# User

Let me know whether sql statement extracting data from sqlite as below is correct:

Select a."Firm / Headquarters" FROM a WHERE a."Firm / Headquarters" NOT IN (SELECT b."Firm / Headquarters" FROM b)

Particularly I am doubtful of the clause NOT IN.

# Bing

Your SQL statement is syntactically correct. The NOT IN clause in SQL is used to exclude the records that match the condition specified.

Here's what your query does:

SELECT a."Firm / Headquarters"

FROM a

WHERE a."Firm / Headquarters" NOT IN (SELECT b."Firm / Headquarters" FROM b)

This query will select all records from table a where the value of Firm / Headquarters is not found in the list of Firm / Headquarters values in table b.

However, please ensure that both tables a and b exist and have the column Firm / Headquarters. Also, be aware that if there are NULL values in the b."Firm / Headquarters" column, you might not get the results you expect, because in SQL, NULL is not considered a value, and hence is not comparable. In such cases, you might want to handle NULL values explicitly in your subquery.

If you're still having issues, please provide more details about the error or unexpected behavior you're experiencing. I'm here to help! 😊

# User

Okay, Now comes the real challenging issue.

I used LET formula like: =SUM(LET(x,Table1[Firm / Headquarters],y,Table2[Firm / Headquarters],x=y))\*1 and this formula returns zero. But the above SQL which similarly compares the two data fields only returns: Firm / Headquarters in excel (I am using xlwings with = sql function like this: =sql(N14,B1:B501,G1:G501) Where N1 cell contains query:

Select a."Firm / Headquarters" FROM a WHERE a."Firm / Headquarters" NOT IN (SELECT b."Firm / Headquarters" FROM b)

Can you identify the issue why there is an appearent mismatch? Or is this comparison weird?

# Bing

The SQL query and the Excel LET formula you're using are not equivalent, which could explain the discrepancy in results.

The SQL query is selecting records from table a where Firm / Headquarters is not found in table b. It's looking for non-matching records.

On the other hand, the Excel LET formula is summing up the instances where Firm / Headquarters in table a matches Firm / Headquarters in table b. It's looking for matching records.

Here's the breakdown:

* SQL Query:

SELECT a."Firm / Headquarters"

FROM a

WHERE a."Firm / Headquarters" NOT IN (SELECT b."Firm / Headquarters" FROM b)

This query returns the Firm / Headquarters from table a that are not present in table b.

* Excel LET Formula:

=SUM(LET(x,Table1[Firm / Headquarters],y,Table2[Firm / Headquarters],x=y))\*1

This formula sums up the instances where Firm / Headquarters from Table1 matches Firm / Headquarters from Table2.

So, if the SQL query is returning results, it means there are some Firm / Headquarters in table a that are not found in table b. But the Excel formula is returning zero because it didn't find any matching Firm / Headquarters in both tables.

If you want to make the Excel formula equivalent to the SQL query, you would need to count the instances where Firm / Headquarters in table a does not match any Firm / Headquarters in table b. Unfortunately, Excel does not have a straightforward built-in function to do this. You might need to use a combination of functions or use VBA for this purpose.

I hope this helps! If you have further questions, feel free to ask. 😊

# User

What I don't understand is that is suppose I do like this range A1:A10=B1:B10 and if all return TRUE (1) than =SUM(A1:A10=B1:B10) shiuld return 10 of that dynamic array of all TRUE values. Why it is returning 0 in excel?

# Bing

The issue you're encountering is due to how Excel handles array operations. When you perform an operation like A1:A10=B1:B10, Excel returns an array of Boolean values (TRUE or FALSE). However, Excel does not automatically coerce these Boolean values to their numeric equivalents (1 for TRUE, 0 for FALSE) in mathematical operations like SUM.

To get the sum of this array operation, you need to coerce the Boolean values to numbers. This can be done using the -- (double unary) operator or the N function. Here's how you can modify your formula:

=SUM(--(A1:A10=B1:B10))

or

=SUM(N(A1:A10=B1:B10))

Both of these formulas will convert TRUE to 1 and FALSE to 0, and then sum up the results. If all 10 cells in A1:A10 are equal to their corresponding cells in B1:B10, the sum will be 10.

I hope this helps! If you have further questions, feel free to ask. 😊

# User

So that was correctly identified by you. Now my LET statement: =SUM(--(LET(x,Table1[Firm / Headquarters],y,Table2[Firm / Headquarters],x=y)))\*1 returns 500 (all 500 values in both arrays are equal)!

# Bing

That's great to hear! Your modified LET formula is now correctly identifying and summing up the matches between the two arrays. It seems like all 500 values in both arrays are indeed equal, hence the sum is 500.

Remember, this formula counts the number of matching Firm / Headquarters between Table1 and Table2. If you need any more help with Excel formulas or SQL queries, feel free to ask. I'm here to help! 😊

# User

Now about that SQL which I referred above. As we know - I told you in above prompt that both arrays are equal. But sql statement like this which references these same same arrays which we used in LET statement above: Select a."Firm / Headquarters" FROM a WHERE a."Firm / Headquarters" NOT IN (SELECT b."Firm / Headquarters" FROM b) which is referred in another like this using xlwings: =sql(N14,B1:B501,G1:G501)

returns column headers: Firm / Headquarters

Is it correct?

# Bing

Yes, that is correct. If all the values in the two arrays are equal, then the SQL query:

SELECT a."Firm / Headquarters"

FROM a

WHERE a."Firm / Headquarters" NOT IN (SELECT b."Firm / Headquarters" FROM b)

will return no rows, because there are no Firm / Headquarters in table a that are not found in table b.

However, the column header Firm / Headquarters will still be displayed, because the SQL query specifies to select the Firm / Headquarters column from table a. The column header is displayed even if the query returns no rows.

So, if you're seeing only the column header Firm / Headquarters and no rows beneath it, that means your SQL query is working correctly given that all values in the two arrays are indeed equal. 😊

# User

Okay - Now everything is crystal clear - Anomaly between LET and SQL which I raised in beginning of the session has been resolved.

# Bing

I'm glad to hear that everything is clear now! It was a great discussion about the differences between SQL queries and Excel formulas. If you have any more questions in the future, whether about SQL, Excel, or anything else, don't hesitate to ask. I'm here to help! 😊