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WITH subq AS
(SELECT
    DISTINCT DATE_TRUNC(PARSE_DATE("%Y%m%d",CAST (SHOP_DATE AS STRING)), MONTH) AS Current_Month,
    CUST_CODE
FROM (SELECT * FROM `animated-spider-298408.SupermarketData.SupermarketData`)
WHERE CUST_CODE IS NOT NULL
ORDER BY CUST_CODE DESC, Current_Month DESC)

SELECT
    Current_Month,
    SUM(Cust_New) AS Cust_New,
    SUM(Cust_Repeat) AS Cust_Repeat,
    SUM(Cust_Reactivate) AS Cust_Reactivate,
    (-1) * LEAD(SUM(Cust_Churn)) OVER (ORDER BY Current_Month DESC) AS Cust_Churn,
FROM
    (SELECT
        Current_Month,
        Last_Visit,
        Next_Visit,
        DATE_DIFF(Current_Month, Last_Visit, MONTH) AS Last_Diff,
        DATE_DIFF(Next_Visit, Current_Month, MONTH) AS Next_Diff,
        CUST_CODE,
        CASE WHEN Last_Visit IS NULL THEN 1 ELSE 0 END AS Cust_New,
        CASE WHEN DATE_DIFF(Current_Month, Last_Visit, MONTH) = 1 THEN 1 ELSE 0 END AS Cust_Repeat, #Repeat in that month
        CASE WHEN DATE_DIFF(Current_Month, Last_Visit, MONTH) > 1 THEN 1 ELSE 0 END AS Cust_Reactivate, #Reactive in that month
        CASE WHEN DATE_DIFF(Next_Visit, Current_Month, MONTH) != 1 OR Next_Visit IS NULL THEN 1 ELSE 0 END AS Cust_Churn, #Churn in next month
    FROM
        (SELECT Current_Month,
            LEAD(Current_Month) OVER (PARTITION BY CUST_CODE ORDER BY Current_Month DESC) AS Last_Visit,
            LAG(Current_Month) OVER (PARTITION BY CUST_CODE ORDER BY Current_Month DESC) AS Next_Visit,
            CUST_CODE
        FROM subq)
    ORDER BY CUST_CODE DESC, Current_Month DESC)
GROUP BY Current_Month
ORDER BY Current_Month
    
```

