 |    7 | +------------+-----------+
```

SQL Query: SELECT POWER(2, 3), LOG10(100); **Output:**

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

SQL Query: SELECT MOD(10, 3), ROUND(3.14159, 2), TRUNCATE(3.14159, 2); **Output:**

```
+------------+-------------------+----------------------+
| 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.

SQL Query: SELECT

```
            ->     CASE
            ->         WHEN 'Naini' REGEXP '^n' THEN 'Name starts with n'
            ->          ELSE 'Name does not start with n'
            ->     END AS result;
```

Output:

```
+--------------------+
| result             |
+--------------------+
| Name starts with n |
+--------------------+
```

p. Compare two strings and print the value ‘yes’ if they are equal, else print ‘no’. **SQL Query**: SELECT CASE WHEN 'apple' = 'banana' THEN 'yes' ELSE 'no' END AS result; **Output:**

```
+--------+
| result |
+--------+
| no     |
+--------+
```

q. Simulate the construct in MySQL for a mark and grade setup. **SQL Query**: 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'
```

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```
    ->         ELSE 'Invalid marks'
    ->     END AS grade;
```

Output:

```
+-------+-------+
| marks | grade |
+-------+-------+
|    85 | B     |
+-------+-------+
```

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

SQL Query: SELECT IFNULL (10 / 5, 'Result is NULL') AS result; **Output:**

```
+--------+
| result |
+--------+
| 2.0000 |
+--------+
```