**Kalimwabo Emile**     <u>**assignment of DBMS**</u>
**ID:28892**


**Q1** **SELECT CONCAT('28892 - ', first_name, ' ', last_name) AS full_name**

   **-> FROM employees;**

```
+----------------------+
| full_name            |
+----------------------+
| 28892 - Alice Johnson |
| 28892 - Bob Smith     |
| 28892 - Carol Adams   |
| 28892 - David Lee     |
| 28892 - Eve Martins   |
| 28892 - Frank Green   |
| 28892 - Grace Brown   |
| 28892 - Hank Wilson   |
| 28892 - Ivy Clark     |
| 28892 - Jake White    |
+----------------------+
```

10 rows in set (0.040 sec)

**Q2.** **SELECT CONCAT('28892 - ', LOWER(first_name)) AS lower_name**

   **-> FROM employees;**

```
+---------------+
| lower_name    |
+---------------+
| 28892 - alice |
| 28892 - bob   |
| 28892 - carol |
| 28892 - david |
```

| 28892 - eve   |

| 28892 - frank |

| 28892 - grace |

| 28892 - hank  |

| 28892 - ivy   |

| 28892 - jake  |

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

### Q3. SELECT CONCAT('28892 - ', SUBSTRING(first_name, 1, 3)) AS short_name

   **-> FROM employees;**

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

| short_name  |

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

| 28892 - Ali |

| 28892 - Bob |

| 28892 - Car |

| 28892 - Dav |

| 28892 - Eve |

| 28892 - Fra |

| 28892 - Gra |

| 28892 - Han |

| 28892 - Ivy |

| 28892 - 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('28892 - ', TRIM(first_name)) AS first_name,**

    ->      **CONCAT('28892 - ', TRIM(last_name)) AS last_name**

    **-> FROM employees;**

```
+-------------+--------------+-----------------+
| employee_id | first_name   | last_name       |
+-------------+--------------+-----------------+
|         101 | 28892 - Alice | 28892 - Johnson |
|         102 | 28892 - Bob   | 28892 - Smith   |
|         103 | 28892 - Carol | 28892 - Adams   |
|         104 | 28892 - David | 28892 - Lee     |
|         105 | 28892 - Eve   | 28892 - Martins |
|         106 | 28892 - Frank | 28892 - Green   |
|         107 | 28892 - Grace | 28892 - Brown   |
|         108 | 28892 - Hank  | 28892 - Wilson  |
|         109 | 28892 - Ivy   | 28892 - Clark   |
|         110 | 28892 - Jake  | 28892 - White   |
+-------------+--------------+-----------------+
```

10 rows in set (0.002 sec)

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

    ->      **CONCAT('28892 - ', LENGTH(CONCAT(first_name, ' ', last_name))) AS name_length**

    **-> FROM employees;**

```
+-------------+------------+-----------+-------------+
| employee_id | first_name | last_name | name_length |
+-------------+------------+-----------+-------------+
|         101 | Alice      | Johnson   | 28892 - 13  |
|         102 | Bob        | Smith     | 28892 - 9   |
|         103 | Carol      | Adams     | 28892 - 11  |
|         104 | David      | Lee       | 28892 - 9   |
```

```
|     105 | Eve      | Martins  | 28892 - 11  |

|     106 | Frank    | Green    | 28892 - 11  |

|     107 | Grace    | Brown    | 28892 - 11  |

|     108 | Hank     | Wilson   | 28892 - 11  |

|     109 | Ivy      | Clark    | 28892 - 9   |

|     110 | Jake     | White    | 28892 - 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('28892 - ',**

    **->       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   | 28892 - Ms. Alice Johnson |
|         102 | Bob        | Smith     | 28892 - Mr. Bob Smith    |
|         103 | Carol      | Adams     | 28892 - Ms. Carol Adams  |
|         104 | David      | Lee       | 28892 - Mr. David Lee    |
|         105 | Eve        | Martins   | 28892 - Ms. Eve Martins  |
|         106 | Frank      | Green     | 28892 - Mr. Frank Green  |
|         107 | Grace      | Brown     | 28892 - Ms. Grace Brown  |
|         108 | Hank       | Wilson    | 28892 - Mr. Hank Wilson  |
|         109 | Ivy        | Clark     | 28892 - Ms. Ivy Clark    |
|         110 | Jake       | White     | 28892 - Mr. Jake White   |
+-------------+------------+-----------+--------------------------+
10 rows in set (0.008 sec)
```

