Ticket table

```sql
CREATE TABLE tickets (
    ticket_id INT PRIMARY KEY,
    customer_name VARCHAR(100),
    issue_type VARCHAR(50),
    priority INT,            -- 1 (Low), 2 (Medium), 3 (High)
    status VARCHAR(20),      -- Open, Closed, Pending, Escalated
    created_date DATE,
    assigned_team VARCHAR(50),   -- Support Team names
    location VARCHAR(50)         -- City or Branch location
);


INSERT INTO tickets (ticket_id, customer_name, issue_type, priority, status, created_date, assigned_team, location) VALUES
(1, 'Alice',   'Network',  3, 'Open',     '2025-08-01', 'Network Team',  'New York'),
(2, 'Bob',     'Software', 2, 'Closed',   '2025-07-28', 'Software Team', 'Chicago'),
(3, 'Charlie', 'Hardware', 1, 'Pending',  '2025-08-02', 'Hardware Team', 'San Francisco'),
(4, 'Diana',   'Network',  2, 'Open',     '2025-08-03', 'Network Team',  'New York'),
(5, 'Eve',     'Software', 3, 'Closed',   '2025-07-30', 'Software Team', 'Boston'),
(6, 'Frank',   'Software', 1, 'Pending',  '2025-08-04', 'Software Team', 'Seattle'),
(7, 'Grace',   'Network',  2, 'Escalated', '2025-08-05', 'Network Team',  'Los Angeles'),
(8, 'Henry',   'Hardware', 3, 'Open',     '2025-08-01', 'Hardware Team', 'Houston'),
(9, 'Ivy',     'Network',  1, 'Closed',   '2025-07-29', 'Network Team',  'Chicago'),
(10, 'Jack',   'Software', 3, 'Open',     '2025-08-06', 'Software Team', 'New York'),
(11, 'Kate',   'Hardware', 2, 'Pending',  '2025-08-02', 'Hardware Team', 'Boston'),
(12, 'Leo',    'Software', 2, 'Closed',   '2025-07-31', 'Software Team', 'San Francisco'),
(13, 'Mona',   'Network',  3, 'Escalated', '2025-08-03', 'Network Team',  'New York'),
(14, 'Nina',   'Hardware', 1, 'Open',     '2025-08-04', 'Hardware Team', 'Seattle'),
(15, 'Oscar',  'Software', 3, 'Pending',  '2025-08-01', 'Software Team', 'Los Angeles'),
(16, 'Paul',   'Network',  2, 'Closed',   '2025-07-30', 'Network Team',  'Houston'),
```

(17, 'Queen', 'Hardware', 1, 'Pending', '2025-08-05', 'Hardware Team', 'New York'),

(18, 'Rita',   'Software', 2, 'Open',   '2025-08-06', 'Software Team', 'Chicago'),

(19, 'Sam',   'Network', 3, 'Open',   '2025-08-07', 'Network Team', 'Boston'),

(20, 'Tina',   'Hardware', 2, 'Escalated', '2025-08-02', 'Hardware Team', 'Seattle');

✅ **1. Classify each ticket by urgency based on priority**

- Priority 3 → 'High'

- Priority 2 → 'Medium'

- Priority 1 → 'Low'

  ANS:

  mysql> select *,

    -> case

    -> when priority=3 then 'High'

    -> when priority=2 then 'Medium'

    -> else 'Low'

    -> end as Updated_priority

    -> from tickets;

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

  | ticket_id | customer_name | issue_type | priority | status | created_date | assigned_team | location | Updated_priority |

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

  | 1 | Alice | Network | 3 | Open | 2025-08-01 | Network Team | New York | High |

  | 2 | Bob | Software | 2 | Closed | 2025-07-28 | Software Team | Chicago | Medium |

  | 3 | Charlie | Hardware | 1 | Pending | 2025-08-02 | Hardware Team | San Francisco | Low |

  | 4 | Diana | Network | 2 | Open | 2025-08-03 | Network Team | New York | Medium |

