```
WITH
prep_data AS (
       SELECT distinct CUST_CODE as cust_code, PARSE_DATE("%Y%m%d", CAST(SHOP_DATE AS STRING)) AS date
       FROM `crm-bads.supermarket.supermarket_crm`
       WHERE CUST_CODE is not null),
cross_date_cust AS (
         SELECT distinct *
          FROM
          (SELECT FORMAT_DATE("%Y-%m", master_date) as master_date
          FROM UNNEST(GENERATE_DATE_ARRAY((SELECT min(date) from prep_data), '2008-07-31', INTERVAL 1 MONTH)) AS master_date)
          CROSS JOIN
          ( SELECT cust_code FROM prep_data )),
max_min_date_data AS (
         SELECT t1.cust_code, FORMAT_DATE("%Y-%m",max_date) as max_date, FORMAT_DATE("%Y-%m",min_date) as min_date,
FORMAT_DATE("%Y-%m", latest_date) as latest_date
          FROM
          (SELECT cust_code, max(date) as max_date, (SELECT max(date) as max_date FROM prep_data) as latest_date
          FROM prep_data
         group by cust_code) as t1
          LEFT JOIN
          (SELECT cust_code, min(date) as min_date
          FROM prep_data
          group by cust_code) as t2
         on t1.cust_code = t2.cust_code)
SELECT *
FROM(
   SELECT
       cust_code,
       master_date,
```

```
min_date,
       CASE
       WHEN cust_code_came = first_date THEN 'new'
       WHEN cust_code_came = previous_month THEN 'repeat'
       WHEN cust_code_came is null THEN 'churn'
       WHEN previous_month is null and cust_code_came is not null THEN 'reactivated'
       END as status,
       CASE
       WHEN cust_code_came = first_date THEN 1
       WHEN cust_code_came = previous_month THEN 1
       WHEN cust_code_came is null THEN -1
       WHEN previous_month is null and cust_code_came is not null THEN 1
       END as status_no
   FROM(
     SELECT t1.*, t2.cust_code as cust_code_came, t4.cust_code as first_date, t3.cust_code as last_date, LAG(t2.cust_code) OVER (PARTITION
{\tt BY\ t1.cust\_code\ ORDER\ BY\ master\_date)}\ as\ previous\_month,\ t5.min\_date\ as\ min\_date
      FROM cross_date_cust as t1
     LEFT JOIN
     ( SELECT distinct cust_code, FORMAT_DATE("%Y-%m", date) as date FROM prep_data ) as t2
      ON t1.master_date = t2.date and t1.cust_code = t2.cust_code
     LEFT JOIN max_min_date_data as t3
      ON t1.master_date = t3.max_date and t1.cust_code = t3.cust_code
     LEFT JOIN max_min_date_data as t4
      ON t1.master_date = t4.min_date and t1.cust_code = t4.cust_code
      LEFT JOIN max_min_date_data as t5
      ON t1.cust_code = t5.cust_code
      ORDER BY master_date))
```

## WHERE master\_date >= min\_date

cust_code	master_date	min_date	status	status_ne
CUST0000104537	2006-04	2006-04	new	- 1
CUST0000281501	2006-04	2006-04	new	1
CUST0000314122	2006-04	2006-04	new	1
CUST0000320706	2006-04	2006-04	new	- 1
CUST0000322562	2006-04	2006-04	new	- 1
CUST0000372188	2006-04	2006-04	new	- 1
CUST0000537317	2006-04	2006-04	new	1
CUST0000915945	2006-04	2006-04	new	- 1
CUST0000943833	2006-04	2006-04	new	- 1
CUST0000991491	2006-04	2006-04	new	- 1
CUST0000035601	2006-04	2006-04	new	- 1
CUST0000178139	2006-04	2006-04	new	1
CUST0000268287	2006-04	2006-04	new	1
CUST0000349165	2006-04	2006-04	new	1
CUST0000599230	2006-04	2006-04	new	1
CUST0000651348	2006-04	2006-04	new	1
	CUST0000104537 CUST0000281501 CUST0000321076 CUST0000320706 CUST00003227562 CUST0000372188 CUST0000372188 CUST0000915945 CUST00000919491 CUST0000035601 CUST0000178139 CUST0000178139 CUST0000248283 CUST0000349165 CUST0000349165 CUST0000359230	cust_code         master_date           CUST0000104537         2006-04           CUST0000281501         2006-04           CUST00003214122         2006-04           CUST0000322762         2006-04           CUST0000322582         2006-04           CUST0000372183         2006-04           CUST0000915945         2006-04           CUST00000943833         2006-04           CUST0000091891         2006-04           CUST0000091891         2006-04           CUST0000035601         2006-04           CUST0000349165         2006-04           CUST0000349165         2006-04           CUST0000349165         2006-04           CUST0000599230         2006-04           CUST0000599230         2006-04	CUST0000104537 2006-04 2006-04 CUST0000314122 2006-04 2006-04 CUST0000314122 2006-04 2006-04 CUST00003104122 2006-04 2006-04 CUST0000372188 2006-04 2006-04 CUST0000372188 2006-04 2006-04 CUST000037317 2006-04 2006-04 CUST000037317 2006-04 2006-04 CUST0000035917 2006-04 2006-04 CUST000003591 2006-04 2006-04 CUST00003591 2006-04 2006-04 CUST0003591 2006-04 2006-04	CUST0000104537         2006-04         2006-04         new           CUST0000281501         2006-04         2006-04         new           CUST00002314122         2006-04         2006-04         new           CUST00000320706         2006-04         2006-04         new           CUST0000372188         2006-04         2006-04         new           CUST00000537317         2006-04         2006-04         new           CUST0000915945         2006-04         2006-04         new           CUST0000918933         2006-04         2006-04         new           CUST000091491         2006-04         2006-04         new           CUST0000035601         2006-04         2006-04         new           CUST0000036801         2006-04         2006-04         new           CUST0000037801         2006-04         2006-04         new           CUST0000036801         2006-04         2006-04         new           CUST0000368107         2006-04         2006-04         new           CUST0000369187         2006-04         2006-04         new           CUST0000549165         2006-04         2006-04         new           CUST0000549165         2006-04         2006-04

