Assignment for Database Management System
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ID: 27931
Names: Philippe UWITONZE

ANSWERS

Q1 **SELECT CONCAT('27931 - ', first_name, ' ', last_name) AS full_name**

   -> FROM employees;

```
+----------------------+
| full_name            |
+----------------------+
| 27931 - Alice Johnson |
| 27931 - Bob Smith     |
| 27931 - Carol Adams   |
| 27931 - David Lee     |
| 27931 - Eve Martins   |
| 27931 - Frank Green   |
| 27931 - Grace Brown   |
| 27931 - Hank Wilson   |
| 27931 - Ivy Clark     |
| 27931 - Jake White    |
+----------------------+
```
10 rows in set (0.040 sec)

Q2. **SELECT CONCAT('27931 - ', LOWER(first_name)) AS lower_name**

   -> FROM employees;

```
+---------------+
| lower_name    |
+---------------+
```

| 27931 - alice |

| 27931 - bob | |

27931 - carol |

| 27931 - david |

| 27931 - eve |

| 27931 - frank |

| 27931 - grace | |

27931 - hank |

| 27931 - ivy |

| 27931 - jake |

+---------------+

Q3. **SELECT CONCAT('27931 - ', SUBSTRING(first_name, 1, 3)) AS short_name**

   -> FROM employees;

+-------------+

| short_name |

+-------------+

| 27931 - Ali |

| 27931 - Bob |

| 27931 - Car |

| 27931 - Dav |

| 27931 - Eve |

| 27931 - Fra |

| 27931 - Gra |

| 27931 - Han |

| 27931 - Ivy |

| 27931 - Jak |

+-------------+

10 rows in set (0.003 sec)

Q4. **UPDATE employees**

   -> SET email = REPLACE(email, '@company.com', '@org.com')

   -> WHERE email LIKE '%@company.com';

Query OK, 10 rows affected (0.014 sec)

Rows matched: 10 Changed: 10 Warnings: 0

MariaDB [employee_management]> **select * from employees;**

```
+-------------+------------+-----------+----------------------+------------+---------+---------------+
| employee_id | first_name | last_name | email                | hire_date  | salary  | department_id |
+-------------+------------+-----------+----------------------+------------+---------+---------------+
|         101 | Alice      | Johnson   | alice.johnson@org.com | 2015-03-15 | 4500.00 |             1 |
|         102 | Bob        | Smith     | bob.smith@org.com    | 2018-06-23 | 5200.00 |             3 |
|         103 | Carol      | Adams     | carol.adams@org.com  | 2012-09-10 | 6700.00 |             2 |
|         104 | David      | Lee       | david.lee@org.com    | 2020-01-05 | 3800.00 |             4 |
|         105 | Eve        | Martins   | eve.martins@org.com  | 2019-12-11 | 4000.00 |             3 |
|         106 | Frank      | Green     | frank.green@org.com  | 2017-07-08 | 6000.00 |             8 |
|         107 | Grace      | Brown     | grace.brown@org.com  | 2014-11-02 | 4900.00 |             5 |
|         108 | Hank       | Wilson    | hank.wilson@org.com  | 2013-02-17 | 3100.00 |             6 |
|         109 | Ivy        | Clark     | ivy.clark@org.com    | 2021-08-30 | 2700.00 |             9 |
|         110 | Jake       | White     | jake.white@org.com   | 2022-05-19 | 3600.00 |             7 |
+-------------+------------+-----------+----------------------+------------+---------+---------------+
```

10 rows in set (0.000 sec)

Q5. SELECT employee_id,

   ->   CONCAT('27931 - ', TRIM(first_name)) AS first_name,

   ->   CONCAT('27931 - ', TRIM(last_name)) AS last_name

  -> FROM employees;

```
+-------------+--------------+-----------------+
| employee_id | first_name   | last_name       |
```

```
+-------------+--------------+-----------------+
|         101 | 27931 - Alice | 27931 - Johnson |
|         102 | 27931 - Bob   | 27931 - Smith   |
|         103 | 27931 - Carol | 27931 - Adams   |
|         104 | 27931 - David | 27931 - Lee     |
|         105 | 27931 - Eve   | 27931 - Martins |
|         106 | 27931 - Frank | 27931 - Green   |
|         107 | 27931 - Grace | 27931 - Brown   |
|         108 | 27931 - Hank  | 27931 - Wilson  |
|         109 | 27931 - Ivy   | 27931 - Clark   |
|         110 | 27931 - Jake  | 27931 - White   |
+-------------+--------------+-----------------+
```

10 rows in set (0.002 sec)

6. **SELECT employee_id, first_name, last_name,**

   ->   CONCAT('27931 - ', LENGTH(CONCAT(first_name, ' ', last_name))) AS name_length

  -> FROM employees;

```
+-------------+------------+-----------+-------------+
| employee_id | first_name | last_name | name_length |
+-------------+------------+-----------+-------------+
|         101 | Alice      | Johnson   | 27931 - 13  |
|         102 | Bob        | Smith     | 27931 - 9   |
|         103 | Carol      | Adams     | 27931 - 11  |
|         104 | David      | Lee       | 27931 - 9   |
|         105 | Eve        | Martins   | 27931 - 11  |
|         106 | Frank      | Green     | 27931 - 11  |
|         107 | Grace      | Brown     | 27931 - 11  |
|         108 | Hank       | Wilson    | 27931 - 11  |
|         109 | Ivy        | Clark     | 27931 - 9   |
|         110 | Jake       | White     | 27931 - 10  |
```

```
+-------------+-----------+-----------+-------------+
```

