## **Calculate Ride Cancellation Rate: Problem Statement**

Given two tables, “Trips” and “Users”, containing information on trips and users respectively. Calculate the cancellation rate for carpool requests involving users who are not banned. A ride request is considered cancelled if it is cancelled either by the customer or by the driver. The cancellation rate is calculated by dividing the number of cancelled requests (involving non-banned users) by the total number of requests (with non-banned users) each day.

The “Trips” table includes details such as trip ID, rider ID, driver ID, city ID, status, and request date.

**Trips:**

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

| id | client\_id | driver\_id | city\_id | status | request\_at |

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

| 1 | 1 | 10 | 1 | completed | 2023-07-12 |

| 2 | 2 | 11 | 1 | cancelled\_by\_driver | 2023-07-12 |

| 3 | 3 | 12 | 6 | completed | 2023-07-12 |

| 4 | 4 | 13 | 6 | cancelled\_by\_client | 2023-07-12 |

| 5 | 1 | 10 | 1 | completed | 2023-07-13 |

| 6 | 2 | 11 | 6 | completed | 2023-07-13 |

| 7 | 3 | 12 | 6 | completed | 2023-07-13 |

| 8 | 2 | 12 | 12 | completed | 2023-07-14 |

| 9 | 3 | 10 | 12 | completed | 2023-07-14 |

| 10 | 4 | 13 | 12 | cancelled\_by\_driver | 2023-07-14 |

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The “Users” table contains user information such as user ID, ban status, and role.

**Users:**

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| users\_id | banned | role |

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| 1 | No | client |

| 2 | Yes | client |

| 3 | No | client |

| 4 | No | client |

| 10 | No | driver |

| 11 | No | driver |

| 12 | No | driver |

| 13 | No | driver |

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CREATE TABLE Trips (

id INT,

client\_id INT,

driver\_id INT,

city\_id INT,

status VARCHAR(20),

request\_at DATE

);

INSERT INTO Trips (id, client\_id, driver\_id, city\_id, status, request\_at) VALUES

(1, 1, 10, 1, 'completed', '2023-07-12'),

(2, 2, 11, 1, 'cancelled\_by\_driver', '2023-07-12'),

(3, 3, 12, 6, 'completed', '2023-07-12'),

(4, 4, 13, 6, 'cancelled\_by\_client', '2023-07-12'),

(5, 1, 10, 1, 'completed', '2023-07-13'),

(6, 2, 11, 6, 'completed', '2023-07-13'),

(7, 3, 12, 6, 'completed', '2023-07-13'),

(8, 2, 12, 12, 'completed', '2023-07-14'),

(9, 3, 10, 12, 'completed', '2023-07-14'),

(10, 4, 13, 12, 'cancelled\_by\_driver', '2023-07-14');

CREATE TABLE Users (

users\_id INT,

banned VARCHAR(3),

role VARCHAR(10)

);

INSERT INTO Users (users\_id, banned, role) VALUES

(1, 'No', 'client'),

(2, 'Yes', 'client'),

(3, 'No', 'client'),

(4, 'No', 'client'),

(10, 'No', 'driver'),

(11, 'No', 'driver'),

(12, 'No', 'driver'),

(13, 'No', 'driver');

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**calculate the ride cancellation rate using SQL**

WITH UnbannedTrips AS (

SELECT

t.request\_at AS Day,

COUNT(CASE WHEN t.status LIKE 'cancelled%%' THEN 1 END) AS canceled\_requests,

COUNT(\*) AS total\_requests

FROM

Trips t

JOIN Users u1 ON t.client\_id = u1.users\_id

JOIN Users u2 ON t.driver\_id = u2.users\_id

WHERE

u1.banned = 'No' AND u2.banned = 'No'

GROUP BY

t.request\_at

)

SELECT

Day,

ROUND(canceled\_requests / NULLIF(total\_requests, 0), 2) AS `Cancellation Rate`

FROM

UnbannedTrips

ORDER BY

Day;