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SELECT YEAR_MONTH, STATUS, CASE WHEN STATUS = 'CHURN' THEN (-1)*COUNT_CUST ELSE COUNT_CUST END AS COUNT_CUST
FROM (
    SELECT YEAR_MONTH, STATUS, COUNT(DISTINCT CUST_CODE) AS COUNT_CUST
    FROM (
        -- NEW, REPEAT, REACTIVATE
        SELECT YEAR_MONTH, CUST_CODE, REGISTER_DATE, --SHOP_MONTH, PREVIOUS_MONTH,
            DATE_DIFF(SHOP_MONTH, PREVIOUS_MONTH, MONTH) AS R,
            CASE WHEN SHOP_MONTH = REGISTER_DATE THEN 'NEW'
            WHEN DATE_DIFF(SHOP_MONTH, PREVIOUS_MONTH, MONTH) = 1 THEN 'REPEAT'
            WHEN DATE_DIFF(SHOP_MONTH, PREVIOUS_MONTH, MONTH) > 1 THEN 'REACTIVATE' END AS STATUS
        FROM (
            -- PREVIOUS MONTH
            SELECT CUST_CODE, YEAR_MONTH, SHOP_MONTH, REGISTER_DATE, LAG(SHOP_MONTH) OVER (PARTITION BY CUST_CODE ORDER BY SHOP_MONTH) AS PREVIOUS_MONTH
            FROM (
                SELECT CUST_CODE, YEAR_MONTH, SHOP_MONTH, REGISTER_DATE
                FROM (
                    SELECT ALL_CUST.CUST_CODE, SHOP_MONTH, REGISTER_DATE
                    FROM (
                        -- ALL_CUST
                        SELECT CUST_CODE, DATE_TRUNC(PARSE_DATE('%Y%m%d', CAST(SHOP_DATE AS STRING)), MONTH) AS SHOP_MONTH
                        FROM `data-rookery-331410.Supermarket_Data.Supermarket_Data_Table`
                        WHERE CUST_CODE IS NOT NULL
                        GROUP BY 1,2
                    ) ALL_CUST LEFT JOIN (
                        -- REGISTER DATE
                        SELECT CUST_CODE, DATE_TRUNC(PARSE_DATE('%Y%m%d', CAST(MIN(SHOP_DATE) AS STRING)), MONTH) AS REGISTER_DATE
                        FROM `data-rookery-331410.Supermarket_Data.Supermarket_Data_Table`
                        WHERE CUST_CODE IS NOT NULL
                        GROUP BY 1
                    ) REGISTER ON ALL_CUST.CUST_CODE = REGISTER.CUST_CODE
                ) ALL_CUST_2 LEFT JOIN (
                    -- YEAR MONTH PERIOD
                    SELECT DATE_TRUNC(PARSE_DATE('%Y%m%d', CAST(SHOP_DATE AS STRING)), MONTH) AS YEAR_MONTH
                    FROM `data-rookery-331410.Supermarket_Data.Supermarket_Data_Table`
                    WHERE CUST_CODE IS NOT NULL
                    GROUP BY 1
                ) MONTH_PERIOD ON ALL_CUST_2.SHOP_MONTH = MONTH_PERIOD.YEAR_MONTH
            ) PREV_M
        ) N_R_R
    UNION ALL
        -- CHURN
        SELECT YEAR_MONTH, CUST_CODE, REGISTER_DATE, R, STATUS --, LAST_DATE
        FROM (
            SELECT CUST_CODE, STATUS, REGISTER_DATE, NULL AS R, MIN(CASE WHEN STATUS = 'CHURN' THEN YEAR_MONTH END) AS YEAR_MONTH --, LAST_DATE
            FROM (
                SELECT *, CASE WHEN YEAR_MONTH > LAST_DATE THEN 'CHURN' END AS STATUS
                FROM (
                    -- YEAR MONTH PERIOD
                    SELECT 1 AS KEY, DATE_TRUNC(PARSE_DATE('%Y%m%d', CAST(SHOP_DATE AS STRING)), MONTH) AS YEAR_MONTH
                    FROM `data-rookery-331410.Supermarket_Data.Supermarket_Data_Table`
                    WHERE CUST_CODE IS NOT NULL
                    GROUP BY 1,2
                ) A LEFT JOIN (
                    SELECT 1 AS KEY, *
                    FROM (
                        -- ALL_CUST
                        SELECT CUST_CODE, DATE_TRUNC(PARSE_DATE('%Y%m%d', CAST(SHOP_DATE AS STRING)), MONTH) AS SHOP_MONTH
                        FROM `data-rookery-331410.Supermarket_Data.Supermarket_Data_Table`
                        WHERE CUST_CODE IS NOT NULL
                        GROUP BY 1,2
                    ) A1 RIGHT JOIN (
                        --REGISTER DATE AND LAST DATE
                        SELECT CUST_CODE AS CUST_CODE_RE, DATE_TRUNC(PARSE_DATE('%Y%m%d', CAST(MIN(SHOP_DATE) AS STRING)), MONTH) AS REGISTER_DATE,
                            DATE_TRUNC(PARSE_DATE('%Y%m%d', CAST(MAX(SHOP_DATE) AS STRING)), MONTH) AS LAST_DATE
                        FROM `data-rookery-331410.Supermarket_Data.Supermarket_Data_Table`
                        WHERE CUST_CODE IS NOT NULL
                        GROUP BY 1
                    ) A2 ON A1.CUST_CODE = A2.CUST_CODE_RE
                ) B ON A.KEY = B.KEY
            )
        )
        GROUP BY 1,2,3 --,4
    )
    WHERE STATUS IS NOT NULL
) RESULT
GROUP BY 1,2
) ALL_RESULT

```