10 rows in set (0.003 sec)

Q7 SELECT employee_id, email, INSTR(email, '@') FROM employees;

```
+-------------+-------------------------+-------------------+
| employee_id | email                   | INSTR(email, '@') |
+-------------+-------------------------+-------------------+
|         101 | alice.johnson@campany.com |            14 | |
102 | bob.smith@campany.com     |           10 |
|         103 | carol.adams@campany.com   |           12 |
|         104 | david.lee@campany.com     |           10 |
|         105 | eve.martins@campany.com   |           12 |
|         106 | frank.green@campany.com   |           12 |
|         107 | grace.brown@campany.com   |           12 |
|         108 | hank.wilson@campany.com   |           12 |
|         109 | ivy.clark@campany.com     |           10 |
|         110 | jake.white@campany.com    |           11 |
+-------------+-------------------------+-------------------+
```

10 rows in set (0.002 sec)

Q8. SELECT employee_id, first_name, last_name,

    ->   CONCAT('27931 - ',

    ->   CASE

    ->   WHEN first_name IN ('Alice', 'Carol', 'Eve', 'Grace', 'Ivy') THEN 'Ms. '

    ->   WHEN first_name IN ('Bob', 'David', 'Frank', 'Hank', 'Jake') THEN 'Mr. '   ->   ELSE ''

    ->   END,

    ->   first_name, ' ', last_name) AS titled_name

    -> FROM employees;

```
+-------------+------------+-----------+-------------------------+
| employee_id | first_name | last_name | titled_name             |
+-------------+------------+-----------+-------------------------+
```

```
|         101 | Alice      | Johnson    | 27931 - Ms. Alice Johnson |
|         102 | Bob        | Smith      | 27931 - Mr. Bob Smith     |
|         103 | Carol      | Adams      | 27931 - Ms. Carol Adams   |
|         104 | David      | Lee        | 27931 - Mr. David Lee     |
|         105 | Eve        | Martins    | 27931 - Ms. Eve Martins   |
|         106 | Frank      | Green      | 27931 - Mr. Frank Green   |
|         107 | Grace      | Brown      | 27931 - Ms. Grace Brown   |
|         108 | Hank       | Wilson     | 27931 - Mr. Hank Wilson   |
|         109 | Ivy        | Clark      | 27931 - Ms. Ivy Clark     |
|         110 | Jake       | White      | 27931 - Mr. Jake White    |
+-------------+------------+-----------+--------------------------+
```

10 rows in set (0.008 sec)

Q9. SELECT CONCAT('27931 - ', UPPER(project_name)) AS project_name_upper

   -> FROM projects;

```
+----------------------------------+
| project_name_upper               |
+----------------------------------+
| 27931 - HR REVAMP                |
| 27931 - FINANCE AUTOMATION       |
| 27931 - IT INFRASTRUCTURE UPGRADE |
| 27931 - MARKETING BLITZ 2025     |
| 27931 - LEGAL COMPLIANCE         |
| 27931 - CUSTOMER PORTAL          |
| 27931 - SALES BOOSTER            |
| 27931 - R&D PILOT                |
| 27931 - PROCUREMENT TRACKER      |
| 27931 - OPERATIONS STREAMLINE    |
+----------------------------------+
```

10 rows in set (0.004 sec)

Q10. select project_name,replace (project_name, '-','') from projects;

```
+-------------------------+------------------------------+
| project_name            | replace (project_name, '-','') |
+-------------------------+------------------------------+
| HR Revamp               | HR Revamp                    |
| Finance Automation      | Finance Automation           |
| IT Infrastructure Upgrade | IT Infrastructure Upgrade  |
| Marketing Blitz 2025    | Marketing Blitz 2025         |
| Legal Compliance        | Legal Compliance             |
| Customer Portal         | Customer Portal              |
| Sales Booster           | Sales Booster                |
| R&D Pilot               | R&D Pilot                    |
| Procurement Tracker     | Procurement Tracker          |
| Operations Streamline   | Operations Streamline        |
+-------------------------+------------------------------+
```

10 rows in set (0.000 sec)

Q11. SELECT

```
    ->    e.employee_id,
    ->    CONCAT('Emp: ', e.first_name, ' ', e.last_name, ' (', d.department_name, ')') AS employee_label
   -> FROM
    ->    employees e
   -> JOIN
    ->    department d ON e.department_id = d.department_id;
```

```
+-------------+-----------------------------------------+
| employee_id | employee_label                          |
+-------------+-----------------------------------------+
|       101 | Emp: Alice Johnson (Human Resources)      |
|       102 | Emp: Bob Smith (Information Technology)    |
|       103 | Emp: Carol Adams (Finance)                |
```

```
|         104 | Emp: David Lee (Marketing)             |
|         105 | Emp: Eve Martins (Information Technology) |
|         106 | Emp: Frank Green (Sales)               |
|         107 | Emp: Grace Brown (Legal)               |
|         108 | Emp: Hank Wilson (Operations)          |
|         109 | Emp: Ivy Clark (Research and Development) |
|         110 | Emp: Jake White (Customer Service)     |
+-------------+----------------------------------------+
```

