

How to get the result:

1. The first query was incorrect because it was using a self-join to calculate running totals, but it was not grouping by date. As a result, each row was being multiplied by the number of transactions for each date, producing incorrect results.
2. To correct the query, I first calculated the sum of amt\_sales and the count of transactions for each date using a subquery and a group by clause. This resulted in a table with the total amt\_sales and total number of transactions for each date.
3. Next, I used two additional subqueries in the main SELECT statement to calculate the running total of amt\_sales and the running total of cnt\_sales. These subqueries sum the amt\_sales and cnt\_sales for each date up to and including the current date being processed in the main SELECT statement.
4. Finally, I added a subquery to calculate the number of transactions for each date, so that the final result includes a separate row for each transaction, with the running totals calculated for each date.

By using subqueries in this manner, I was able to achieve the desired result without using any window functions.

The screenshot shows the MySQL Workbench interface. The SQL editor contains a query that uses a CTE to create a table of transactions for 20220101, then uses subqueries to calculate running totals for amt\_sales and cnt\_sales. The results grid shows the following data:

dt_sales	amt_sales	cnt_sales	amt_sales_running_total	cnt_sales_running_total
20220101	12	2	12	2
20220102	5	1	17	3
20220103	30	1	47	4

The status bar at the bottom indicates that 18 rows were returned in 0.000 seconds.

In the next page, I showed some other screen shots of separate queries and get the results :

MySQL Workbench

unconnected x Local instance MySQL80 x

File Edit View Query Database Server Tools Scripting Help

Navigator: Query 1 x Administration - Server Status

MANAGEMENT

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261 WITH t\_demo AS

262 (SELECT 20220101 AS dt\_sales, 10 amt\_sales FROM DUAL UNION ALL

263 SELECT 20220101 AS dt\_sales, 2 amt\_sales FROM DUAL UNION ALL

264 SELECT 20220102 AS dt\_sales, 5 amt\_sales FROM DUAL UNION ALL

265 SELECT 20220103 AS dt\_sales, 30 amt\_sales FROM DUAL

266 )

267 SELECT a.dt\_sales, SUM(a.amt\_sales) AS amt\_sales

268 FROM t\_demo a

269 GROUP BY(a.dt\_sales)

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271

Administration Schemas

Information

No object selected

Result Grid

dt_sales	amt_sales
20220101	12
20220102	5
20220103	30

Result 19 x

Output

Action Output

Message

Duration / Fetch

0.000 sec

Object Info Session

21 02:49:21 WITH t\_demo AS (SELECT 20220101 AS dt\_sales, 10 amt\_sales FROM DUAL UNION ALL SELECT 20220101 ... Error Code: 1109. Unknown table 'a' in field list

Windows taskbar: Type here to search, Snowing now, 2:54 AM 1/30/2023

MySQL Workbench

unconnected x Local instance MySQL80 x

File Edit View Query Database Server Tools Scripting Help

Navigator: Query 1 x Administration - Server Status

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288

289 WITH t\_demo AS

290 (SELECT 20220101 AS dt\_sales, 10 amt\_sales FROM DUAL UNION ALL

291 SELECT 20220101 AS dt\_sales, 2 amt\_sales FROM DUAL UNION ALL

292 SELECT 20220102 AS dt\_sales, 5 amt\_sales FROM DUAL UNION ALL

293 SELECT 20220103 AS dt\_sales, 30 amt\_sales FROM DUAL

294 )

295 -- SELECT a.dt\_sales, SUM(a.amt\_sales) AS amt\_sales

296 SELECT a.dt\_sales, count(a.amt\_sales) As cnt\_sales, ((SELECT SUM(b.amt\_sales) FROM t\_demo b WHERE b.dt\_sales <= a.dt\_sales ))

297 FROM t\_demo a

298 GROUP BY(a.dt\_sales);

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Administration Schemas

Information

No object selected

Result Grid

dt_sales	cnt_sales	((SELECT SUM(b.amt_sales) FROM t_demo b WHERE b.dt_sales <= a.dt_sales ))
20220101	2	12
20220102	1	17
20220103	1	47

Result 20 x

Output

Action Output

Message

Duration / Fetch

0.016 sec

Object Info Session

25 03:01:03 WITH t\_demo AS (SELECT 20220101 AS dt\_sales, 10 amt\_sales FROM DUAL UNION ALL SELECT 20220101 ... Error Code: 1630. FUNCTION adventureworks SUM does not exist. Check the Function Name Parsing and Reso... 0.000 sec / 0.000 sec

26 03:03:59 WITH t\_demo AS (SELECT 20220101 AS dt\_sales, 10 amt\_sales FROM DUAL UNION ALL SELECT 20220101 ... 3 row(s) returned

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MySQL Workbench

unconnected x Local instance MySQL80 x

File Edit View Query Database Server Tools Scripting Help

Navigator: Query 1 Administration - Server Status Limit to 1000 rows

**MANAGEMENT**

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**PERFORMANCE**

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```
294
295
296
297 WITH t_demo AS (
298 /* two transactions for 20220101 */
299 SELECT 20220101 AS dt_sales, 10 amt_sales FROM DUAL UNION ALL
300 SELECT 20220101 AS dt_sales, 2 amt_sales FROM DUAL UNION ALL
301 SELECT 20220102 AS dt_sales, 5 amt_sales FROM DUAL UNION ALL
302 SELECT 20220103 AS dt_sales, 30 amt_sales FROM DUAL
303 )
304 SELECT a.dt_sales, SUM(a.amt_sales) AS amt_sales,
305
306 (SELECT SUM(c.cnt_sales)
307 FROM (SELECT dt_sales, COUNT(dt_sales) AS cnt_sales FROM t_demo GROUP BY dt_sales) c
308 WHERE c.dt_sales <= a.dt_sales) AS cnt_sales_running_total
309 FROM (SELECT dt_sales, amt_sales FROM t_demo) a
310 GROUP BY a.dt_sales;
```

Administration Schemas

Information

No object selected

dt_sales	amt_sales	cnt_sales_running_total
20220101	12	2
20220102	5	3
20220103	30	4

Result 23 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
34	03:15:33	WITH t_demo AS ( /* two transactions for 20220101 */ SELECT 20220101 AS dt_sales, 10 amt_sales FROM D...	3 row(s) returned	0.000 sec / 0.000 sec
35	03:17:15	WITH t_demo AS ( /* two transactions for 20220101 */ SELECT 20220101 AS dt_sales, 10 amt_sales FROM D...	3 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Type here to search

Snowing now

3:18 AM 1/30/2023