

SQL

```
1 WITH cust_month AS (
2     select distinct cust_code, date_trunc(parse_date('%Y%m%d', cast(SHOP_DATE as string)), month) shop_month
3     from `customermovement-332506.Cus_movement.SuperMarket`
4     where cust_code is not null
5 )
6 SELECT report_month
7     ,COUNT(DISTINCT CASE WHEN status = 'New' THEN cust_code ELSE NULL END) AS new_customers
8     ,COUNT(DISTINCT CASE WHEN status = 'Repeat' THEN cust_code ELSE NULL END) AS repeat_customers
9     ,COUNT(DISTINCT CASE WHEN status = 'Reactivated' THEN cust_code ELSE NULL END) AS reactivated_customers
10    ,-COUNT(DISTINCT CASE WHEN status = 'Churn' THEN cust_code ELSE NULL END) AS churn_customers
11 FROM (
12     SELECT cust_code, shop_month AS report_month, prev_month
13     ,CASE
14         WHEN DATE_DIFF(shop_month, prev_month, MONTH) IS NULL THEN 'New'
15         WHEN DATE_DIFF(shop_month, prev_month, MONTH) = 1 THEN 'Repeat'
16         WHEN DATE_DIFF(shop_month, prev_month, MONTH) > 1 THEN 'Reactivated'
17     ELSE NULL END AS status
18 FROM (
19     SELECT cust_code, shop_month, LAG(shop_month, 1) OVER (PARTITION BY cust_code ORDER BY shop_month) AS prev_month
20     FROM cust_month
21 )
22 UNION ALL
23 SELECT cust_code, DATE_ADD(shop_month, INTERVAL 1 MONTH) report_month, shop_month as prev_month
24     ,'Churn' AS status
25 FROM (
26     SELECT cust_code, shop_month
27         ,LEAD(shop_month, 1) OVER (PARTITION BY cust_code ORDER BY shop_month) AS next_trans_date
28         ,DATE_DIFF(LEAD(shop_month, 1) OVER (PARTITION BY cust_code ORDER BY shop_month), shop_month, MONTH) AS n_months
29     FROM cust_month
30 ) WHERE
31     (n_months > 1 or n_months is null)
32     AND shop_month < (SELECT MAX(shop_month) FROM cust_month)-- excluding last month
33 ) GROUP BY report_month
34 order by report_month
```

Result of Query

Query results SAVE RESULTS EXPLORE DATA

Query complete (18.6 sec elapsed, 388.3 MB processed)

Job information Results JSON Execution details

Row	report_month	new_customers	repeat_customers	reactivated_customers	churn_customers
1	2006-04-01	1003	0	0	0
2	2006-05-01	544	675	0	-328
3	2006-06-01	382	787	82	-432
4	2006-07-01	385	843	181	-408
5	2006-08-01	366	887	197	-522
6	2006-09-01	328	931	238	-519
7	2006-10-01	255	940	254	-557
8	2006-11-01	239	927	277	-522
9	2006-12-01	226	940	319	-503
10	2007-01-01	175	924	306	-561
11	2007-02-01	151	897	280	-508
...	...	...	...	...	...

Visualize