10 rows in set (0.010 sec)

Q12. select email,length(email) from employees;

```
+--------------------------+---------------+
| email                    | length(email) |
+--------------------------+---------------+
| alice.johnson@company.com |          25 | |
bob.smith@company.com      |          21 |
| carol.adams@company.com   |          23 |
| david.lee@company.com     |          21 |
| eve.martins@company.com   |          23 |
| frank.green@company.com   |          23 |
| grace.brown@company.com   |          23 |
| hank.wilson@company.com   |          23 |
| ivy.clark@company.com     |          21 |
| jake.white@company.com    |          22 |
+--------------------------+---------------+
```

10 rows in set (0.001 sec)

13. SELECT

-> **employee_id,**

-> **email,**

```
    ->    CONCAT('27931 - ', SUBSTRING_INDEX(SUBSTRING_INDEX(email, '@', 1), '.', -1)) AS
last_name_extracted    -> FROM
    ->    employees;
```

```
+-------------+--------------------------+---------------------+
| employee_id | email                    | last_name_extracted |
+-------------+--------------------------+---------------------+
|         101 | alice.johnson@campany.com | 27931 - johnson    |
|         102 | bob.smith@campany.com     | 27931 - smith      |
|         103 | carol.adams@campany.com   | 27931 - adams      |
|         104 | david.lee@campany.com     | 27931 - lee        |
|         105 | eve.martins@campany.com   | 27931 - martins    |
|         106 | frank.green@campany.com   | 27931 - green      |
|         107 | grace.brown@campany.com   | 27931 - brown      |
|         108 | hank.wilson@campany.com   | 27931 - wilson     |
|         109 | ivy.clark@campany.com     | 27931 - clark      |
|         110 | jake.white@campany.com    | 27931 - white      |
+-------------+--------------------------+---------------------+
10 rows in set (0.002 sec)
```

Q14. SELECT employee_id,

```
    ->    CONCAT('27931 - ', UPPER(last_name), ', ', first_name) AS formatted_name
    -> FROM employees;
```

```
+-------------+-----------------------+
| employee_id | formatted_name        |
+-------------+-----------------------+
|         101 | 27931 - JOHNSON, Alice |
|         102 | 27931 - SMITH, Bob     |
|         103 | 27931 - ADAMS, Carol   |
|         104 | 27931 - LEE, David     |
|         105 | 27931 - MARTINS, Eve   |
```

```
|      106 | 27931 - GREEN, Frank   |

|      107 | 27931 - BROWN, Grace   |

|      108 | 27931 - WILSON, Hank   |

|      109 | 27931 - CLARK, Ivy     |

|      110 | 27931 - WHITE, Jake    |

+-------------+------------------------+

10 rows in set (0.001 sec)
```

15. SELECT CONCAT('27931 - ', first_name, ' ', last_name,

```
    ->     IF(
    ->       employee_id IN (
    ->         SELECT employee_id
    ->         FROM employee_projects ep
    ->         JOIN projects p ON ep.project_id = p.project_id
    ->         WHERE p.end_date IS NULL OR p.end_date > CURDATE()
    ->       ),
    ->       ' (Active)', ''
    ->     )) AS name_with_status
    -> FROM employees;

+------------------------------+

| name_with_status             |

+------------------------------+

| 27931 - Alice Johnson        |

| 27931 - Bob Smith (Active)   |

| 27931 - Carol Adams          |

| 27931 - David Lee            |

| 27931 - Eve Martins (Active) |

| 27931 - Frank Green          |

| 27931 - Grace Brown          |

| 27931 - Hank Wilson          |
```

| 27931 - Ivy Clark |

| 27931 - Jake White |

+-----------------------------+

10 rows in set (0.031 sec)

16. MariaDB [employee_management]> SELECT

   -> employee_id,

   -> first_name,

   -> last_name,

   -> salary,

   -> ROUND(salary) AS rounded_salary

   -> FROM

   -> employees;

+-------------+------------+-----------+---------+----------------+
| employee_id | first_name | last_name | salary | rounded_salary |
+-------------+------------+-----------+---------+----------------+
101	Alice	Johnson	4500.00	4500
102	Bob	Smith	5200.00	5200
103	Carol	Adams	6700.00	6700
104	David	Lee	3800.00	3800
105	Eve	Martins	4000.00	4000
106	Frank	Green	6000.00	6000
107	Grace	Brown	4900.00	4900
108	Hank	Wilson	3100.00	3100
109	Ivy	Clark	2700.00	2700
110	Jake	White	3600.00	3600
+-------------+------------+-----------+---------+----------------+

10 rows in set (0.001 sec)

