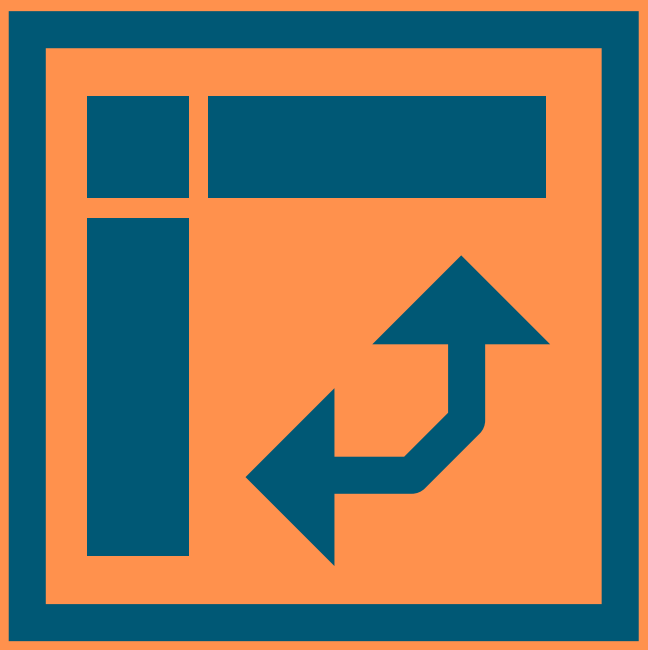
PIVOT TABLES IN SQL

@jasmeetKaur

PIVOT TABLE



a pivot table is a table that presents data in a summarized format by grouping and aggregating information from a larger table.

It is often used to analyze and report data from a database.

METHOD 1

To create a pivot table in SQL, you can use the GROUP BY clause with aggregate functions such as SUM, COUNT, AVG, MIN, or MAX.

SYNTAX 1

```sql
SELECT category, SUM(sales) AS total_sales
FROM sales_table
GROUP BY category;
```

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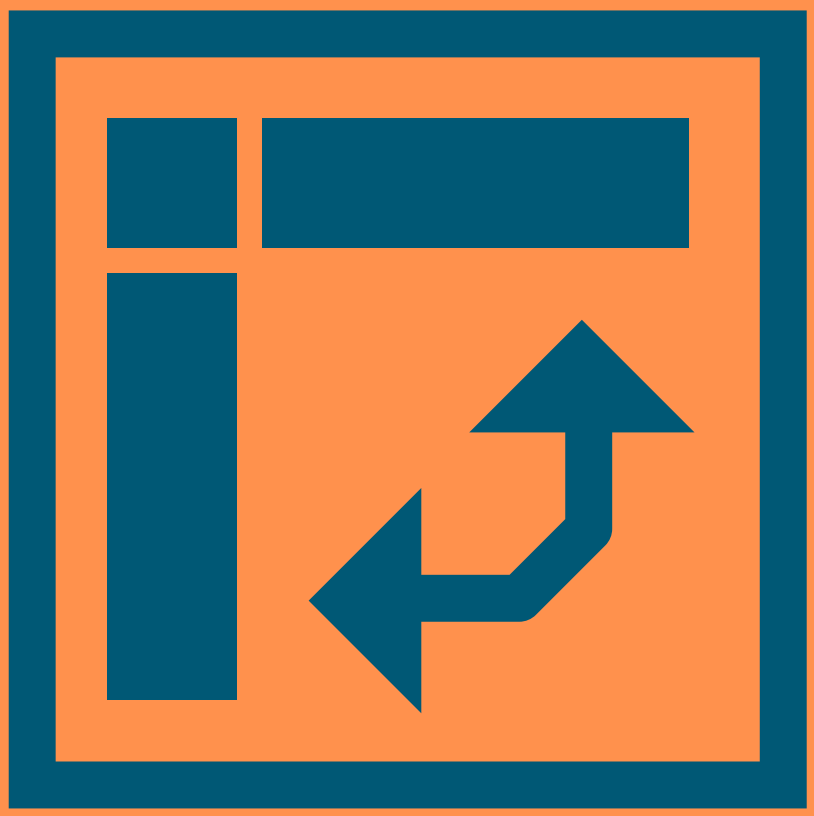
METHOD 2



You can also use the PIVOT clause in SQL Server to pivot data based on a particular column.

SYNTAX 2

```sql
SELECT *
FROM (
  SELECT column1, column2, column3
  FROM table_name
) AS source_table
PIVOT (
  aggregate_function(column_to_aggregate)
  FOR column_to_pivot
  IN (list_of_pivot_values)
) AS pivot_table;
```

- source_table: original table,
  column_to_aggregate: column to perform the aggregation on,
- column_to_pivot: the column that you want to pivot,
- list_of_pivot_values: a comma-separated list of values that is used as columns in the output.

EXAMPLE

```sql
SELECT *
FROM (
  SELECT year, product, sales_amount
  FROM sales
) AS source_table
PIVOT (
  SUM(sales_amount)
  FOR year
  IN ([2020], [2021])
) AS pivot_table;
```

- we first select the columns we want to use (year, product, and sales_amount)
- create a subquery called source_table.
- We then use the PIVOT operator to pivot the data, with SUM(sales_amount) as the aggregation function and year as the pivot column.

EXAMPLE

```
product | [2020] | [2021]
--------/--------/-------
A       | 100    | 200
B       | 150    | 175
C       | 75     | 125
```

, the columns [2020] and [2021] were created by the PIVOT operator based on the distinct values in the year column. The values in these columns represent the total sales for each product in each year, calculated using the SUM function.

30 DAYS OF SQL

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