  | 5 | Eve | Software | 3 | Closed | 2025-07-30 | Software Team | Boston | High |

6	Frank	Software	1	Pending	2025-08-04	Software Team	Seattle	Low
7	Grace	Network	2	Escalated	2025-08-05	Network Team	Los Angeles	Medium
8	Henry	Hardware	3	Open	2025-08-01	Hardware Team	Houston	High
9	Ivy	Network	1	Closed	2025-07-29	Network Team	Chicago	Low
10	Jack	Software	3	Open	2025-08-06	Software Team	New York	High
11	Kate	Hardware	2	Pending	2025-08-02	Hardware Team	Boston	Medium
12	Leo	Software	2	Closed	2025-07-31	Software Team	San Francisco	Medium
13	Mona	Network	3	Escalated	2025-08-03	Network Team	New York	High
14	Nina	Hardware	1	Open	2025-08-04	Hardware Team	Seattle	Low
15	Oscar	Software	3	Pending	2025-08-01	Software Team	Los Angeles	High
16	Paul	Network	2	Closed	2025-07-30	Network Team	Houston	Medium
17	Queen	Hardware	1	Pending	2025-08-05	Hardware Team	New York	Low
18	Rita	Software	2	Open	2025-08-06	Software Team	Chicago	Medium
19	Sam	Network	3	Open	2025-08-07	Network Team	Boston	High
20	Tina	Hardware	2	Escalated	2025-08-02	Hardware Team	Seattle	Medium

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

✅ 2. Add a column to classify ticket status

- 'Active' if status = 'Open' or 'Escalated'
- 'Inactive' if status = 'Closed'
- 'Waiting' otherwise

ANS: -> case

   -> when status='Open' or'Escalated' then 'Active'

   -> when status='Closed' then 'Inactive'

   -> else 'Waiting'

   -> end as updatued_status

   -> from tickets;

```
+----------+--------------+-----------+---------+----------+-------------+--------------+--------------+----------------+
| ticket_id | customer_name | issue_type | priority | status   | created_date | assigned_team | location     | updatued_status |
+----------+--------------+-----------+---------+----------+-------------+--------------+--------------+----------------+
|        1 | Alice        | Network   |       3 | Open     | 2025-08-01  | Network Team | New York     | Active          |
|        2 | Bob          | Software  |       2 | Closed   | 2025-07-28  | Software Team | Chicago     | Inactive        |
|        3 | Charlie      | Hardware  |       1 | Pending  | 2025-08-02  | Hardware Team | San Francisco | Waiting       |
|        4 | Diana        | Network   |       2 | Open     | 2025-08-03  | Network Team | New York     | Active          |
|        5 | Eve          | Software  |       3 | Closed   | 2025-07-30  | Software Team | Boston      | Inactive        |
|        6 | Frank        | Software  |       1 | Pending  | 2025-08-04  | Software Team | Seattle     | Waiting         |
|        7 | Grace        | Network   |       2 | Escalated | 2025-08-05  | Network Team | Los Angeles  | Waiting        |
|        8 | Henry        | Hardware  |       3 | Open     | 2025-08-01  | Hardware Team | Houston     | Active          |
|        9 | Ivy          | Network   |       1 | Closed   | 2025-07-29  | Network Team | Chicago     | Inactive        |
|       10 | Jack         | Software  |       3 | Open     | 2025-08-06  | Software Team | New York    | Active          |
|       11 | Kate         | Hardware  |       2 | Pending  | 2025-08-02  | Hardware Team | Boston      | Waiting         |
|       12 | Leo          | Software  |       2 | Closed   | 2025-07-31  | Software Team | San Francisco | Inactive      |
```

| 13 | Mona | Network | 3 | Escalated | 2025-08-03 | Network Team | New York | Waiting |

| 14 | Nina | Hardware | 1 | Open | 2025-08-04 | Hardware Team | Seattle | Active |

| 15 | Oscar | Software | 3 | Pending | 2025-08-01 | Software Team | Los Angeles | Waiting |

| 16 | Paul | Network | 2 | Closed | 2025-07-30 | Network Team | Houston | Inactive |

| 17 | Queen | Hardware | 1 | Pending | 2025-08-05 | Hardware Team | New York | Waiting |

| 18 | Rita | Software | 2 | Open | 2025-08-06 | Software Team | Chicago | Active |

| 19 | Sam | Network | 3 | Open | 2025-08-07 | Network Team | Boston | Active |

| 20 | Tina | Hardware | 2 | Escalated | 2025-08-02 | Hardware Team | Seattle | Waiting |

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

✅ 3. List tickets and show issue category

- 'Software Issue', 'Hardware Issue', 'Network Issue', or 'Other'

  ANS;

  mysql> select *,

  -> case

  -> when issue_type='Software' then 'Software Issue'

  -> when issue_type='Hardware' then 'Hardware Issue'

  -> else'Network Issue or other'

  -> end

  -> as issue_catogory

  -> from tickets;

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

  | ticket_id | customer_name | issue_type | priority | status | created_date | assigned_team | location | issue_catogory |

