

LAB SESSION 1  
18/07/2024

1. Installation of MYSQL

```
sudo apt install mysql-server
```

2. SQL query to find year from the given date

```
select year("2024-12-10") as y;
```

```
+-----+
| y      |
+-----+
| 2024   |
+-----+
```

3. Check whether the date passed to the query is the date of given format

```
select str_to_date('2024-07-18','%y-%m-%d') as valid_date;
```

```
+-----+
| valid_date |
+-----+
| NULL      |
+-----+
```

3. Given a date, retrieve next date

```
SELECT DATE_ADD("2024-07-18", INTERVAL 1 DAY);
```

```
+-----+
| DATE_ADD("2024-07-18", INTERVAL 1 DAY) |
+-----+
| 2024-07-19          |
+-----+
```

4. Retrieve username and password

```
select user, authentication_string from mysql.user;
```

```
+-----+-----+
| user          | authentication_string |
+-----+-----+
| mysql.infoschema | $A$005$THISISACOMBINATIONOFINVALIDSALTANDPASSWORDTHATMUSTNEVERBRBEUSED |
| mysql.session   | $A$005$THISISACOMBINATIONOFINVALIDSALTANDPASSWORDTHATMUSTNEVERBRBEUSED |
| mysql.sys       | $A$005$THISISACOMBINATIONOFINVALIDSALTANDPASSWORDTHATMUSTNEVERBRBEUSED |
| root           | $A$005$Kp_R?         |
} [3pI:n>wPIC/wX86HP/0v5v/HHDcri0ojEy6Z03wKh2IJpA8Lx9 |
+-----+-----+
4 rows in set (0.00 sec)
```

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5. Get database date

```
SELECT CURRENT_TIMESTAMP;
```

```
+-----+
| CURRENT_TIMESTAMP |
+-----+
| 2024-07-26 08:32:33 |
+-----+
```

6. Default database name

```
use mysql;
```

Database changed

7. MySQL username and hostname

```
select user, host, authentication_string, plugin from mysql.user;
```

```
+-----+-----+-----+-----+
| user      | host      | authentication_string | plugin |
+-----+-----+-----+-----+
| mysql.infoschema | localhost | $A$005$THISISACOMBINATIONOFINVALIDSALTANDPASSWORDTHATMUSTNEVERBRBEUSED | caching_sha2_password |
| mysql.session   | localhost | $A$005$THISISACOMBINATIONOFINVALIDSALTANDPASSWORDTHATMUSTNEVERBRBEUSED | caching_sha2_password |
| mysql.sys       | localhost | $A$005$THISISACOMBINATIONOFINVALIDSALTANDPASSWORDTHATMUSTNEVERBRBEUSED | caching_sha2_password |
| root          | localhost | $A$005$Kp_R?         |        |
+-----+-----+-----+-----+
[3pI:n>wPIC/wX86HP/0v5v/HHDcri0ojEy6Z03wKh2IJpA8Lx9 | caching_sha2_password |
+-----+-----+-----+-----+
```

8. MySQL server version

```
SELECT VERSION();
```

```
+-----+
| VERSION() |
+-----+
| 9.0.1    |
+-----+
```

9. Bitwise XOR, AND, OR

```
SELECT 1&2 AS andRes, 1|2 AS orRes, 1^2 AS xorRes;
```

```
+-----+-----+-----+
| andRes | orRes | xorRes |
+-----+-----+-----+
| 0      | 3     | 3      |
+-----+-----+-----+
```

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10. Difference between two dates

```
SELECT DATEDIFF("2017-06-25", "2017-06-15");
```

```
+-----+
| DATEDIFF("2017-06-25", "2017-06-15") |
+-----+
|                                10 |
+-----+
```

11. Add 2:50 to the current time

```
SELECT ADDTIME("12:00:00", "02:50:00") as updated;
```

```
+-----+
| updated |
+-----+
| 14:50:00 |
+-----+
```

12. Floor, Ceil of a float

```
select floor(9.8) as f, ceil(9.8) s c;
```

```
+---+---+
| f | c |
+---+---+
| 9 | 10 |
+---+---+
```

13. Operations on regex

```
select "Pranav" REGEXP "A*"; select "Pranav" REGEXP "B+";
```

```
+-----+
| "Pranav" REGEXP "A*" |
+-----+
|                      1 |
+-----+
| "Pranav" REGEXP "B+" |
+-----+
|                      0 |
+-----+
```

14. Compare 2 strings

```
Select STRCMP('Sharma', 'Sharma') As 'Cmp_Value';
```

```
+-----+
| Cmp_Value |
+-----+
|          0 |
+-----+
```

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15. Simulate if-else statement for marks and grades

```
SELECT IF(500>100, "YES", "NO");
```

```
+-----+
| IF(500>100, "YES", "NO") |
+-----+
| YES                        |
+-----+
```

16. IS NULL

```
select isnull(null);
```

```
+-----+
| isnull(null) |
+-----+
|             1 |
+-----+
```

17. Grant all privileges to user

```
GRANT SELECT ON Users TO 'Amit'@'localhost';
```

ERROR 1410 (42000): You are not allowed to create a user with GRANT

18. Display all Databases

```
show databases;
```

```
+-----+
| Database          |
+-----+
| information_schema |
| mysql              |
| performance_schema |
| sys                |
+-----+
```

19. Size of the schema in MB

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

```
+-----+
| SIZE IN MB |
+-----+
|          0.02 |
+-----+
```