

Name	Hatim Yusuf Sawai
UID no.	2021300108
Experiment No.	9

AIM:	Date & Time Operators
PROBLEM STATEMENT:	Implement different types of date-time operators on user data in MySQL
THEORY:	<p>In SQL, dates are complicated, since while working with database, the format of the date in table must be matched with the input date in order to insert. In various scenarios instead of date, datetime (time is also involved with date) is used.</p> <p>In MySql the <b>default date functions</b> are:</p> <ol style="list-style-type: none"> <li>1. <b>CURDATE()</b>: Returns current date</li> <li>2. <b>CURTIME()</b>: Returns current time</li> <li>3. <b>NOW()</b>: Returns current date &amp; time</li> <li>4. <b>DATE()</b>: Returns date part of the date/time expression</li> <li>5. <b>TIME()</b>: Returns time part of the date/time expression</li> </ol> <p>MySql Date <b>Data-Types</b>:</p> <ol style="list-style-type: none"> <li>1. <b>DATE</b> - format YYYY-MM-DD</li> <li>2. <b>DATETIME</b> - format: YYYY-MM-DD HH:MI:SS</li> <li>3. <b>TIMESTAMP</b> - format: YYYY-MM-DD HH:MI:SS</li> <li>4. <b>YEAR</b> - format YYYY or YY</li> </ol>

## QUERIES:

### Default Date Functions:

1. SELECT DATE('2003-01-28 08:20:53');

```
date
abc Filter...
2003-01-28
```

2. SELECT TIME('2003-01-28 08:20:53');

```
time
abc Filter...
08:20:53
```

3. SELECT CURDATE();

```
CURDATE()
abc Filter...
2022-12-06
```

4. SELECT CURTIME();

```
CURTIME()
abc Filter...
11:23:25
```

5. SELECT NOW();

```
NOW()
abc Filter...
2022-12-06 11:23:45
```

### Table date Function Queries:

1. Add birth date column to patient table with data type 'date':  
`ALTER TABLE patient ADD COLUMN birthdate DATE AFTER Age;`

2. `UPDATE patient SET birthdate = '2004-03-26' WHERE P_id=6;`

Pname	birthdate
abc Filter...	abc Filter...
Virinchi	2003-01-28

3. Show Formatted birth date of patient with id = 6:

`SELECT Pname,DATE_FORMAT(birthdate,'%W %M %D %Y') AS birthdate FROM patient WHERE P_id=6;`

Pname	birthdate
abc Filter...	abc Filter...
Virinchi	Tuesday January 28th 2003

### Date Addition/Subtraction Functions:

1. `SELECT DATE_ADD('2003-01-29', INTERVAL 3 DAY) AS newDate;`

newDate
abc Filter...
2003-02-01

2. `SELECT DATE_SUB('2004-03-03', INTERVAL 4 DAY) AS newDate;`

newDate
abc Filter...
2004-02-28

### CONCLUSION:

In this experiment, we learned to use different types of date time operators and functions in mysql to retrieve specific date/time information from tables.