ID	Name	Type	Priority	Status	Date	Team	Location	Description
1	Alice	Network	3	Open	2025-08-01	Network Team	New York	Network Issue or other
2	Bob	Software	2	Closed	2025-07-28	Software Team	Chicago	Software Issue
3	Charlie	Hardware	1	Pending	2025-08-02	Hardware Team	San Francisco	Hardware Issue
4	Diana	Network	2	Open	2025-08-03	Network Team	New York	Network Issue or other
5	Eve	Software	3	Closed	2025-07-30	Software Team	Boston	Software Issue
6	Frank	Software	1	Pending	2025-08-04	Software Team	Seattle	Software Issue
7	Grace	Network	2	Escalated	2025-08-05	Network Team	Los Angeles	Network Issue or other
8	Henry	Hardware	3	Open	2025-08-01	Hardware Team	Houston	Hardware Issue
9	Ivy	Network	1	Closed	2025-07-29	Network Team	Chicago	Network Issue or other
10	Jack	Software	3	Open	2025-08-06	Software Team	New York	Software Issue
11	Kate	Hardware	2	Pending	2025-08-02	Hardware Team	Boston	Hardware Issue
12	Leo	Software	2	Closed	2025-07-31	Software Team	San Francisco	Software Issue
13	Mona	Network	3	Escalated	2025-08-03	Network Team	New York	Network Issue or other
14	Nina	Hardware	1	Open	2025-08-04	Hardware Team	Seattle	Hardware Issue
15	Oscar	Software	3	Pending	2025-08-01	Software Team	Los Angeles	Software Issue
16	Paul	Network	2	Closed	2025-07-30	Network Team	Houston	Network Issue or other
17	Queen	Hardware	1	Pending	2025-08-05	Hardware Team	New York	Hardware Issue
18	Rita	Software	2	Open	2025-08-06	Software Team	Chicago	Software Issue

| 19 | Sam | Network | 3 | Open | 2025-08-07 | Network Team | Boston | Network Issue or other |

| 20 | Tina | Hardware | 2 | Escalated | 2025-08-02 | Hardware Team | Seattle | Hardware Issue |

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

✅ **4. Mark tickets as "VIP" if customer name starts with A, E, M, or S**

ANS: mysql> select *,

   -> case

   -> when customer_name like 'A%' then 'VIP'

   -> when customer_name like 'E%' then 'VIP'

   -> when customer_name like 'M%' then 'VIP'

   -> when customer_name like 'S%' then 'VIP'

   -> end as new

   -> from tickets;

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

| ticket_id | customer_name | issue_type | priority | status | created_date | assigned_team | location | new |

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

| 1 | Alice | Network | 3 | Open | 2025-08-01 | Network Team | New York | VIP |

| 2 | Bob | Software | 2 | Closed | 2025-07-28 | Software Team | Chicago | NULL |

| 3 | Charlie | Hardware | 1 | Pending | 2025-08-02 | Hardware Team | San Francisco | NULL |

| 4 | Diana | Network | 2 | Open | 2025-08-03 | Network Team | New York | NULL |

| 5 | Eve | Software | 3 | Closed | 2025-07-30 | Software Team | Boston | VIP |

| 6 | Frank | Software | 1 | Pending | 2025-08-04 | Software Team | Seattle | NULL |

| 7 | Grace | Network | 2 | Escalated | 2025-08-05 | Network Team | Los Angeles | NULL |

8	Henry	Hardware	3	Open	2025-08-01	Hardware Team	Houston	NULL
9	Ivy	Network	1	Closed	2025-07-29	Network Team	Chicago	NULL
10	Jack	Software	3	Open	2025-08-06	Software Team	New York	NULL
11	Kate	Hardware	2	Pending	2025-08-02	Hardware Team	Boston	NULL
12	Leo	Software	2	Closed	2025-07-31	Software Team	San Francisco	NULL
13	Mona	Network	3	Escalated	2025-08-03	Network Team	New York	VIP
14	Nina	Hardware	1	Open	2025-08-04	Hardware Team	Seattle	NULL
15	Oscar	Software	3	Pending	2025-08-01	Software Team	Los Angeles	NULL
16	Paul	Network	2	Closed	2025-07-30	Network Team	Houston	NULL
17	Queen	Hardware	1	Pending	2025-08-05	Hardware Team	New York	NULL
18	Rita	Software	2	Open	2025-08-06	Software Team	Chicago	NULL
19	Sam	Network	3	Open	2025-08-07	Network Team	Boston	VIP
20	Tina	Hardware	2	Escalated	2025-08-02	Hardware Team	Seattle	NULL

