

AVERAGE ORDER

NOV 2023

Joins, Group By and Nested Select

LinkedIn Coding Challenge

Intermediate

A database with many tables has foreign keys that are designed to join the tables during SQL queries.

Find the average of all orders by joining the following tables:

Orders.OrderID → OrdersDishes.OrderID

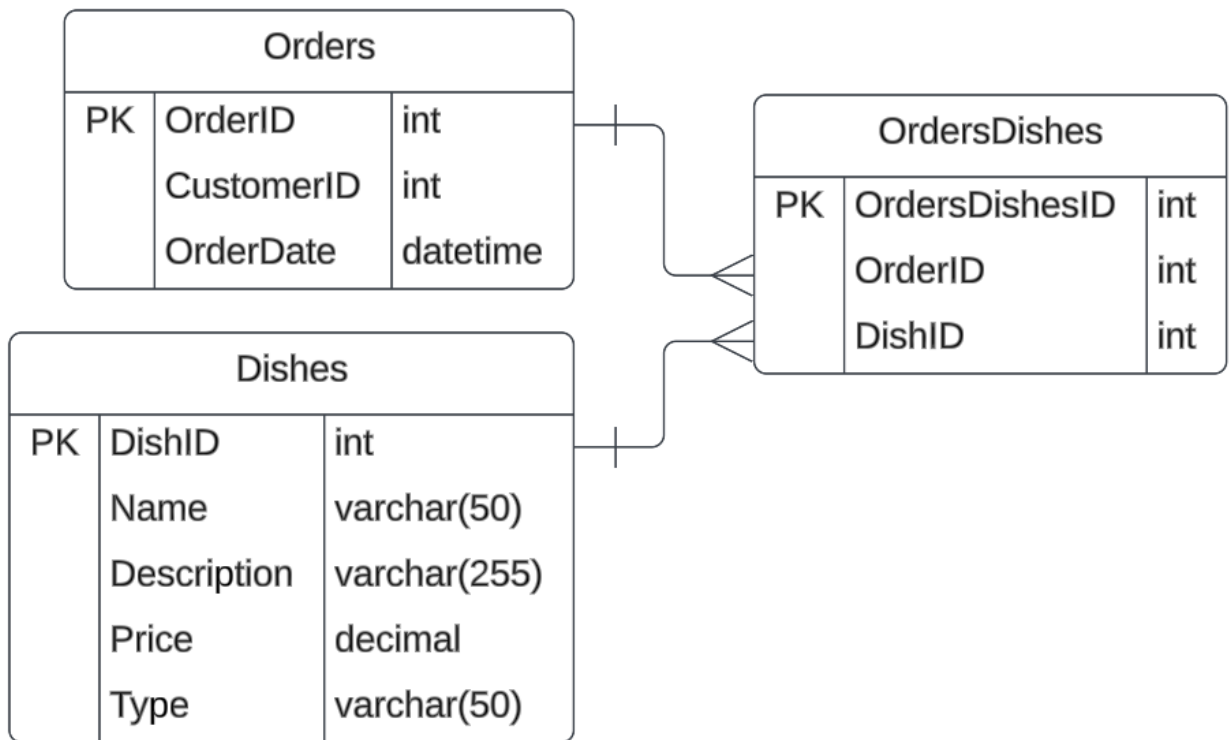
OrdersDishes.DishID → Dishes.DishID

There are two steps:

1. Find the sum of each order in the dataset
 2. Find the average of the order sums
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INPUT FORMAT

The source tables are **ORDERS**, **ORDERSDISHES**, and **DISHES**. The tables are connected as follows:



CONSTRAINTS

The results should have a single row with one column:

ORDERAVERAGE: Average value of all orders

CODE SOLUTION

```
SELECT AVG(DISHPRICES) AS ORDERAVERAGE
FROM(
    SELECT Orders.ORDERID, SUM(Dishes.PRICE) AS DISHPRICES
    FROM Orders
    JOIN OrdersDishes
    ON OrdersDishes.ORDERID=Orders.ORDERID
    JOIN Dishes
    ON Dishes.DISHID=OrdersDishes.DISHID
    GROUP BY Orders.ORDERID)
```

SOLUTION PROCESS

- Nested Select function: **ORDERS** is the primary table choice because it has the greatest one-to-many relationships connected to it. Join functions allow extraction of customer names and summed dish price data renamed as DISHPRICES.
 - Group By: Results are grouped by first column in Select function to ensure that DISHPRICES is summed per each individual order, thus completing the first step
 - Outer Select function: Table with Orders.OrderID and DISHPRICES columns is created by nested function. Select function extracts average of DISHPRICES values and renames column using 'As' syntax
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OUTPUT

```
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| ORDERAVERAGE |
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| 32.66777      |
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```