17. SELECT

   -> employee_id,

```
    ->      first_name,

    ->      last_name,

    ->      salary

    -> FROM

    ->      employees

    -> WHERE

    ->      MOD(ROUND(salary), 2) = 0;
```

```
+-------------+------------+-----------+---------+
| employee_id | first_name | last_name | salary  |
+-------------+------------+-----------+---------+
|         101 | Alice      | Johnson   | 4500.00 |
|         102 | Bob        | Smith     | 5200.00 |
|         103 | Carol      | Adams     | 6700.00 |
|         104 | David      | Lee       | 3800.00 |
|         105 | Eve        | Martins   | 4000.00 |
|         106 | Frank      | Green     | 6000.00 |
|         107 | Grace      | Brown     | 4900.00 |
|         108 | Hank       | Wilson    | 3100.00 |
|         109 | Ivy        | Clark     | 2700.00 |
|         110 | Jake       | White     | 3600.00 |
+-------------+------------+-----------+---------+
10 rows in set (0.001 sec)
```

18. SELECT

```
    ->  project_id,

    ->  project_name,

    ->  DATEDIFF(end_date, start_date) AS duration_days

    -> FROM

    ->  projects

    -> WHERE
```

```
    ->  end_date IS NOT NULL;
```

```
+------------+----------------------+---------------+
| project_id | project_name         | duration_days |
+------------+----------------------+---------------+
|        201 | HR Revamp            |           364 |
|        202 | Finance Automation   |           350 |
|        204 | Marketing Blitz 2025 |           149 |
|        205 | Legal Compliance     |           184 |
|        206 | Customer Portal      |           364 |
|        207 | Sales Booster        |           364 |
|        209 | Procurement Tracker  |           245 |
|        210 | Operations Streamline|           365 |
+------------+----------------------+---------------+
```

8 rows in set (0.003 sec)

19. SELECT

```
    ->  ABS(
    ->    (SELECT salary FROM employees WHERE employee_id = 101) -
    ->    (SELECT salary FROM employees WHERE employee_id = 102)
    ->  ) AS salary_diff;
```

```
+-------------+
| salary_diff |
+-------------+
|      700.00 |
+-------------+ 1 row in
```

set (0.004 sec)

20.

MariaDB [employee_management]> SELECT

```
    ->  employee_id,
    ->  salary,
```

```
    ->  salary * POWER(1.10, 1) AS increased_salary
    -> FROM
    ->  employees;
```

```
+-------------+---------+--------------------+
| employee_id | salary  | increased_salary   |
+-------------+---------+--------------------+
|         101 | 4500.00 |               4950 |
|         102 | 5200.00 | 5720.000000000001  |
|         103 | 6700.00 | 7370.000000000001  |
|         104 | 3800.00 |               4180 |
|         105 | 4000.00 |               4400 |
|         106 | 6000.00 | 6600.000000000001  |
|         107 | 4900.00 |               5390 |
|         108 | 3100.00 | 3410.0000000000005 |
|         109 | 2700.00 | 2970.0000000000005 |
|         110 | 3600.00 | 3960.0000000000005 |
+-------------+---------+--------------------+
```

10 rows in set (0.003 sec)

21. SELECT

```
    ->  employee_id,
    ->  FLOOR(RAND() * 10000) AS random_test_id
    -> FROM
    ->  employees;
```

```
+-------------+----------------+
| employee_id | random_test_id |
+-------------+----------------+
|         101 |           4028 |
|         102 |           3300 |
|         103 |           4415 |
```

```
|       104 |      2179 |

|       105 |      7647 |

|       106 |      1701 |

|       107 |      5563 |

|       108 |      2715 |

|       109 |      6883 |

|       110 |      6273 |

+------------+---------------+

10 rows in set (0.002 sec)
```

22. SELECT

    -> employee_id,

    -> salary,

    -> CEIL(salary) AS salary_ceil,

    -> FLOOR(salary) AS salary_floor

    -> FROM

    -> employees;

```
+------------+---------+------------+-------------+

| employee_id | salary  | salary_ceil | salary_floor |

+------------+---------+------------+-------------+

|       101 | 4500.00 |     4500 |     4500 |

|       102 | 5200.00 |     5200 |     5200 |

|       103 | 6700.00 |     6700 |     6700 |

|       104 | 3800.00 |     3800 |     3800 |

|       105 | 4000.00 |     4000 |     4000 |

|       106 | 6000.00 |     6000 |     6000 |

|       107 | 4900.00 |     4900 |     4900 |

|       108 | 3100.00 |     3100 |     3100 |

|       109 | 2700.00 |     2700 |     2700 |

|       110 | 3600.00 |     3600 |     3600 |
```

```
+-------------+---------+-------------+--------------+
```

10 rows in set (0.000 sec)

23.

