CSLR51-DBMS Session-1

1. Write SQL queries in MySQL for the following.

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

Query : SELECT year(CURDATE()) as Year;

Output :

```
mysql> select year(curdate()) as Year;
+------+
| Year |
+------+
| 2024 |
+------+
1 row in set (0.01 sec)
```

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

Query : SELECT STR_TO_DATE('25/07/2024','%d/%m/%Y') IS NOT NULL;

Output :

```
mysql> SELECT STR_TO_DATE('25/07/2024','%d/%m/%Y') IS NOT NULL;
+-----------------------------------------------------+
| STR_TO_DATE('25/07/2024','%d/%m/%Y') IS NOT NULL |
+-----------------------------------------------------+
|                                                   1 |
+-----------------------------------------------------+
1 row in set (0.00 sec)
```

c. Find the size of the SCHEMA/USER.

Query : SELECT table_schema AS "Database", ROUND(SUM(data_length + index_length) / 1024 / 1024, 2) AS "Size (MB)" FROM information_schema.TABLES GROUP BY table_schema;

Output :

```
mysql> SELECT table_schema AS "Database",  ROUND(SUM(data_length + index_length)
 / 1024 / 1024, 2) AS "Size (MB)"  FROM information_schema.TABLES  GROUP BY tabl
e_schema;
+--------------------+-----------+
| Database           | Size (MB) |
+--------------------+-----------+
| mysql              |      2.72 |
| information_schema |      0.00 |
| performance_schema |      0.00 |
| sys                |      0.02 |
| gregs_list         |      0.02 |
| pragyan_cms_db     |      1.31 |
| food_ordering_system |      0.17 |
| newtest            |      0.06 |
+--------------------+-----------+
8 rows in set (0.24 sec)
```

d. Display the current time.

Query : SELECT CURTIME();

Output :

```
mysql> SELECT CURTIME();
+-----------+
| CURTIME() |
+-----------+
| 04:16:50  |
+-----------+
1 row in set (0.00 sec)
```

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

Query : SELECT DATE_ADD('2024/12/11',INTERVAL 1 DAY);

Output :

```
mysql> SELECT DATE_ADD('2024/12/11',INTERVAL 1 DAY);
+--------------------------------------+
| DATE_ADD('2024/12/11',INTERVAL 1 DAY) |
+--------------------------------------+
| 2024-12-12                           |
+--------------------------------------+
1 row in set, 1 warning (0.00 sec)
```

f. Get the database's date.

Query : SELECT CURDATE();

Output :

```
mysql> SELECT CURDATE();
+------------+
| CURDATE()  |
+------------+
| 2024-07-26 |
+------------+
1 row in set (0.00 sec)
```

g. Returns the default(current) database name.

Query : SELECT database();

Output :

```
mysql> SELECT database();
+----------------------+
| database()           |
+----------------------+
| food_ordering_system |
+----------------------+
1 row in set (0.00 sec)
```

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

Query : SELECT User();

Output :

```
mysql> SELECT User();
+----------------+
| User()         |
+----------------+
| root@localhost |
+----------------+
1 row in set (0.00 sec)
```

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

Query : SELECT Version();

Output :

```
mysql> SELECT Version();
+-------------------------+
| Version()               |
+-------------------------+
| 8.0.37-0ubuntu0.22.04.3 |
+-------------------------+
1 row in set (0.00 sec)
```

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

Query : SELECT 3|6 ,3&6 ,3^6;

Output :

```
mysql> SELECT 3|6 ,3&6 ,3^6;
+-----+-----+-----+
| 3|6 | 3&6 | 3^6 |
+-----+-----+-----+
|   7 |   2 |   5 |
+-----+-----+-----+
1 row in set (0.00 sec)
```

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

Query : SELECT DATEDIFF('2007-12-31','2002-12-30');

Output :

```
mysql> SELECT DATEDIFF('2007-12-31','2002-12-30');
+-----------------------------------+
| DATEDIFF('2007-12-31','2002-12-30') |
+-----------------------------------+
|                              1827 |
+-----------------------------------+
1 row in set (0.00 sec)
```

l. Add one day to the current date.

Query : SELECT DATE_ADD(CURDATE(),INTERVAL 1 DAY);

Output :

```
mysql> SELECT DATE_ADD(CURDATE(),INTERVAL 1 DAY);
+-----------------------------------+
| DATE_ADD(CURDATE(),INTERVAL 1 DAY) |
+-----------------------------------+
| 2024-07-27                        |
+-----------------------------------+
1 row in set (0.00 sec)
```

m. Add two hours and 50:00 minutes to the current date and print the new date.

Query : SELECT ADDTIME(time(now()),'0:02:15');

Output :

```
mysql> SELECT ADDTIME(time(now()),'0:02:15');
+---------------------------------+
| ADDTIME(time(now()),'0:02:15') |
+---------------------------------+
| 04:30:23                        |
+---------------------------------+
1 row in set (0.00 sec)
```

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

Query : SELECT floor(3.14),ceil(3.14),pow(2,5),log(100),mod(10,3),round(10.756,2),truncate(10.756,2);

Output :

```
mysql> SELECT floor(3.14),ceil(3.14),pow(2,5),log(100),mod(10,3),round(10.756,2),truncate(10.756,2);
+-------------+------------+----------+------------------+-----------+-----------------+--------------------+
| floor(3.14) | ceil(3.14) | pow(2,5) | log(100)         | mod(10,3) | round(10.756,2) | truncate(10.756,2) |
+-------------+------------+----------+------------------+-----------+-----------------+--------------------+
|           3 |          4 |       32 | 4.605170185988092 |         1 |           10.76 |              10.75 |
+-------------+------------+----------+------------------+-----------+-----------------+--------------------+
1 row in set (0.00 sec)
```

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

Query : SELECT 'string1' = 'string2';

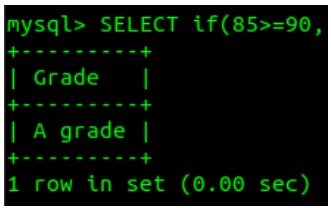
Output :

```
mysql> SELECT 'string1' = 'string2';
+-----------------------+
| 'string1' = 'string2' |
+-----------------------+
|                     0 |
+-----------------------+
1 row in set (0.00 sec)
```

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

Query : SELECT if(85>=90,'S grade',if(85>=70,'A grade',if(85>=50,'B grade',if(85>=30,'D grade',if(85>=0,'Fail','No result'))))) as 'Grade';

Output :



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

Query : SELECT IFNULL(1/0,10);

Output :