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WITH cust_month AS (
    select distinct cust_code, PARSE_DATE('%Y%m%d',CAST(shop_date AS STRING))
    shop_month
    FROM `speedy-rhino-331309.SUPER.SUPERMARKET`
    where cust_code is not null
)
SELECT report_month
    ,COUNT(DISTINCT CASE WHEN status = 'New' THEN cust_code ELSE NULL END) AS
new_customers
    ,COUNT(DISTINCT CASE WHEN status = 'Repeat' THEN cust_code ELSE NULL END) AS
repeat_customers
    ,COUNT(DISTINCT CASE WHEN status = 'Reactivated' THEN cust_code ELSE NULL END) AS
reactivated_customers
    ,-COUNT(DISTINCT CASE WHEN status = 'Churn' THEN cust_code ELSE NULL END) AS
churn_customers
FROM (
    SELECT cust_code, shop_month AS report_month, prev_month
        ,CASE
            WHEN DATE_DIFF(shop_month, prev_month, MONTH) IS NULL THEN 'New'
            WHEN DATE_DIFF(shop_month, prev_month, MONTH) = 1 THEN 'Repeat'
            WHEN DATE_DIFF(shop_month, prev_month, MONTH) > 1 THEN 'Reactivated'
            ELSE NULL END AS status
        FROM (
            SELECT cust_code, shop_month, LAG(shop_month, 1) OVER (PARTITION BY cust_code
ORDER BY shop_month) AS prev_month
            FROM cust_month
        )
    UNION ALL
    SELECT cust_code, DATE_ADD(shop_month, INTERVAL 1 MONTH) report_month, shop_month
as prev_month
    ,'Churn' AS status
    FROM (
        SELECT cust_code, shop_month
            ,LEAD(shop_month, 1) OVER (PARTITION BY cust_code ORDER BY shop_month) AS
next_trans_date
            ,DATE_DIFF(LEAD(shop_month, 1) OVER (PARTITION BY cust_code ORDER BY
shop_month), shop_month, MONTH) AS n_months
        FROM cust_month
    ) WHERE
        (n_months > 1 or n_months is null)
        AND shop_month < (SELECT MAX(shop_month) FROM cust_month)-- excluding last month
) GROUP BY report_month
order by report_month
;

```