

with churn as (
SELECT CUST_CODE,

```
        CASE    WHEN M200807=1 AND  
M200604+M200605+M200606+M200607+M200608+M200609+M200610+M200611+M200612+M200701+M200702+M20  
0703+M200704+M200705+M200706+M200707+M200708+M200709+M200710+M200711+M200712+M200801+M20080  
2+M200803+M200804+M200805+M200806=0 THEN 'NEW'  
            WHEN M200807=1 AND M200806=1 THEN 'REPEAT'  
            WHEN M200807=1 THEN 'REACTIVATE'  
            WHEN M200807=0 AND M200806=1 THEN 'CHURN' END AS FLAG200807,
```

```
        CASE    WHEN M200806=1 AND  
M200604+M200605+M200606+M200607+M200608+M200609+M200610+M200611+M200612+M200701+M200702+M20  
0703+M200704+M200705+M200706+M200707+M200708+M200709+M200710+M200711+M200712+M200801+M20080  
2+M200803+M200804+M200805=0 THEN 'NEW'  
            WHEN M200806=1 AND M200805=1 THEN 'REPEAT'  
            WHEN M200806=1 THEN 'REACTIVATE'  
            WHEN M200806=0 AND M200805=1 THEN 'CHURN' END AS FLAG200806,
```

```
        CASE    WHEN M200805=1 AND  
M200604+M200605+M200606+M200607+M200608+M200609+M200610+M200611+M200612+M200701+M200702+M20  
0703+M200704+M200705+M200706+M200707+M200708+M200709+M200710+M200711+M200712+M200801+M20080  
2+M200803+M200804=0 THEN 'NEW'  
            WHEN M200805=1 AND M200804=1 THEN 'REPEAT'  
            WHEN M200805=1 THEN 'REACTIVATE'  
            WHEN M200805=0 AND M200804=1 THEN 'CHURN' END AS FLAG200805,
```

```
        CASE    WHEN M200804=1 AND  
M200604+M200605+M200606+M200607+M200608+M200609+M200610+M200611+M200612+M200701+M200702+M20  
0703+M200704+M200705+M200706+M200707+M200708+M200709+M200710+M200711+M200712+M200801+M20080  
2+M200803=0 THEN 'NEW'  
            WHEN M200804=1 AND M200803=1 THEN 'REPEAT'  
            WHEN M200804=1 THEN 'REACTIVATE'  
            WHEN M200804=0 AND M200803=1 THEN 'CHURN' END AS FLAG200804,
```

```
        CASE    WHEN M200803=1 AND  
M200604+M200605+M200606+M200607+M200608+M200609+M200610+M200611+M200612+M200701+M200702+M20  
0703+M200704+M200705+M200706+M200707+M200708+M200709+M200710+M200711+M200712+M200801+M20080  
2=0 THEN 'NEW'  
            WHEN M200803=1 AND M200802=1 THEN 'REPEAT'  
            WHEN M200803=1 THEN 'REACTIVATE'  
            WHEN M200803=0 AND M200802=1 THEN 'CHURN' END AS FLAG200803,
```

```
        CASE    WHEN M200802=1 AND  
M200604+M200605+M200606+M200607+M200608+M200609+M200610+M200611+M200612+M200701+M200702+M20  
0703+M200704+M200705+M200706+M200707+M200708+M200709+M200710+M200711+M200712+M200801=0 THEN  
'NEW'  
            WHEN M200802=1 AND M200801=1 THEN 'REPEAT'  
            WHEN M200802=1 THEN 'REACTIVATE'  
            WHEN M200802=0 AND M200801=1 THEN 'CHURN' END AS FLAG200802,
```

```
        CASE    WHEN M200801=1 AND  
M200604+M200605+M200606+M200607+M200608+M200609+M200610+M200611+M200612+M200701+M200702+M20  
0703+M200704+M200705+M200706+M200707+M200708+M200709+M200710+M200711+M200712=0 THEN 'NEW'  
            WHEN M200801=1 AND M200712=1 THEN 'REPEAT'
```