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

✅ **5. Show ticket summary: "High Priority Open", "Low Priority Closed", or "Other"**

ANS:

mysql> select *,

-> case

-> when priority=3 and status='open' then 'High Priority Open'

-> when priority=1 and status='closed' then 'Low Priority Closed'

-> else

```
    -> 'other'
    -> end as updated
    -> from tickets;
```

+-----------+---------------+------------+----------+-----------+--------------+---------------+---------------+-------------------+
| ticket_id | customer_name | issue_type | priority | status | created_date | assigned_team | location | updated |
+-----------+---------------+------------+----------+-----------+--------------+---------------+---------------+-------------------+
1	Alice	Network	3	Open	2025-08-01	Network Team	New York	High Priority Open
2	Bob	Software	2	Closed	2025-07-28	Software Team	Chicago	other
3	Charlie	Hardware	1	Pending	2025-08-02	Hardware Team	San Francisco	other
4	Diana	Network	2	Open	2025-08-03	Network Team	New York	other
5	Eve	Software	3	Closed	2025-07-30	Software Team	Boston	other
6	Frank	Software	1	Pending	2025-08-04	Software Team	Seattle	other
7	Grace	Network	2	Escalated	2025-08-05	Network Team	Los Angeles	other
8	Henry	Hardware	3	Open	2025-08-01	Hardware Team	Houston	High Priority Open
9	Ivy	Network	1	Closed	2025-07-29	Network Team	Chicago	Low Priority Closed
10	Jack	Software	3	Open	2025-08-06	Software Team	New York	High Priority Open
11	Kate	Hardware	2	Pending	2025-08-02	Hardware Team	Boston	other
12	Leo	Software	2	Closed	2025-07-31	Software Team	San Francisco	other
13	Mona	Network	3	Escalated	2025-08-03	Network Team	New York	other
14	Nina	Hardware	1	Open	2025-08-04	Hardware Team	Seattle	other

| 15 | Oscar | Software | 3 | Pending | 2025-08-01 | Software Team | Los Angeles | other |

| 16 | Paul | Network | 2 | Closed | 2025-07-30 | Network Team | Houston | other |

| 17 | Queen | Hardware | 1 | Pending | 2025-08-05 | Hardware Team | New York | other |

| 18 | Rita | Software | 2 | Open | 2025-08-06 | Software Team | Chicago | other |

| 19 | Sam | Network | 3 | Open | 2025-08-07 | Network Team | Boston | High Priority Open |

| 20 | Tina | Hardware | 2 | Escalated | 2025-08-02 | Hardware Team | Seattle | other |

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

✅ **6. Mark follow-up required if ticket is pending or priority is high**

ANS: mysql> select *,

  -> case

  -> when priority=3 or status='Pending' then 'Follow_up_required'

  -> end as new

  -> from tickets;

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

| ticket_id | customer_name | issue_type | priority | status | created_date | assigned_team | location | new |

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

| 1 | Alice | Network | 3 | Open | 2025-08-01 | Network Team | New York | Follow_up_required |

| 2 | Bob | Software | 2 | Closed | 2025-07-28 | Software Team | Chicago | NULL |

| 3 | Charlie | Hardware | 1 | Pending | 2025-08-02 | Hardware Team | San Francisco | Follow_up_required |

| 4 | Diana | Network | 2 | Open | 2025-08-03 | Network Team | New York | NULL |

| 5 | Eve | Software | 3 | Closed | 2025-07-30 | Software Team | Boston | Follow_up_required |

| 6 | Frank | Software | 1 | Pending | 2025-08-04 | Software Team | Seattle | Follow_up_required |

| 7 | Grace | Network | 2 | Escalated | 2025-08-05 | Network Team | Los Angeles | NULL |

| 8 | Henry | Hardware | 3 | Open | 2025-08-01 | Hardware Team | Houston | Follow_up_required |

| 9 | Ivy | Network | 1 | Closed | 2025-07-29 | Network Team | Chicago | NULL |

| 10 | Jack | Software | 3 | Open | 2025-08-06 | Software Team | New York | Follow_up_required |

| 11 | Kate | Hardware | 2 | Pending | 2025-08-02 | Hardware Team | Boston | Follow_up_required |

| 12 | Leo | Software | 2 | Closed | 2025-07-31 | Software Team | San Francisco | NULL |

| 13 | Mona | Network | 3 | Escalated | 2025-08-03 | Network Team | New York | Follow_up_required |

