Submission By:

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1.

```
SELECT
   user_id,
   date,
   SUM(CASE WHEN activity_type = 'enquiry' THEN 1 ELSE 0 END) AS
count_enqs,
   SUM(CASE WHEN activity_type = 'transaction' THEN 1 ELSE 0 END) AS
count_txns
FROM enquiry_txn
GROUP BY user_id, date;
```

2

Assumptions:

We have two tables:

- enquiries(enquiry_id, user_id, date)
- transactions(txn_id, user_id, date)

```
WITH txn_with_enq AS (

   SELECT

      t.txn_id,

      t.user_id,

      t.date AS txn_date,

      e.enquiry_id,

      e.date AS enquiry_date,

      ROW_NUMBER() OVER (
```

```
            PARTITION BY t.txn_id
            ORDER BY e.date
        ) AS rn
    FROM transactions t
    JOIN enquiries e
      ON t.user_id = e.user_id
     AND e.date <= t.date
     AND e.date >= t.date - INTERVAL '30 days'
),
linked_txns AS (
    SELECT
        enquiry_id,
        txn_id
    FROM txn_with_enq
    WHERE rn = 1
),
txn_grouped AS (
    SELECT
        e.enquiry_id,
        e.date,
        e.user_id,
        ARRAY_AGG(l.txn_id) AS txn_ids
    FROM enquiries e
    LEFT JOIN linked_txns l
      ON e.enquiry_id = l.enquiry_id
```

```
    GROUP BY e.enquiry_id, e.date, e.user_id
)
SELECT
    enquiry_id,
    date,
    user_id,
    COALESCE(txn_ids, ARRAY[]::VARCHAR[]) AS txn_ids
FROM txn_grouped;
```