

EXERCISE 5: DATE FUNCTIONS

Question 2: Add 6 Month to each employee's hire date
Using DATEADD()

```
SELECT Emp_id, Name,  
       Hire_date,  
       DATEADD(Month, 6, 'Hire_date')  
          AS Hire_plus_6_Months  
FROM Employees;
```

| Emp_id | Name | Hire date | Hire plus 6 Months |
|--------|---------|------------|--------------------|
| 1 | Alice | 2020-01-15 | 2020-07-15 |
| 2 | Bob | 2021-06-10 | 2021-12-10 |
| 3 | Charlie | 2023-03-22 | 2023-03-22 |

Question 2: Use DATEDIFF() to find age in days
from dob to today

```
SELECT Student_id, Name,  
       DATEDIFF(Day, 'Dob', Current_date)  
          AS Age_in_days  
FROM Students;
```

| Student_id | Name | Age in days |
|------------|---------|-------------|
| 101 | Maya | 7376 |
| 102 | Ethan | 7624 |
| 103 | Sieanna | 7179 |

Quesiton 3 : Find how many days are left until each event using DATEDIFF

SELECT Event_id, Event_name,
ABS(DATEDIFF(Days, 'Event_date', Current_date))
AS Days remaining
From Events;

| Event_id | Event_name | Days Remaining |
|----------|------------|----------------|
| 1 | Seminar | 492 |
| 2 | Workshop | -49 |
| 3 | Hackathon | 273 |

Question 4 : Calculate the number of days between issue date & Due-date

SELECT Invoice_id, Issue_date,
Due_date,
DATEDIFF(Days, 'Issue_date', 'Due_date')
AS Days_Between
From Invoice;

| Invoice_id | Issue_date | Due date | Days between |
|------------|------------|------------|--------------|
| S01 | 2025-03-10 | 2025-03-25 | 15 |
| S02 | 2025-04-01 | 2025-04-15 | 14 |
| S03 | 2025-04-10 | 2025-04-20 | 10 |

Question 5 : Format start_date as 'Month_YYYY' using to_char

```
SELECT Course_id, Name,  
       To_Char(Start_date, 'MM-YYYY')  
          AS Formatted date  
  FROM Courses;
```

| Course_id | Name | Formatted date |
|-----------|------------|----------------|
| 201 | SQL Basics | 05-2025 |
| 202 | PYTHON | 06-2025 |

Question 6 : Create full date from parts Using DATE_FROM_Parts()

```
SELECT Member_id,  
       DATEFROMPARTS ( Start_Year, Start_month, Start_day )  
          AS Full_Date  
  FROM Memberships;
```

| Member_id | Fulldate |
|-----------|------------|
| 1 | 2023-05-10 |
| 2 | 2022-11-25 |

Question 7 : Extend each renewal date by 1 year Using DATEADD

```
SELECT Sub_id, Plan,  
       DATEADD ( Year, 1, Renewal_date )  
          AS Extended_Renewal_date  
  FROM Subscriptions;
```

| Sub_id | Plan | Extended Renewal date |
|--------|---------|-----------------------|
| 1 | Basic | 2026-01-01 |
| 2 | Premium | 2026-03-15 |

Question 8 Show Current date & Difference from Order date Use Current date & Datediff

```
SELECT Order_id, Order_date,
       Current_date AS Today_Date,
       DATEDIFF(Days, Order_date, Today_date)
           AS Days_since_Order
  FROM Orders;
```

| Order id | Orderdate | Today Date | Days Since Order |
|----------|------------|------------|------------------|
| 1001 | 2025-04-15 | 2025-10-18 | 187 |
| 1002 | 2025-04-10 | 2025-10-18 | 192 |

Question 9 Extract the year from training date
Using (Year, 'Training date') (Date Part())

```
SELECT Training_id, Topic
      Extract(Year, 'Training date')
           AS Training Year
  FROM Trainings;
```

| Training id | Topic | Training Year |
|-------------|------------|---------------|
| 1 | Safety | 2025 |
| 2 | Compliance | 2025 |

Question 10 : Extract hour & minute from published on

```
SELECT Post_id, Title,  
       Extract(hour, `Published on` )  
             AS hour_published_on,  
       Extract(Minutes, `Published on` )  
             AS Minutes_published_on  
FROM Blog_posts;
```

| Post_id | Title | hour published on | Minutes Published on |
|---------|---------------|-------------------|----------------------|
| 1 | SQL Tips | 10 | 15 |
| 2 | Data Cleaning | 16 | 45 |

Question 11 : Calculate days left until license expiry
Using datediff & Today date.

```
SELECT Driver_id, License_expiry,  
       ABS(DATEDIFF(`Day`, `License_expiry`, Current_date ))  
             AS Days_left
```

| Driver_id | License_expiry | Days left |
|-----------|----------------|-----------|
| 301 | 2025-08-10 | 70 |
| 302 | 2023-12-31 | 659 |

Question 12 : Display Current timestamp & Calculate Seconds
Since the message was sent

```
SELECT Message_id, Sent_timestamp, Current_timestamp,  
       Timediff(Seconds, `Sent_timestamp`, `Current_timestamp`)  
             AS Second_since_Sent  
FROM Messages;
```

| Message_id | Sent timestamp | Current timestamp | Second Since |
|------------|---------------------|-------------------|--------------|
| 1 | 2025-04-19 09:32:45 | 2025-10-18 | 15907639 |
| 2 | 2025-04-18 23:57:59 | 2025-10-18 | 1600805 |

Question 13 : Add 15 days to return date using DATEADD() to show restock date.

```
SELECT Return_id, Return_date
    DATEADD(Days, 15, 'Return_date')
    AS Restock_date
```

From Returns;

| Return id | Return date | Restock date |
|-----------|-------------|--------------|
| 901 | 2025-04-05 | 2025-04-20 |
| 902 | 2025-04-01 | 2025-04-16 |

Question 14 : Convert assigned on to date using To_Date if it's stored as a string

```
SELECT Assign_id,
    To_Date(Assigned on, 'YYYY-MM-DD')
    AS Assigned_on_date
From Assignments;
```

| Assign_id | Assigned on date |
|-----------|------------------|
| 1 | 2025-03-01 |
| 2 | 2025-03-05 |

Question 15 : Convert Scheduled time to formatted
String like April 19, 2025 at 2:00 PM
Using TO_CHAR()

SELECT Meeting_id,
TO_CHAR(Scheduled_Time, MM-DD-YYYY
HH:MM) AS
Formatted_Meeting_time
FROM Meetings;

| Meeting_id | Formatted_Meeting_time |
|------------|------------------------|
| 1 | April 19 2025 2:00 pm |
| 2 | April 19, 2025 9:30 Am |