| 14 | Nina | Hardware | 1 | Open | 2025-08-04 | Hardware Team | Seattle | NULL |

| 15 | Oscar | Software | 3 | Pending | 2025-08-01 | Software Team | Los Angeles | Follow_up_required |

| 16 | Paul | Network | 2 | Closed | 2025-07-30 | Network Team | Houston | NULL |

| 17 | Queen | Hardware | 1 | Pending | 2025-08-05 | Hardware Team | New York | Follow_up_required |

| 18 | Rita | Software | 2 | Open | 2025-08-06 | Software Team | Chicago | NULL |

| 19 | Sam | Network | 3 | Open | 2025-08-07 | Network Team | Boston | Follow_up_required |

| 20 | Tina | Hardware | 2 | Escalated | 2025-08-02 | Hardware Team | Seattle | NULL |

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

✅ 7. Assign handling group based on issue_type

✅ 8. Label cities as "HQ" if in New York or Chicago

ANS: mysql> select *,

   -> case

   -> when location='New York' or location='Chicago' then 'HQ'

   -> end as cities

   -> from tickets;

```
+-----------+---------------+------------+----------+-----------+--------------+---------------+---------------+--------+
| ticket_id | customer_name | issue_type | priority | status    | created_date | assigned_team | location      | cities |
+-----------+---------------+------------+----------+-----------+--------------+---------------+---------------+--------+
|         1 | Alice         | Network    |        3 | Open      | 2025-08-01   | Network Team  | New York      | HQ     |
|         2 | Bob           | Software   |        2 | Closed    | 2025-07-28   | Software Team | Chicago       | HQ     |
|         3 | Charlie       | Hardware   |        1 | Pending   | 2025-08-02   | Hardware Team | San Francisco | NULL   |
|         4 | Diana         | Network    |        2 | Open      | 2025-08-03   | Network Team  | New York      | HQ     |
|         5 | Eve           | Software   |        3 | Closed    | 2025-07-30   | Software Team | Boston        | NULL   |
|         6 | Frank         | Software   |        1 | Pending   | 2025-08-04   | Software Team | Seattle       | NULL   |
|         7 | Grace         | Network    |        2 | Escalated | 2025-08-05   | Network Team  | Los Angeles   | NULL   |
|         8 | Henry         | Hardware   |        3 | Open      | 2025-08-01   | Hardware Team | Houston       | NULL   |
|         9 | Ivy           | Network    |        1 | Closed    | 2025-07-29   | Network Team  | Chicago       | HQ     |
|        10 | Jack          | Software   |        3 | Open      | 2025-08-06   | Software Team | New York      | HQ     |
|        11 | Kate          | Hardware   |        2 | Pending   | 2025-08-02   | Hardware Team | Boston        | NULL   |
|        12 | Leo           | Software   |        2 | Closed    | 2025-07-31   | Software Team | San Francisco | NULL   |
|        13 | Mona          | Network    |        3 | Escalated | 2025-08-03   | Network Team  | New York      | HQ     |
```

| 14 | Nina | Hardware | 1 | Open | 2025-08-04 | Hardware Team | Seattle | NULL |

| 15 | Oscar | Software | 3 | Pending | 2025-08-01 | Software Team | Los Angeles | NULL |

| 16 | Paul | Network | 2 | Closed | 2025-07-30 | Network Team | Houston | NULL |

| 17 | Queen | Hardware | 1 | Pending | 2025-08-05 | Hardware Team | New York | HQ |

| 18 | Rita | Software | 2 | Open | 2025-08-06 | Software Team | Chicago | HQ |

| 19 | Sam | Network | 3 | Open | 2025-08-07 | Network Team | Boston | NULL |

| 20 | Tina | Hardware | 2 | Escalated | 2025-08-02 | Hardware Team | Seattle | NULL |

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

✅ **9. Sort tickets so 'Escalated' come first, then 'Open', then others**

✅ **10. Update status to 'Urgent' if priority = 3 and status is 'Open'**

✅ **11. Show how many tickets fall into each priority label**

✅ **12. Show a response plan:**

- Immediate (High + Open)

- Scheduled (Medium + Pending)

- Escalate (Low + Escalated)

- Standard otherwise

ANS: mysql> select *,

-> case

-> when priority=3 and status='Open' then 'Immediate'

-> when priority=2 and status='Pending' then 'Scheduled'

-> when priority=1 and status='Escalated' then 'Escalated'