WHEN M200801=1 THEN 'REACTIVATE'
WHEN M200801=0 AND M200712=1 THEN 'CHURN' END AS FLAG200801,

CASE WHEN M200712=1 AND
M200604+M200605+M200606+M200607+M200608+M200609+M200610+M200611+M200612+M200701+M200702+M200703+M200704+M200705+M200706+M200707+M200708+M200709+M200710+M200711=0 THEN 'NEW'
WHEN M200712=1 AND M200711=1 THEN 'REPEAT'
WHEN M200712=1 THEN 'REACTIVATE'
WHEN M200712=0 AND M200711=1 THEN 'CHURN' END AS FLAG200712,

CASE WHEN M200711=1 AND
M200604+M200605+M200606+M200607+M200608+M200609+M200610+M200611+M200612+M200701+M200702+M200703+M200704+M200705+M200706+M200707+M200708+M200709+M200710=0 THEN 'NEW'
WHEN M200711=1 AND M200710=1 THEN 'REPEAT'
WHEN M200711=1 THEN 'REACTIVATE'
WHEN M200711=0 AND M200710=1 THEN 'CHURN' END AS FLAG200711,

CASE WHEN M200710=1 AND
M200604+M200605+M200606+M200607+M200608+M200609+M200610+M200611+M200612+M200701+M200702+M200703+M200704+M200705+M200706+M200707+M200708+M200709=0 THEN 'NEW'
WHEN M200710=1 AND M200709=1 THEN 'REPEAT'
WHEN M200710=1 THEN 'REACTIVATE'
WHEN M200710=0 AND M200709=1 THEN 'CHURN' END AS FLAG200710,

CASE WHEN M200709=1 AND
M200604+M200605+M200606+M200607+M200608+M200609+M200610+M200611+M200612+M200701+M200702+M200703+M200704+M200705+M200706+M200707+M200708=0 THEN 'NEW'
WHEN M200709=1 AND M200708=1 THEN 'REPEAT'
WHEN M200709=1 THEN 'REACTIVATE'
WHEN M200709=0 AND M200708=1 THEN 'CHURN' END AS FLAG200709,

CASE WHEN M200708=1 AND
M200604+M200605+M200606+M200607+M200608+M200609+M200610+M200611+M200612+M200701+M200702+M200703+M200704+M200705+M200706+M200707=0 THEN 'NEW'
WHEN M200708=1 AND M200707=1 THEN 'REPEAT'
WHEN M200708=1 THEN 'REACTIVATE'
WHEN M200708=0 AND M200707=1 THEN 'CHURN' END AS FLAG200708,

CASE WHEN M200707=1 AND
M200604+M200605+M200606+M200607+M200608+M200609+M200610+M200611+M200612+M200701+M200702+M200703+M200704+M200705+M200706=0 THEN 'NEW'
WHEN M200707=1 AND M200706=1 THEN 'REPEAT'
WHEN M200707=1 THEN 'REACTIVATE'
WHEN M200707=0 AND M200706=1 THEN 'CHURN' END AS FLAG200707,

CASE WHEN M200706=1 AND
M200604+M200605+M200606+M200607+M200608+M200609+M200610+M200611+M200612+M200701+M200702+M200703+M200704+M200705=0 THEN 'NEW'
WHEN M200706=1 AND M200705=1 THEN 'REPEAT'
WHEN M200706=1 THEN 'REACTIVATE'
WHEN M200706=0 AND M200705=1 THEN 'CHURN' END AS FLAG200706,

CASE WHEN M200705=1 AND
M200604+M200605+M200606+M200607+M200608+M200609+M200610+M200611+M200612+M200701+M200702+M200703+M200704=0 THEN 'NEW'
WHEN M200705=1 AND M200704=1 THEN 'REPEAT'
WHEN M200705=1 THEN 'REACTIVATE'
WHEN M200705=0 AND M200704=1 THEN 'CHURN' END AS FLAG200705,

CASE WHEN M200704=1 AND
M200604+M200605+M200606+M200607+M200608+M200609+M200610+M200611+M200612+M200701+M200702+M200703=0 THEN 'NEW'

WHEN M200704=1 AND M200703=1 THEN 'REPEAT'
WHEN M200704=1 THEN 'REACTIVATE'
WHEN M200704=0 AND M200703=1 THEN 'CHURN' END AS FLAG200704,

CASE WHEN M200703=1 AND
M200604+M200605+M200606+M200607+M200608+M200609+M200610+M200611+M200612+M200701+M200702=0
THEN 'NEW'

WHEN M200703=1 AND M200702=1 THEN 'REPEAT'
WHEN M200703=1 THEN 'REACTIVATE'
WHEN M200703=0 AND M200702=1 THEN 'CHURN' END AS FLAG200703,