24. **SELECT**

   -> employee_id,

   -> salary,

   -> CASE

   ->   WHEN salary > 6000 THEN 'High'

   ->   WHEN salary BETWEEN 4000 AND 6000 THEN 'Medium'

   ->   ELSE 'Low'

   -> END AS salary_category

   -> FROM

   -> employees;

```
+-------------+---------+-----------------+
| employee_id | salary  | salary_category |
+-------------+---------+-----------------+
|         101 | 4500.00 | Medium          |
|         102 | 5200.00 | Medium          |
|         103 | 6700.00 | High            |
|         104 | 3800.00 | Low             |
|         105 | 4000.00 | Medium          |
|         106 | 6000.00 | Medium          |
|         107 | 4900.00 | Medium          |
|         108 | 3100.00 | Low             |
|         109 | 2700.00 | Low             |
|         110 | 3600.00 | Low             |
+-------------+---------+-----------------+
```

10 rows in set (0.001 sec)

25**. SELECT**

   -

   -

   -

```
  >  employee_id,

  >  salary,

  >  LENGTH(REPLACE(CAST(salary AS CHAR), '.', '')) AS digit_count
 -> FROM

 ->  employees;
```

```
+-------------+---------+-------------+

| employee_id | salary  | digit_count |

+-------------+---------+-------------+

|         101 | 4500.00 |           6 |

|         102 | 5200.00 |           6 |

|         103 | 6700.00 |           6 |

|         104 | 3800.00 |           6 |

|         105 | 4000.00 |           6 |

|         106 | 6000.00 |           6 |

|         107 | 4900.00 |           6 |

|         108 | 3100.00 |           6 |

|         109 | 2700.00 |           6 |

|         110 | 3600.00 |           6 |

+-------------+---------+-------------+
```

10 rows in set (0.002 sec)

26. **SELECT CURRENT_DATE() AS today_date;**

```
+------------+

| today_date |

+------------+

| 2025-07-27 |

+------------+
```

   -

   -

   -

27. **SELECT**

    -> employee_id,

    -> first_name,

    > last_name,

    > hire_date

    > FROM

    -> employees

    -> WHERE

    -> YEAR(hire_date) = YEAR(CURRENT_DATE());

Empty set (0.043 sec)

28. **SELECT**

    -> employee_id,

    -> first_name,

    -> last_name,

    -> hire_date

    -> FROM

    -> employees

    -> WHERE

    -> YEAR(hire_date) = YEAR(CURRENT_DATE());

Empty set (0.001 sec)

29. **SELECT NOW() AS current_datetime;**

+---------------------+

| current_datetime |

+---------------------+

| 2025-07-27 21:01:47 |

+---------------------+

   -

   -

   -

1 row in set (0.000 sec)

30**. SELECT**

   -> employee_id,

   -> hire_date,

   -> YEAR(hire_date) AS hire_year,

   -> MONTH(hire_date) AS hire_month,

   > DAY(hire_date) AS hire_day

  > FROM

  > employees;

   -

   -

   -

```
+-------------+------------+-----------+------------+----------+
| employee_id | hire_date  | hire_year | hire_month | hire_day |
+-------------+------------+-----------+------------+----------+
|         101 | 2015-03-15 |      2015 |          3 |       15 |
|         102 | 2018-06-23 |      2018 |          6 |       23 |
|         103 | 2012-09-10 |      2012 |          9 |       10 |
|         104 | 2020-01-05 |      2020 |          1 |        5 |
|         105 | 2019-12-11 |      2019 |         12 |       11 |
|         106 | 2017-07-08 |      2017 |          7 |        8 |
|         107 | 2014-11-02 |      2014 |         11 |        2 |
|         108 | 2013-02-17 |      2013 |          2 |       17 |
|         109 | 2021-08-30 |      2021 |          8 |       30 |
|         110 | 2022-05-19 |      2022 |          5 |       19 |
+-------------+------------+-----------+------------+----------+
10 rows in set (0.001 sec)
```

31. **SELECT**
    -> employee_id,
    -> first_name,
    -> last_name,
    -> hire_date
    -> FROM
    -> employees
    -> WHERE
    -> hire_date < '2020-01-01';

```
+-------------+------------+-----------+------------+
| employee_id | first_name | last_name | hire_date  |
+-------------+------------+-----------+------------+
|         101 | Alice      | Johnson   | 2015-03-15 |
|         102 | Bob        | Smith     | 2018-06-23 |
```

| 103 | Carol | Adams | 2012-09-10 |

| 105 | Eve | Martins | 2019-12-11 |

| 106 | Frank | Green | 2017-07-08 |

| 107 | Grace | Brown | 2014-11-02 |

| 108 | Hank | Wilson | 2013-02-17 |

+-------------+------------+-----------+------------+

7 rows in set (0.000 sec)

32.

MariaDB [employee_management]> SELECT

   -> project_id,

   -> project_name,

   -> end_date

   -> FROM

   -> projects

   -> WHERE

   -> end_date IS NOT NULL

   -> AND end_date BETWEEN DATE_SUB(CURRENT_DATE(), INTERVAL 30 DAY) AND CURRENT_DATE();

+------------+---------------------+------------+

| project_id | project_name | end_date |

+------------+---------------------+------------+

| 204 | Marketing Blitz 2025 | 2025-06-30 |

+------------+---------------------+------------+

33. **SELECT**

   -> project_id,

   -> project_name,

   -> DATEDIFF(end_date, start_date) AS total_days

   -> FROM

   -> projects

```
    -> WHERE

    ->  end_date IS NOT NULL;

+------------+----------------------+------------+

| project_id | project_name         | total_days |

+------------+----------------------+------------+

|     201 | HR Revamp           |      364 |

|     202 | Finance Automation  |      350 |

|     204 | Marketing Blitz 2025 |      149 |

|     205 | Legal Compliance    |      184 |

|     206 | Customer Portal     |      364 |

|     207 | Sales Booster       |      364 |

|     209 | Procurement Tracker |      245 |

|     210 | Operations Streamline |     365 |

+------------+----------------------+------------+

8 rows in set (0.000 sec)
```