-> else 'Standard'

```
    -> end as response_plan
    -> from tickets;
```

ticket_id	customer_name	issue_type	priority	status	created_date	assigned_team	location	response_plan
1	Alice	Network	3	Open	2025-08-01	Network Team	New York	Immediate
2	Bob	Software	2	Closed	2025-07-28	Software Team	Chicago	Standard
3	Charlie	Hardware	1	Pending	2025-08-02	Hardware Team	San Francisco	Standard
4	Diana	Network	2	Open	2025-08-03	Network Team	New York	Standard
5	Eve	Software	3	Closed	2025-07-30	Software Team	Boston	Standard
6	Frank	Software	1	Pending	2025-08-04	Software Team	Seattle	Standard
7	Grace	Network	2	Escalated	2025-08-05	Network Team	Los Angeles	Standard
8	Henry	Hardware	3	Open	2025-08-01	Hardware Team	Houston	Immediate
9	Ivy	Network	1	Closed	2025-07-29	Network Team	Chicago	Standard
10	Jack	Software	3	Open	2025-08-06	Software Team	New York	Immediate
11	Kate	Hardware	2	Pending	2025-08-02	Hardware Team	Boston	Scheduled
12	Leo	Software	2	Closed	2025-07-31	Software Team	San Francisco	Standard
13	Mona	Network	3	Escalated	2025-08-03	Network Team	New York	Standard
14	Nina	Hardware	1	Open	2025-08-04	Hardware Team	Seattle	Standard

```
|     15 | Oscar      | Software  |     3 | Pending  | 2025-08-01 | Software Team | Los Angeles | Standard    |
|     16 | Paul       | Network   |     2 | Closed   | 2025-07-30 | Network Team  | Houston     | Standard    |
|     17 | Queen      | Hardware  |     1 | Pending  | 2025-08-05 | Hardware Team | New York    | Standard    |
|     18 | Rita       | Software  |     2 | Open     | 2025-08-06 | Software Team | Chicago     | Standard    |
|     19 | Sam        | Network   |     3 | Open     | 2025-08-07 | Network Team  | Boston      | Immediate   |
|     20 | Tina       | Hardware  |     2 | Escalated| 2025-08-02 | Hardware Team | Seattle     | Standard    |
+-----------+-------------+----------+---------+----------+------------+-------------+-------------+-------------
```

✅ **13. Show ticket age category**

- If created_date is today → 'New'

- If more than 7 days ago → 'Old'

- Else → 'Recent'

✅ **14. Count tickets by assigned team type: Software, Hardware, Network**

ANS: mysql> select issue_type,count(ticket_id) from tickets group by issue_type;

```
+------------+------------------+
| issue_type | count(ticket_id) |
+------------+------------------+
| Network    |                7 |
| Software   |                7 |
| Hardware   |                6 |
+------------+------------------+
```

✅ **15. Create a column with nested CASE:**

- If Open:

  o High → 'Critical Open'

- o   Medium → 'Important Open'

- o   Else → 'Minor Open'

- Else: 'Not Open'

ANS: mysql> select *,

    -> case

    -> when status='Open'then

    -> case

    -> when priority=3 then 'Critically Open'

    -> when priority=2 then 'Important Open'

    -> else'Minor Open'

    -> end

    -> else'Not Open'

