

SQL Interview Question asked in

The Deloitte logo is displayed within a black rectangular box. The word "Deloitte" is written in a bold, white, sans-serif font. A small green circle, representing a period, is positioned at the end of the word.

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Problem Statement

Consider a table named 'FinancialTransactions' with the following columns:

TransactionID (int)

TransactionDate (date)

Amount (float)

TransactionType (varchar): The type of transaction, either 'Credit' or 'Debit'.

Write an SQL query to calculate the total balance for each day, considering both credit and debit transactions. Display the results with the columns TransactionDate and TotalBalance.

Table Creation and Data Insertion script

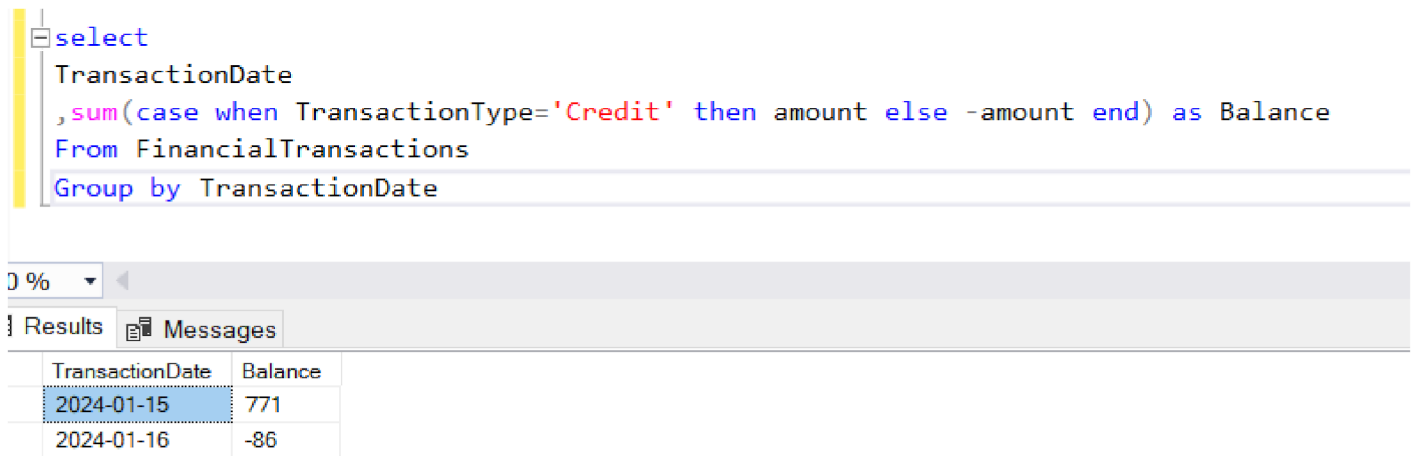
```
----Table creation Script
create table FinancialTransactions
(
TransactionID int primary key
,TransactionDate date
,Amount float
,TransactionType varchar(10)
)

--Data Insertion Script
Insert into FinancialTransactions
(TransactionID,TransactionDate,Amount,TransactionType)
values
(1,'2024-01-15',56.00,'Debit'),
(2,'2024-01-15',23.00,'Credit'),
(3,'2024-01-15',880.00,'Credit'),
(4,'2024-01-15',76.00,'Debit'),
(5,'2024-01-16',60.00,'Credit'),
(6,'2024-01-16',146.00,'Debit')
```

Table FinancialTransactions

TransactionID	TransactionDate	Amount	TransactionType
1	2024-01-15	56	Debit
2	2024-01-15	23	Credit
3	2024-01-15	880	Credit
4	2024-01-15	76	Debit
5	2024-01-16	60	Credit
6	2024-01-16	146	Debit

Solution



The screenshot shows a SQL query in a text editor and its results in a table. The query is:

```
select  
TransactionDate  
,sum(case when TransactionType='Credit' then amount else -amount end) as Balance  
From FinancialTransactions  
Group by TransactionDate
```

Below the query, there is a toolbar with a dropdown menu set to 0% and buttons for Results and Messages. The Results tab is active, displaying a table with two columns: TransactionDate and Balance.

TransactionDate	Balance
2024-01-15	771
2024-01-16	-86

SQL Script

```
select  
TransactionDate  
,sum(case when TransactionType='Credit' then amount else -amount  
end) as Balance  
From FinancialTransactions  
Group by TransactionDate
```

Explanation

- We have used case statement to determine whether transaction belongs to 'Debit' or 'Credit'
- Result of Case statement is then aggregated, grouped by 'TransactionDate'