34. **SELECT CONCAT('27931 - ',**

    ->   MONTHNAME('2025-07-23'), ' ',

    ->   DAY('2025-07-23'), ', ',

    ->   YEAR('2025-07-23')) AS formatted_date;

```
+-----------------------+

| formatted_date        |

+-----------------------+

| 27931 - July 23, 2025 |

+-----------------------+
```

1 row in set (0.007 sec)

35. **SELECT**

    -> project_id,

    -> project_name,

    -> CASE

```
    ->    WHEN end_date IS NULL THEN 'Ongoing'

    ->    ELSE 'Completed'

    ->  END AS project_status

    -> FROM

    ->  projects;
```

```
+------------+--------------------------+----------------+
| project_id | project_name             | project_status |
+------------+--------------------------+----------------+
|       201  | HR Revamp                | Completed      |
|       202  | Finance Automation       | Completed      |
|       203  | IT Infrastructure Upgrade| Ongoing        |
|       204  | Marketing Blitz 2025     | Completed      |
|       205  | Legal Compliance         | Completed      |
|       206  | Customer Portal          | Completed      |
|       207  | Sales Booster            | Completed      |
|       208  | R&D Pilot                | Ongoing        |
|       209  | Procurement Tracker      | Completed      |
|       210  | Operations Streamline    | Completed      |
+------------+--------------------------+----------------+
```

10 rows in set (0.000 sec)

36. **SELECT**

```
    ->  employee_id,

    ->  salary,

    ->  CASE

    ->    WHEN salary >= 6000 THEN 'High'

    ->    WHEN salary BETWEEN 4000 AND 5999.99 THEN 'Medium'

    ->    ELSE 'Low'

    ->  END AS salary_category

    -> FROM employees;
```

```
+-------------+---------+-----------------+
| employee_id | salary  | salary_category |
+-------------+---------+-----------------+
|         101 | 4500.00 | Medium          |
|         102 | 5200.00 | Medium          |
|         103 | 6700.00 | High            |
|         104 | 3800.00 | Low             |
|         105 | 4000.00 | Medium          |
|         106 | 6000.00 | High            |
|         107 | 4900.00 | Medium          |
|         108 | 3100.00 | Low             |
|         109 | 2700.00 | Low             |
|         110 | 3600.00 | Low             |
+-------------+---------+-----------------+
10 rows in set (0.001 sec)
```

37. **SELECT**
   -> employee_id,
   -> COALESCE(email, 'No Email') AS email_or_default
   -> FROM employees;

```
+-------------+--------------------------+
| employee_id | email_or_default         |
+-------------+--------------------------+
|         101 | alice.johnson@company.com |
|         102 | bob.smith@company.com     |
|         103 | carol.adams@company.com   |
|         104 | david.lee@company.com     |
|         105 | eve.martins@company.com   |
|         106 | frank.green@company.com   |
|         107 | grace.brown@company.com   |
```

```
|      108 | hank.wilson@company.com   |
|      109 | ivy.clark@company.com    |
|      110 | jake.white@company.com   |
+-------------+--------------------------+
```

10 rows in set (0.001 sec)

38. SELECT

   -> employee_id,

   -> hire_date,

   -> CASE

   -> WHEN hire_date < '2015-01-01' THEN 'Veteran'

   -> ELSE 'Newcomer'

   -> END AS veteran_status

   -> FROM employees;

```
+-------------+------------+----------------+
| employee_id | hire_date  | veteran_status |
+-------------+------------+----------------+
|      101 | 2015-03-15 | Newcomer      |
|      102 | 2018-06-23 | Newcomer      |
|      103 | 2012-09-10 | Veteran       |
|      104 | 2020-01-05 | Newcomer      |
|      105 | 2019-12-11 | Newcomer      |
|      106 | 2017-07-08 | Newcomer      |
|      107 | 2014-11-02 | Veteran       |
|      108 | 2013-02-17 | Veteran       |
|      109 | 2021-08-30 | Newcomer      |
|      110 | 2022-05-19 | Newcomer      |
+-------------+------------+----------------+
```

10 rows in set (0.000 sec)

39. SELECT

-> employee_id,

        -> COALESCE(salary, 3000) AS salary_with_default

        -> FROM employees;

+-------------+---------------------+

| employee_id | salary_with_default |

+-------------+---------------------+

| 101 | 4500.00 |

| 102 | 5200.00 |

| 103 | 6700.00 |

| 104 | 3800.00 |

| 105 | 4000.00 |

| 106 | 6000.00 |

| 107 | 4900.00 |

| 108 | 3100.00 |

| 109 | 2700.00 |

| 110 | 3600.00 |

+-------------+---------------------+

10 rows in set (0.000 sec)

40. **SELECT**

    -> e.employee_id,

    -> d.department_name,

    -> CASE

    ->   WHEN d.department_name = 'Information Technology' THEN 'IT'

    ->   WHEN d.department_name = 'Human Resources' THEN 'HR'

    ->   ELSE 'Other'