CASE WHEN M200702=1 AND
M200604+M200605+M200606+M200607+M200608+M200609+M200610+M200611+M200612+M200701=0 THEN 'NEW'

WHEN M200702=1 AND M200701=1 THEN 'REPEAT'
WHEN M200702=1 THEN 'REACTIVATE'
WHEN M200702=0 AND M200701=1 THEN 'CHURN' END AS FLAG200702,

CASE WHEN M200701=1 AND
M200604+M200605+M200606+M200607+M200608+M200609+M200610+M200611+M200612=0 THEN 'NEW'

WHEN M200701=1 AND M200612=1 THEN 'REPEAT'
WHEN M200701=1 THEN 'REACTIVATE'
WHEN M200701=0 AND M200612=1 THEN 'CHURN' END AS FLAG200701,

CASE WHEN M200612=1 AND
M200604+M200605+M200606+M200607+M200608+M200609+M200610+M200611=0 THEN 'NEW'

WHEN M200612=1 AND M200611=1 THEN 'REPEAT'
WHEN M200612=1 THEN 'REACTIVATE'
WHEN M200612=0 AND M200611=1 THEN 'CHURN' END AS FLAG200612,

CASE WHEN M200611=1 AND M200604+M200605+M200606+M200607+M200608+M200609+M200610=0
THEN 'NEW'

WHEN M200611=1 AND M200610=1 THEN 'REPEAT'
WHEN M200611=1 THEN 'REACTIVATE'
WHEN M200611=0 AND M200610=1 THEN 'CHURN' END AS FLAG200611,

CASE WHEN M200610=1 AND M200604+M200605+M200606+M200607+M200608+M200609=0 THEN 'NEW'

WHEN M200610=1 AND M200609=1 THEN 'REPEAT'
WHEN M200610=1 THEN 'REACTIVATE'
WHEN M200610=0 AND M200609=1 THEN 'CHURN' END AS FLAG200610,

CASE WHEN M200609=1 AND M200604+M200605+M200606+M200607+M200608=0 THEN 'NEW'

WHEN M200609=1 AND M200608=1 THEN 'REPEAT'
WHEN M200609=1 THEN 'REACTIVATE'
WHEN M200609=0 AND M200608=1 THEN 'CHURN' END AS FLAG200609,

CASE WHEN M200608=1 AND M200604+M200605+M200606+M200607=0 THEN 'NEW'

WHEN M200608=1 AND M200607=1 THEN 'REPEAT'
WHEN M200608=1 THEN 'REACTIVATE'
WHEN M200608=0 AND M200607=1 THEN 'CHURN' END AS FLAG200608,

CASE WHEN M200607=1 AND M200604+M200605+M200606=0 THEN 'NEW'

WHEN M200607=1 AND M200606=1 THEN 'REPEAT'
WHEN M200607=1 THEN 'REACTIVATE'
WHEN M200607=0 AND M200606=1 THEN 'CHURN' END AS FLAG200607,

```

CASE    WHEN M200606=1 AND M200604+M200605=0 THEN 'NEW'
        WHEN M200606=1 AND M200605=1 THEN 'REPEAT'
        WHEN M200606=1 THEN 'REACTIVATE'
        WHEN M200606=0 AND M200605=1 THEN 'CHURN' END AS FLAG200606,

CASE    WHEN M200605=1 AND M200604=0 THEN 'NEW'
        WHEN M200605=1 AND M200604=1 THEN 'REPEAT'
        WHEN M200605=1 THEN 'REACTIVATE'
        WHEN M200605=0 AND M200604=1 THEN 'CHURN' END AS FLAG200605,

CASE    WHEN M200604=1 THEN 'NEW' END AS FLAG200604

