

Exercise 5 - DATE Functions

1. Add 6 months to each employee's hire date using `DATEADD`

```
SELECT emp_id, namehire_date, 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	2023-09-22

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	7388
102	Ethan	7642
103	Seng	7141

3. Find how many days are left until each event using `DATEDIFF`

```
SELECT event_id, event_name,
       DATEDIFF(DAY, CURRENT_DATE, event_date) AS days_remaining
FROM Events;
```

event_id	event_name	days_remaining
1	Seminar	487
2	Workshop	44
3	Hackathon	268

9 Q4. Calculate the number of days between issue-date and due-date.

```
SELECT invoice_id, issue_date, due_date,  
       DATEDIFF(DAY, issue_date, due_date) AS days_between  
FROM invoices;
```

invoice_id	issue_date	due_date	days_between
501	2025-03-10	2025-03-25	15
502	2025-04-01	2025-04-15	14
503	2025-04-10	2025-04-20	10

5. Format start_date as 'Month YYYY' using ~~TO~~ CHAR()

```
SELECT course_id, name,  
       TO_CHAR(start_date, 'Month YYYY') AS formatted_date  
FROM courses;
```

Course_id	name	formatted_date
201	SQL Basics	May 2025
202	Python	June 2025

6. Create full date from parts using DATE_FROM_PARTS()

7. ~~Extend columns: sub_id, plan, and renewal_date~~

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
11	Basic	2026-01-01
12	Premium	2026-03-15

8. Show current date and difference from order_date.

Use CURRENT_DATE and DATEDIFF()

```
SELECT order_id, order_date,  
       CURRENT_DATE AS today_date,  
       DATEDIFF (DAY, order_date, CURRENT_DATE) AS days_since_order  
FROM orders;
```

order_id	order_date	today_date	days_since_order
1001	2025-07-15	2025-10-15	183
1002	2025-07-10	2025-10-15	185

9. Extract the year from training_date using DATE_PART() or EXTRACT()

10. Extract hour and minute from published-on

SELECT post_id, title,
EXTRACT (HOUR FROM published-on) AS hour_published,
EXTRACT (MINUTE FROM published-on) AS minute_published
FROM blog_posts;

Post_id	title	hour_published	minute_published
1	SQL Tips	10	15
2	Data cleaning	16	45

11. Calculate days left until license expiry using DATEDIFF() and today's date.

SELECT driver_id, license_expiry,
DATEDIFF (DAY, license_expiry, CURRENT_DATE) AS days_left
FROM drivers;

12.

driver_id	license_expiry	days_left
301	2025-08-10	66
302	2023-12-31	654

12. Display the current timestamp and calculate seconds since the message was sent

SELECT message_id, sent_timestamp,
CURRENT_TIMESTAMP AS current_timestamp,
DATEDIFF (SECOND, sent_timestamp, CURRENT_TIMESTAMP) AS
seconds_since_sent

FROM messages;

message_id	sent_timestamp	current_timestamp	seconds_since_sent
1	2025-04-19 09:32:45	2025-10-15 00:00:00	153 000 000
2	2025-04-18 23:59:59	2025-10-15 00:00:00	1531 000 000

B Add 15 days to return_date using DATEADD() to show
restock_date.

```
SELECT return_id, return_date,  
DATEADD(DAY, 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

14 Convert assigned_on to date using TO_DATE() (if its stored as string)

```
SELECT assign_id,  
TO_DATE(assigned_on, 'YY YY-MM-DD') AS assigned_on_date  
FROM assignments;
```

assign_id	assigned_on_date
1	2025-03-01
2	2025-03-05