    -> end

    -> as new

    -> from tickets;

```
+-----------+---------------+------------+----------+----------+--------------+---------------+---------------+----------------+
| ticket_id | customer_name | issue_type | priority | status   | created_date | assigned_team | location      | new            |
+-----------+---------------+------------+----------+----------+--------------+---------------+---------------+----------------+
|         1 | Alice         | Network    |        3 | Open     | 2025-08-01   | Network Team  | New York      | Critically Open |
|         2 | Bob           | Software    |       2 | Closed   | 2025-07-28   | Software Team | Chicago       | Not Open       |
|         3 | Charlie       | Hardware   |        1 | Pending  | 2025-08-02   | Hardware Team | San Francisco | Not Open       |
|         4 | Diana         | Network    |        2 | Open     | 2025-08-03   | Network Team  | New York      | Important Open |
|         5 | Eve           | Software    |       3 | Closed   | 2025-07-30   | Software Team | Boston        | Not Open       |
|         6 | Frank         | Software    |       1 | Pending  | 2025-08-04   | Software Team | Seattle       | Not Open       |
```

```
|      7 | Grace       | Network   |     2 | Escalated | 2025-08-05  | Network Team  | Los Angeles  | Not Open       |

|      8 | Henry       | Hardware  |     3 | Open      | 2025-08-01  | Hardware Team | Houston      | Critically Open |

|      9 | Ivy         | Network   |     1 | Closed    | 2025-07-29  | Network Team  | Chicago      | Not Open       |

|     10 | Jack        | Software  |     3 | Open      | 2025-08-06  | Software Team | New York     | Critically Open |

|     11 | Kate        | Hardware  |     2 | Pending   | 2025-08-02  | Hardware Team | Boston       | Not Open       |

|     12 | Leo         | Software  |     2 | Closed    | 2025-07-31  | Software Team | San Francisco | Not Open       |

|     13 | Mona        | Network   |     3 | Escalated | 2025-08-03  | Network Team  | New York     | Not Open       |

|     14 | Nina        | Hardware  |     1 | Open      | 2025-08-04  | Hardware Team | Seattle      | Minor Open     |

|     15 | Oscar       | Software  |     3 | Pending   | 2025-08-01  | Software Team | Los Angeles  | Not Open       |

|     16 | Paul        | Network   |     2 | Closed    | 2025-07-30  | Network Team  | Houston      | Not Open       |

|     17 | Queen       | Hardware  |     1 | Pending   | 2025-08-05  | Hardware Team | New York     | Not Open       |

|     18 | Rita        | Software  |     2 | Open      | 2025-08-06  | Software Team | Chicago      | Important Open |

|     19 | Sam         | Network   |     3 | Open      | 2025-08-07  | Network Team  | Boston       | Critically Open |

|     20 | Tina        | Hardware  |     2 | Escalated | 2025-08-02  | Hardware Team | Seattle      | Not Open       |

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

✅ **16. Count number of Open vs. Closed vs. Other ticket**

✅ **17. List all tickets and show "Assigned Team Type"**

- If team contains "Software" → 'SW'

- If team contains "Hardware" → 'HW'

- If team contains "Network" → 'NW'

ANS: mysql> select *,

    -> case

    -> when assigned_team='Software Team' then 'SW'

    -> when assigned_team='Hardware Team' then 'HR'

    -> when assigned_team='Network Team' then 'NW'

    -> end as Assigned_team_type

    -> from tickets;

```
+-----------+---------------+------------+----------+-----------+--------------+---------------+---------------+------------------+
| ticket_id | customer_name | issue_type | priority | status    | created_date | assigned_team | location      | Assigned_team_type |
+-----------+---------------+------------+----------+-----------+--------------+---------------+---------------+------------------+
|         1 | Alice         | Network    |        3 | Open      | 2025-08-01   | Network Team  | New York      | NW               |
|         2 | Bob           | Software   |        2 | Closed    | 2025-07-28   | Software Team | Chicago       | SW               |
|         3 | Charlie       | Hardware   |        1 | Pending   | 2025-08-02   | Hardware Team | San Francisco | HR               |
|         4 | Diana         | Network    |        2 | Open      | 2025-08-03   | Network Team  | New York      | NW               |
|         5 | Eve           | Software   |        3 | Closed    | 2025-07-30   | Software Team | Boston        | SW               |
|         6 | Frank         | Software   |        1 | Pending   | 2025-08-04   | Software Team | Seattle       | SW               |
|         7 | Grace         | Network    |        2 | Escalated | 2025-08-05   | Network Team  | Los Angeles   | NW               |
|         8 | Henry         | Hardware   |        3 | Open      | 2025-08-01   | Hardware Team | Houston       | HR               |
|         9 | Ivy           | Network    |        1 | Closed    | 2025-07-29   | Network Team  | Chicago       | NW               |
|        10 | Jack          | Software   |        3 | Open      | 2025-08-06   | Software Team | New York      | SW               |
```

| 11 | Kate | Hardware | 2 | Pending | 2025-08-02 | Hardware Team | Boston | HR |

| 12 | Leo | Software | 2 | Closed | 2025-07-31 | Software Team | San Francisco | SW |

| 13 | Mona | Network | 3 | Escalated | 2025-08-03 | Network Team | New York | NW |

| 14 | Nina | Hardware | 1 | Open | 2025-08-04 | Hardware Team | Seattle | HR |

| 15 | Oscar | Software | 3 | Pending | 2025-08-01 | Software Team | Los Angeles | SW |

| 16 | Paul | Network | 2 | Closed | 2025-07-30 | Network Team | Houston | NW |

| 17 | Queen | Hardware | 1 | Pending | 2025-08-05 | Hardware Team | New York | HR |

| 18 | Rita | Software | 2 | Open | 2025-08-06 | Software Team | Chicago | SW |

| 19 | Sam | Network | 3 | Open | 2025-08-07 | Network Team | Boston | NW |

| 20 | Tina | Hardware | 2 | Escalated | 2025-08-02 | Hardware Team | Seattle | HR |

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

✅ **18. Get average priority per issue type**

ANS: mysql> select issue_type,avg(priority) from tickets group by issue_type;

+------------+---------------+
| issue_type | avg(priority) |
+------------+---------------+
Network	2.2857
Software	2.2857
Hardware	1.6667
+------------+---------------+

✅ **19. Show only 'Software' tickets with extra labels: 'High Risk', 'Normal', etc.**

ANS: mysql> select *,