```

FROM

```

(
SELECT CUST_CODE,
       SUM(M200604) AS M200604,
       SUM(M200605) AS M200605,
       SUM(M200606) AS M200606,
       SUM(M200607) AS M200607,
       SUM(M200608) AS M200608,
       SUM(M200609) AS M200609,
       SUM(M200610) AS M200610,
       SUM(M200611) AS M200611,
       SUM(M200612) AS M200612,
       SUM(M200701) AS M200701,
       SUM(M200702) AS M200702,
       SUM(M200703) AS M200703,
       SUM(M200704) AS M200704,
       SUM(M200705) AS M200705,
       SUM(M200706) AS M200706,
       SUM(M200707) AS M200707,
       SUM(M200708) AS M200708,
       SUM(M200709) AS M200709,
       SUM(M200710) AS M200710,
       SUM(M200711) AS M200711,
       SUM(M200712) AS M200712,
       SUM(M200801) AS M200801,
       SUM(M200802) AS M200802,
       SUM(M200803) AS M200803,
       SUM(M200804) AS M200804,
       SUM(M200805) AS M200805,
       SUM(M200806) AS M200806,
       SUM(M200807) AS M200807

```

FROM

```

(
SELECT CUST_CODE,
       CASE WHEN MTH = '200604' THEN 1 ELSE 0 END AS M200604,
       CASE WHEN MTH = '200605' THEN 1 ELSE 0 END AS M200605,
       CASE WHEN MTH = '200606' THEN 1 ELSE 0 END AS M200606,
       CASE WHEN MTH = '200607' THEN 1 ELSE 0 END AS M200607,
       CASE WHEN MTH = '200608' THEN 1 ELSE 0 END AS M200608,
       CASE WHEN MTH = '200609' THEN 1 ELSE 0 END AS M200609,
       CASE WHEN MTH = '200610' THEN 1 ELSE 0 END AS M200610,
       CASE WHEN MTH = '200611' THEN 1 ELSE 0 END AS M200611,
       CASE WHEN MTH = '200612' THEN 1 ELSE 0 END AS M200612,
       CASE WHEN MTH = '200701' THEN 1 ELSE 0 END AS M200701,
       CASE WHEN MTH = '200702' THEN 1 ELSE 0 END AS M200702,

```

```

CASE WHEN MTH = '200703' THEN 1 ELSE 0 END AS M200703,
CASE WHEN MTH = '200704' THEN 1 ELSE 0 END AS M200704,
CASE WHEN MTH = '200705' THEN 1 ELSE 0 END AS M200705,
CASE WHEN MTH = '200706' THEN 1 ELSE 0 END AS M200706,
CASE WHEN MTH = '200707' THEN 1 ELSE 0 END AS M200707,
CASE WHEN MTH = '200708' THEN 1 ELSE 0 END AS M200708,
CASE WHEN MTH = '200709' THEN 1 ELSE 0 END AS M200709,
CASE WHEN MTH = '200710' THEN 1 ELSE 0 END AS M200710,
CASE WHEN MTH = '200711' THEN 1 ELSE 0 END AS M200711,
CASE WHEN MTH = '200712' THEN 1 ELSE 0 END AS M200712,
CASE WHEN MTH = '200801' THEN 1 ELSE 0 END AS M200801,
CASE WHEN MTH = '200802' THEN 1 ELSE 0 END AS M200802,
CASE WHEN MTH = '200803' THEN 1 ELSE 0 END AS M200803,
CASE WHEN MTH = '200804' THEN 1 ELSE 0 END AS M200804,
CASE WHEN MTH = '200805' THEN 1 ELSE 0 END AS M200805,
CASE WHEN MTH = '200806' THEN 1 ELSE 0 END AS M200806,
CASE WHEN MTH = '200807' THEN 1 ELSE 0 END AS M200807
FROM
(
SELECT DISTINCT LEFT(CAST(SHOP_DATE AS STRING),6) AS MTH ,CUST_CODE
FROM `third-mercury-283407.supermarket_test.supermarket_test`
WHERE CUST_CODE IS NOT NULL
)
)
GROUP BY 1
)
)

```

```

SELECT MTH,
       flag,
       CASE WHEN flag = 'CHURN' THEN (-1)*num ELSE num END AS number
FROM
(
SELECT 'M200807' as MTH,
       FLAG200807 as flag,
       count(CUST_CODE) as num
FROM churn
group by 1,2

```

UNION ALL

```

SELECT 'M200806' as MTH,
       FLAG200806 as flag,
       count(CUST_CODE) as num
FROM churn
group by 1,2

```

UNION ALL

```

SELECT 'M200805' as MTH,
       FLAG200805 as flag,
       count(CUST_CODE) as num
FROM churn
group by 1,2

```

UNION ALL

```
SELECT 'M200804' as MTH,  
       FLAG200804 as flag,  
       count(CUST_CODE) as num  
FROM churn  
group by 1,2
```