**Q9. SELECT CONCAT('28892 - ', UPPER(project_name)) AS project_name_upper**

```
    -> FROM projects;
+----------------------------------+
| project_name_upper               |
+----------------------------------+
| 28892 - HR REVAMP                |
| 28892 - FINANCE AUTOMATION       |
| 28892 - IT INFRASTRUCTURE UPGRADE |
| 28892 - MARKETING BLITZ 2025     |
| 28892 - LEGAL COMPLIANCE         |
```

```
| 28892 - CUSTOMER PORTAL        |

| 28892 - SALES BOOSTER          |

| 28892 - R&D PILOT              |

| 28892 - PROCUREMENT TRACKER    |

| 28892 - 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('28892 - ', SUBSTRING_INDEX(SUBSTRING_INDEX(email, '@', 1), '.', -1)) AS last_name_extracted**

   **-> FROM**

   **->    employees;**

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

| employee_id | email                    | last_name_extracted |

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

|       101 | alice.johnson@campany.com | 28892 - johnson    |

|       102 | bob.smith@campany.com     | 28892 - smith      |

|       103 | carol.adams@campany.com   | 28892 - adams      |

|       104 | david.lee@campany.com     | 28892 - lee        |

|       105 | eve.martins@campany.com   | 28892 - martins    |

|       106 | frank.green@campany.com   | 28892 - green      |

|       107 | grace.brown@campany.com   | 28892 - brown      |

|       108 | hank.wilson@campany.com   | 28892 - wilson     |

|       109 | ivy.clark@campany.com     | 28892 - clark      |

|       110 | jake.white@campany.com    | 28892 - white      |

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

10 rows in set (0.002 sec)

**Q14. SELECT employee_id,**

   **->    CONCAT('28892 - ', UPPER(last_name), ', ', first_name) AS formatted_name**

   **-> FROM employees;**

**+-------------+-----------------------+**

```
| employee_id | formatted_name        |
+-------------+-----------------------+
|         101 | 28892 - JOHNSON, Alice |
|         102 | 28892 - SMITH, Bob     |
|         103 | 28892 - ADAMS, Carol   |
|         104 | 28892 - LEE, David     |
|         105 | 28892 - MARTINS, Eve   |
|         106 | 28892 - GREEN, Frank   |
|         107 | 28892 - BROWN, Grace   |
|         108 | 28892 - WILSON, Hank   |
|         109 | 28892 - CLARK, Ivy     |
|         110 | 28892 - WHITE, Jake    |
+-------------+-----------------------+
10 rows in set (0.001 sec)
```

15. SELECT CONCAT('28892 - ', 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             |
+------------------------------+
| 28892 - Alice Johnson        |
```

| 28892 - Bob Smith (Active)   |

| 28892 - Carol Adams       |

| 28892 - David Lee         |

| 28892 - Eve Martins (Active) |

| 28892 - Frank Green       |

| 28892 - Grace Brown       |

| 28892 - Hank Wilson       |

| 28892 - Ivy Clark         |

| 28892 - 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('28892 - ',**

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

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

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

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

| **formatted_date** |

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

| **28892 - 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('28892 - ', COALESCE(first_name, 'First'), ' ', COALESCE(last_name, 'Last')) AS display_name**

```
    -> FROM employees;

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

| display_name      |

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

| 28892 - Alice Johnson |
```

| 28892 - Bob Smith    |

| 28892 - Carol Adams  |

| 28892 - David Lee    |

| 28892 - Eve Martins  |

| 28892 - Frank Green  |

| 28892 - Grace Brown  |

| 28892 - Hank Wilson  |

| 28892 - Ivy Clark    |

| 28892 - Jake White   |

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

10 rows in set (0.001 sec)

**46. SELECT employee_id,**

    **->     CONCAT('28892 - ', 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 | 28892 - AliceJohnson | Long Name       |

|         102 | 28892 - BobSmith    | Short Name      |

|         103 | 28892 - CarolAdams  | Short Name      |

|         104 | 28892 - DavidLee    | Short Name      |

|         105 | 28892 - EveMartins  | Short Name      |

|         106 | 28892 - FrankGreen  | Short Name      |

|         107 | 28892 - GraceBrown  | Short Name      |

|         108 | 28892 - HankWilson  | Short Name      |

```
|      109 | 28892 - IvyClark    | Short Name      |
|      110 | 28892 - 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)