```
-> case
-> when issue_type='Software'and priority=3 then 'High risk'
-> when issue_type='Software'and priority=2 then 'Normal'
-> when issue_type='Software'and priority=1 then 'Low'
-> else 'Null'
-> end as extra_labels
-> from tickets;
```

+-----------+---------------+------------+----------+-----------+--------------+---------------+---------------+-------------+
| ticket_id | customer_name | issue_type | priority | status | created_date | assigned_team | location | extra_labels |
+-----------+---------------+------------+----------+-----------+--------------+---------------+---------------+-------------+

ticket_id	customer_name	issue_type	priority	status	created_date	assigned_team	location	extra_labels
1	Alice	Network	3	Open	2025-08-01	Network Team	New York	Null
2	Bob	Software	2	Closed	2025-07-28	Software Team	Chicago	Normal
3	Charlie	Hardware	1	Pending	2025-08-02	Hardware Team	San Francisco	Null
4	Diana	Network	2	Open	2025-08-03	Network Team	New York	Null
5	Eve	Software	3	Closed	2025-07-30	Software Team	Boston	High risk
6	Frank	Software	1	Pending	2025-08-04	Software Team	Seattle	Low
7	Grace	Network	2	Escalated	2025-08-05	Network Team	Los Angeles	Null
8	Henry	Hardware	3	Open	2025-08-01	Hardware Team	Houston	Null
9	Ivy	Network	1	Closed	2025-07-29	Network Team	Chicago	Null
10	Jack	Software	3	Open	2025-08-06	Software Team	New York	High risk
11	Kate	Hardware	2	Pending	2025-08-02	Hardware Team	Boston	Null
12	Leo	Software	2	Closed	2025-07-31	Software Team	San Francisco	Normal

13	Mona	Network	3	Escalated	2025-08-03	Network Team	New York	Null
14	Nina	Hardware	1	Open	2025-08-04	Hardware Team	Seattle	Null
15	Oscar	Software	3	Pending	2025-08-01	Software Team	Los Angeles	High risk
16	Paul	Network	2	Closed	2025-07-30	Network Team	Houston	Null
17	Queen	Hardware	1	Pending	2025-08-05	Hardware Team	New York	Null
18	Rita	Software	2	Open	2025-08-06	Software Team	Chicago	Normal
19	Sam	Network	3	Open	2025-08-07	Network Team	Boston	Null
20	Tina	Hardware	2	Escalated	2025-08-02	Hardware Team	Seattle	Null

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

✅ **20. Display ticket_id, issue_type, and a comment:**

- 'Needs Attention' if Escalated or Pending
- 'Resolved' if Closed
- 'In Progress' otherwise

ANS: mysql> select ticket_id, issue_type,

   -> case

   -> when status='Escalated' or status='Pending' then 'Needs Attention'

   -> when status='Closed' then 'Resolved'

   -> else 'In Progress'

   -> end as Comment

   -> from tickets;

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

| ticket_id | issue_type | Comment |

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

| 1 | Network | In Progress |

| 2 | Software | Resolved |

```
|         3 | Hardware   | Needs Attention |
|         4 | Network    | In Progress     |
|         5 | Software   | Resolved        |
|         6 | Software   | Needs Attention |
|         7 | Network    | Needs Attention |
|         8 | Hardware   | In Progress     |
|         9 | Network    | Resolved        |
|        10 | Software   | In Progress     |
|        11 | Hardware   | Needs Attention |
|        12 | Software   | Resolved        |
|        13 | Network    | Needs Attention |
|        14 | Hardware   | In Progress     |
|        15 | Software   | Needs Attention |
|        16 | Network    | Resolved        |
|        17 | Hardware   | Needs Attention |
|        18 | Software   | In Progress     |
|        19 | Network    | In Progress     |
|        20 | Hardware   | Needs Attention |
+-----------+------------+-----------------+
```