UNION ALL

```
SELECT 'M200803' as MTH,  
       FLAG200803 as flag,  
       count(CUST_CODE) as num  
FROM churn  
group by 1,2
```

UNION ALL

```
SELECT 'M200802' as MTH,  
       FLAG200802 as flag,  
       count(CUST_CODE) as num  
FROM churn  
group by 1,2
```

UNION ALL

```
SELECT 'M200801' as MTH,  
       FLAG200801 as flag,  
       count(CUST_CODE) as num  
FROM churn  
group by 1,2
```

UNION ALL

```
SELECT 'M200712' as MTH,  
       FLAG200712 as flag,  
       count(CUST_CODE) as num  
FROM churn  
group by 1,2
```

UNION ALL

```
SELECT 'M200711' as MTH,  
       FLAG200711 as flag,  
       count(CUST_CODE) as num  
FROM churn  
group by 1,2
```

UNION ALL

```
SELECT 'M200710' as MTH,  
       FLAG200710 as flag,  
       count(CUST_CODE) as num  
FROM churn  
group by 1,2
```

UNION ALL

```
SELECT 'M200709' as MTH,  
       FLAG200709 as flag,
```

```
        count(CUST_CODE) as num
FROM churn
group by 1,2
```

UNION ALL

```
SELECT 'M200708' as MTH,
        FLAG200708 as flag,
        count(CUST_CODE) as num
FROM churn
group by 1,2
```

UNION ALL

```
SELECT 'M200707' as MTH,
        FLAG200707 as flag,
        count(CUST_CODE) as num
FROM churn
group by 1,2
```

UNION ALL

```
SELECT 'M200706' as MTH,
        FLAG200706 as flag,
        count(CUST_CODE) as num
FROM churn
group by 1,2
```

UNION ALL

```
SELECT 'M200705' as MTH,
        FLAG200705 as flag,
        count(CUST_CODE) as num
FROM churn
group by 1,2
```

UNION ALL

```
SELECT 'M200704' as MTH,
        FLAG200704 as flag,
        count(CUST_CODE) as num
FROM churn
group by 1,2
```

UNION ALL

```
SELECT 'M200703' as MTH,
        FLAG200703 as flag,
        count(CUST_CODE) as num
FROM churn
group by 1,2
```

UNION ALL

```
SELECT 'M200702' as MTH,
        FLAG200702 as flag,
        count(CUST_CODE) as num
FROM churn
```

group by 1,2

UNION ALL

```
SELECT 'M200701' as MTH,  
       FLAG200701 as flag,  
       count(CUST_CODE) as num  
FROM churn  
group by 1,2
```

UNION ALL

```
SELECT 'M200612' as MTH,  
       FLAG200612 as flag,  
       count(CUST_CODE) as num  
FROM churn  
group by 1,2
```

UNION ALL

```
SELECT 'M200611' as MTH,  
       FLAG200611 as flag,  
       count(CUST_CODE) as num  
FROM churn  
group by 1,2
```

UNION ALL

```
SELECT 'M200610' as MTH,  
       FLAG200610 as flag,  
       count(CUST_CODE) as num  
FROM churn  
group by 1,2
```

UNION ALL

```
SELECT 'M200609' as MTH,  
       FLAG200609 as flag,  
       count(CUST_CODE) as num  
FROM churn  
group by 1,2
```

UNION ALL

```
SELECT 'M200608' as MTH,  
       FLAG200608 as flag,  
       count(CUST_CODE) as num  
FROM churn  
group by 1,2
```

UNION ALL

```
SELECT 'M200607' as MTH,  
       FLAG200607 as flag,  
       count(CUST_CODE) as num  
FROM churn  
group by 1,2
```


UNION ALL

```
SELECT 'M200606' as MTH,  
       FLAG200606 as flag,  
       count(CUST_CODE) as num  
FROM churn  
group by 1,2
```

UNION ALL

```
SELECT 'M200605' as MTH,  
       FLAG200605 as flag,  
       count(CUST_CODE) as num  
FROM churn  
group by 1,2
```

UNION ALL

```
SELECT 'M200604' as MTH,  
       FLAG200604 as flag,  
       count(CUST_CODE) as num  
FROM churn  
group by 1,2
```

```
)  
WHERE flag IS NOT NULL  
ORDER BY 1,2
```

Monthly Supermarket Customer Movement