    -> END AS dept_group

    -> FROM employees e

    -> JOIN department d USING(department_id);

+-------------+-------------------------+------------+

```
| employee_id | department_name        | dept_group |

+-------------+------------------------+------------+

|         101 | Human Resources        | HR         |

|         102 | Information Technology  | IT         |

|         103 | Finance                | Other      |

|         104 | Marketing              | Other      |

|         105 | Information Technology  | IT         |

|         106 | Sales                  | Other      |

|         107 | Legal                  | Other      |

|         108 | Operations             | Other      |

|         109 | Research and Development | Other     |

|         110 | Customer Service       | Other      |

+-------------+------------------------+------------+
```

10 rows in set (0.001 sec)

41. SELECT

   -> e.employee_id,

   -> CASE

   -> WHEN ep.project_id IS NULL THEN 'Unassigned'

   -> ELSE 'Assigned'

   -> END AS assignment_status

  -> FROM employees e

  -> LEFT JOIN employee_projects ep ON e.employee_id = ep.employee_id;

```
+-------------+-------------------+

| employee_id | assignment_status |

+-------------+-------------------+

|         101 | Assigned          |

|         102 | Assigned          |

|         103 | Assigned          |

|         104 | Assigned          |
```

| 105 | Assigned |

| 106 | Assigned |

| 107 | Unassigned |

| 108 | Unassigned |

| 109 | Unassigned |

| 110 | Unassigned |

+------------+------------------+

10 rows in set (0.000 sec)

42. SELECT

   -> employee_id,

   -> COALESCE(salary, 0) AS salary,

   -> CASE

   ->   WHEN COALESCE(salary, 0) > 6000 THEN 'H1'

   ->   WHEN salary BETWEEN 4000 AND 6000 THEN 'H2'

   ->   ELSE 'H3'

   -> END AS tax_band

   -> FROM employees;

+------------+---------+----------+

| employee_id | salary | tax_band |

+------------+---------+----------+

| 101 | 4500.00 | H2 |

| 102 | 5200.00 | H2 |

| 103 | 6700.00 | H1 |

| 104 | 3800.00 | H3 |

| 105 | 4000.00 | H2 |

| 106 | 6000.00 | H2 |

| 107 | 4900.00 | H2 |

| 108 | 3100.00 | H3 |

| 109 | 2700.00 | H3 |

```
|      110 | 3600.00 | H3     |

+-------------+---------+----------+

10 rows in set (0.000 sec)
```

43. SELECT

```
    -> project_id,

    -> project_name,

    -> CASE

    ->   WHEN end_date IS NULL THEN 'Ongoing'

    ->   WHEN DATEDIFF(end_date, start_date) < 30 THEN 'Short-term'

    ->   WHEN DATEDIFF(end_date, start_date) <= 180 THEN 'Medium-term'

    ->   ELSE 'Long-term'

    ->  END AS duration_label

    -> FROM projects;

+------------+--------------------------+----------------+

| project_id | project_name             | duration_label |

+------------+--------------------------+----------------+

|      201 | HR Revamp                | Long-term      |

|      202 | Finance Automation       | Long-term      |

|      203 | IT Infrastructure Upgrade | Ongoing       |

|      204 | Marketing Blitz 2025     | Medium-term    |

|      205 | Legal Compliance         | Long-term      |

|      206 | Customer Portal          | Long-term      |

|      207 | Sales Booster            | Long-term      |

|      208 | R&D Pilot                | Ongoing        |

|      209 | Procurement Tracker      | Long-term      |

|      210 | Operations Streamline    | Long-term      |

+------------+--------------------------+----------------+

10 rows in set (0.000 sec)
```

44. SELECT

```
    -> employee_id,
    -> salary,
    -> CASE
    ->   WHEN MOD(ROUND(COALESCE(salary,0)), 2) = 0 THEN 'Even Salary'
    ->   ELSE 'Odd Salary'
    -> END AS salary_parity
    -> FROM employees;
```

```
+-------------+---------+---------------+
| employee_id | salary  | salary_parity |
+-------------+---------+---------------+
|         101 | 4500.00 | Even Salary   |
|         102 | 5200.00 | Even Salary   |
|         103 | 6700.00 | Even Salary   |
|         104 | 3800.00 | Even Salary   |
|         105 | 4000.00 | Even Salary   |
|         106 | 6000.00 | Even Salary   |
|         107 | 4900.00 | Even Salary   |
|         108 | 3100.00 | Even Salary   |
|         109 | 2700.00 | Even Salary   |
|         110 | 3600.00 | Even Salary   |
+-------------+---------+---------------+
```

10 rows in set (0.000 sec)

45. SELECT CONCAT('27931 - ', COALESCE(first_name, 'First'), ' ', COALESCE(last_name, 'Last')) AS display_name

```
    -> FROM employees;
```

```
+----------------------+
| display_name         |
+----------------------+
| 27931 - Alice Johnson |
```

| 27931 - Bob Smith |

| 27931 - Carol Adams |

| 27931 - David Lee |

| 27931 - Eve Martins |

| 27931 - Frank Green |

| 27931 - Grace Brown |

| 27931 - Hank Wilson |

| 27931 - Ivy Clark |

| 27931 - Jake White |

+----------------------+

10 rows in set (0.001 sec) **46.**

SELECT employee_id,

    ->   CONCAT('27931 - ', first_name, last_name) AS name_joined,

    ->   CASE

    ->   WHEN LENGTH(CONCAT(first_name, last_name)) > 10 THEN 'Long Name'

