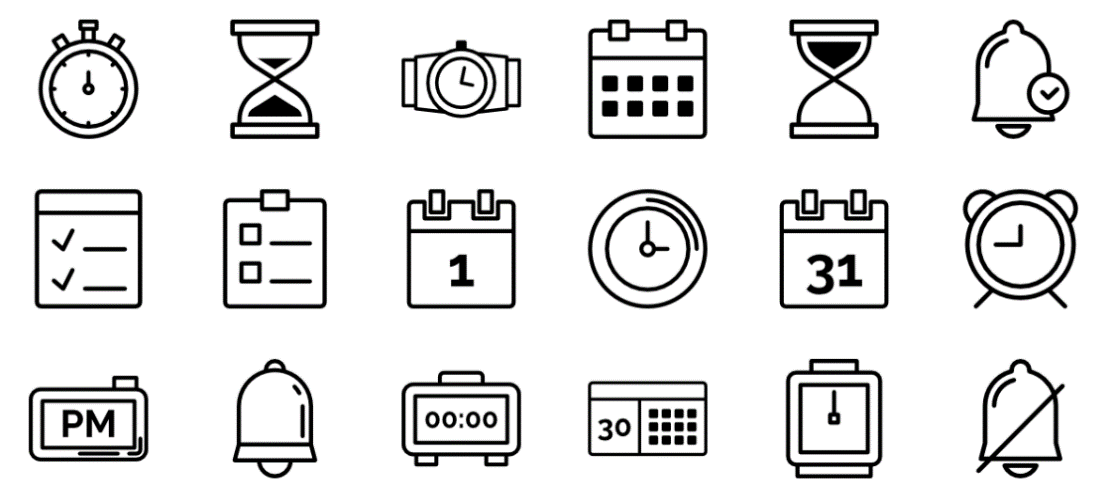
**SQL\_Date Time Manipulation**



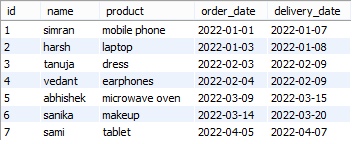
SQL Date Data Types

**MySQL** comes with the following data types for storing a date or a date/time value in the database:

* DATE - format YYYY-MM-DD
* DATETIME - format: YYYY-MM-DD HH:MI:SS
* TIMESTAMP - format: YYYY-MM-DD HH:MI:SS
* YEAR - format YYYY or YY

**DATE MANIPULATION**

**Schema Used: Orders table**



1. **NOW():**

NOW() returns the current date and time.

**Q1. Retrieve the current timestamp.**

select now() as 'Current Timestamp';

1. **CURDATE() & CURTIME():**

CURDATE() returns the current date and CURTIME() returns the current time.

**Q2. Retrieve the current date and current time.**

select curdate() as 'Current Date',curtime() as 'Current Time';

1. **DATE\_ADD():**

The DATE\_ADD() function adds a specified time interval to a date.

### Syntax

DATE\_ADD(date,INTERVAL expr type)

### Example

Assume we have the following "Orders" table:

|  |  |  |
| --- | --- | --- |
| **OrderId** | **ProductName** | **OrderDate** |
| 1 | Jarlsberg Cheese | 2014-11-22 13:23:44.657 |

Now we want to add 30 days to the "OrderDate", to find the payment date.

We use the following SELECT statement:

SELECT OrderId,DATE\_ADD(OrderDate,INTERVAL 30 DAY) AS OrderPayDate  
FROM Orders

**Result:**

|  |  |
| --- | --- |
| **OrderId** | **OrderPayDate** |
| 1 | 2014-12-22 13:23:44.657 |

**Q3. Add 30 days to the order date from order table.**

SELECT id,order\_date,DATE\_ADD(order\_date,INTERVAL 30 DAY) AS OrderPayDate FROM orders

**Q4. Add 1 year to the order date from order table.**

SELECT id,order\_date,DATE\_ADD(order\_date,INTERVAL 1 YEAR) AS OrderPayDate FROM orders;

1. **DATE\_SUB():**

The DATE\_SUB() function subtracts a specified time interval from a date.

**Q5. Subtract 7 days from the order date from order table.**

SELECT id,order\_date,DATE\_SUB(order\_date,INTERVAL 7 DAY) AS OrderPayDate FROM orders;

1. **EXTRACT():**

The EXTRACT() function is used to return a single part of a date/time, such as year, month, day, hour, minute, etc.

### Syntax

EXTRACT(unit FROM date)

**Q6. Extract the year, month and day from delivery date.**

select delivery\_date,extract(year from delivery\_date) as 'year',

extract(month from delivery\_date) as 'month',

extract(day from delivery\_date) as 'day' from orders;

**Q7. Extract the week from delivery date.**

select delivery\_date,extract(week from delivery\_date) as 'week of year' from orders;

1. **DATEDIFF():**

The DATEDIFF() function returns the time between two dates.

**Syntax**

DATEDIFF(date1,date2)

### Example

The following SELECT statement:

SELECT DATEDIFF('2014-11-30','2014-11-29') AS DiffDate

will result in this:

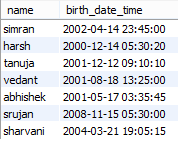
|  |
| --- |
| **DiffDate** |
| 1 |

**Q8. Display the difference between delivery date and order date.**

select delivery\_date,order\_date,datediff(delivery\_date,order\_date) as 'difference' from orders;

**TIME MANIPULATION**

**Schema Used: Birthday table**



## ADDTIME():

ADDTIME() adds expr2 to expr1 and returns the result. The expr1 is a time or datetime expression, while the expr2 is a time expression.

**Q1. Add one day and one hour to the birth date from birthday table.**

SELECT birth\_date\_time,ADDTIME(birth\_date\_time,'1 1:00:00') as 'new date time' from birthday;

1. **HOUR(), MINUTE(), SECOND():**

HOUR()- Returns the hour for time. The range of the return value is 0 to 23 for time-of-day values.

MINUTE()-Returns the minute for time, in the range 0 to 59.

SECOND()-Returns the second for time, in the range 0 to 59.

**Q2. Find out the hour, minute and second from birth date.**

select birth\_date\_time,hour(birth\_date\_time) as 'hour',

minute(birth\_date\_time) as 'minute',

second(birth\_date\_time) as 'second' from birthday;

## TIMESTAMPDIFF(unit,datetime\_expr1,datetime\_expr2)

Returns the integer difference between the date or datetime expressions datetime\_expr1 and datetime\_expr2.

**Q3. Find out the difference in months between birth date and '2004-03-21 19:05:15'.**

select birth\_date\_time,timestampdiff(month,birth\_date\_time,'2004-03-21 19:05:15') as 'difference' from birthday;