    ->   ELSE 'Short Name'

    ->   END AS name_length_label

   -> FROM employees;

+------------+--------------------+------------------+

| employee_id | name_joined | name_length_label |

+------------+--------------------+------------------+

| 101 | 27931 - AliceJohnson | Long Name |

| 102 | 27931 - BobSmith | Short Name |

| 103 | 27931 - CarolAdams | Short Name |

| 104 | 27931 - DavidLee | Short Name |

| 105 | 27931 - EveMartins | Short Name |

| 106 | 27931 - FrankGreen | Short Name |

| 107 | 27931 - GraceBrown | Short Name |

| 108 | 27931 - HankWilson | Short Name |

```
|     109 | 27931 - IvyClark    | Short Name     |
|     110 | 27931 - JakeWhite   | Short Name     |
+------------+--------------------+------------------+
```
10 rows in set (0.001 sec)10 rows in set (0.001 sec)

47. SELECT

    -> employee_id,

    -> email,

    -> CASE

    ->   WHEN UPPER(email) LIKE '%TEST%' THEN 'Dummy Account'

    ->   ELSE 'Real Account'

    -> END AS email_type

    -> FROM employees;

```
+------------+-------------------------+--------------+
| employee_id | email                 | email_type   |
+------------+-------------------------+--------------+
|     101 | alice.johnson@company.com | Real Account | |
102 | bob.smith@company.com    | Real Account |
|     103 | carol.adams@company.com  | Real Account |
|     104 | david.lee@company.com    | Real Account |
|     105 | eve.martins@company.com  | Real Account |
|     106 | frank.green@company.com  | Real Account |
|     107 | grace.brown@company.com  | Real Account |
|     108 | hank.wilson@company.com  | Real Account |
|     109 | ivy.clark@company.com    | Real Account |
|     110 | jake.white@company.com   | Real Account |
+------------+-------------------------+--------------+
```
10 rows in set (0.000 sec)

48. SELECT

    -> employee_id,

```
    -> hire_date,
    -> CASE
    ->    WHEN YEAR(hire_date) <= YEAR(CURRENT_DATE()) - 10 THEN 'Senior'
    ->    ELSE 'Junior'
    -> END AS seniority
    -> FROM employees;
+-------------+------------+-----------+
| employee_id | hire_date  | seniority |
+-------------+------------+-----------+
|         101 | 2015-03-15 | Senior    |
|         102 | 2018-06-23 | Junior    |
|         103 | 2012-09-10 | Senior    |
|         104 | 2020-01-05 | Junior    |
|         105 | 2019-12-11 | Junior    |
|         106 | 2017-07-08 | Junior    |
|         107 | 2014-11-02 | Senior    |
|         108 | 2013-02-17 | Senior    |
|         109 | 2021-08-30 | Junior    |
|         110 | 2022-05-19 | Junior    |
+-------------+------------+-----------+
10 rows in set (0.001 sec)
```

49. SELECT
```
    -> employee_id,
    -> salary,
    -> CASE
    ->    WHEN salary IS NULL THEN 'N/A'
    ->    WHEN salary <= 4000 THEN '5%'
    ->    WHEN salary <= 6000 THEN '7%'
    ->    ELSE '10%'
```

-> END AS increment_rate

    -> FROM employees;

+------------+---------+---------------+

| employee_id | salary | increment_rate |

+------------+---------+---------------+

| 101 | 4500.00 | 7% |

| 102 | 5200.00 | 7% |

| 103 | 6700.00 | 10% |

| 104 | 3800.00 | 5% |

| 105 | 4000.00 | 5% |

| 106 | 6000.00 | 7% |

| 107 | 4900.00 | 7% |

| 108 | 3100.00 | 5% |

| 109 | 2700.00 | 5% |

| 110 | 3600.00 | 5% |

+------------+---------+---------------+

10 rows in set (0.001 sec)

50. SELECT

    -> **employee_id,**

    -> **hire_date,**

    -> **CASE**

    -> **WHEN MONTH(hire_date) = MONTH(CURRENT_DATE()) THEN 'Anniversary Month'**

    -> **ELSE 'Regular Month'**

    -> **END AS anniversary_flag**

    -> **FROM employees;**

+------------+------------+-------------------+

| employee_id | hire_date | anniversary_flag |

+------------+------------+-------------------+

| 101 | 2015-03-15 | Regular Month |

```
|         102 | 2018-06-23 | Regular Month     |
|         103 | 2012-09-10 | Regular Month     |
|         104 | 2020-01-05 | Regular Month     |
|         105 | 2019-12-11 | Regular Month     |
|         106 | 2017-07-08 | Anniversary Month |
|         107 | 2014-11-02 | Regular Month     |
|         108 | 2013-02-17 | Regular Month     |
|         109 | 2021-08-30 | Regular Month     |
|         110 | 2022-05-19 | Regular Month     |
+-------------+------------+-------------------+
10 rows in set (0.000 sec)
```