MONTHLY PRODUCT REVENUE

DECEMBER 2023

Date, Aggregation & CTE

LinkedIn Learning Challenge

Intermediate

The leadership team at a company is making goals for FY2023 and wants to understand how much revenue each of the product subscriptions, **basic** and **expert,** are generating each month in 2022.

The questions that need answers at the following upcoming board meeting are:

1. What is the monthly revenue per product?
2. Which product was the most successfull in 2022?
3. Did the month-to-month trend for each product remain consistent or fluctuate greatly.

Summarize the findings using descriptive statistics such as minimum monthly revenue, maximum monthly revenue, average monthly revenue and standard deviation of monthly revenue.

INPUT FORMAT

The source tables are **SUBSCRIPTIONS** and **PRODUCTS**

Main Data Model
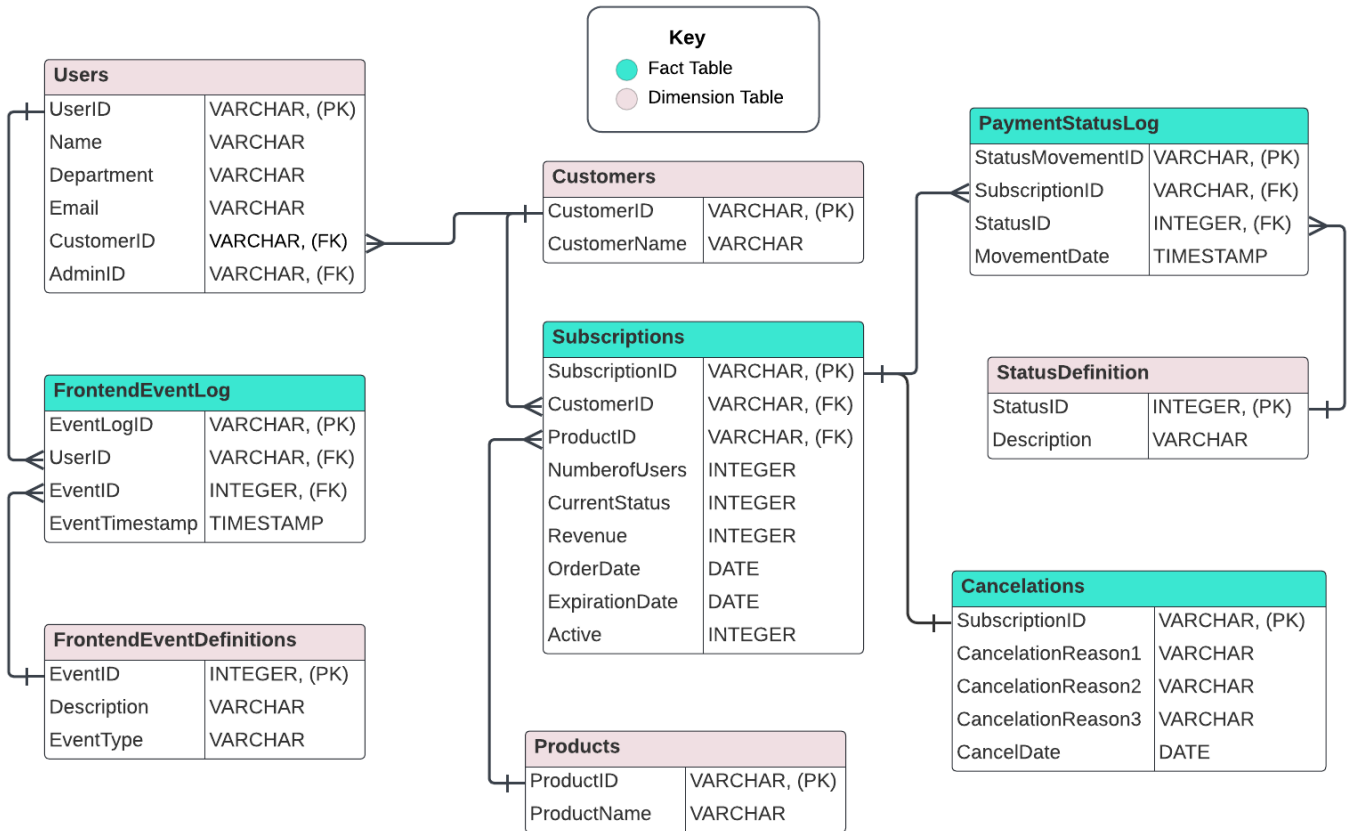
CODE SOLUTION

```
with monthly_revenue as(

SELECT

    date_trunc('month',s.ORDERDATE) AS OrderMonth,

    p.PRODUCTNAME,

    sum(s.REVENUE) AS Revenue

FROM Subscriptions s

JOIN Products p

ON p.PRODUCTID = s.PRODUCTID

WHERE s.ORDERDATE BETWEEN '2022-01-01' AND '2022-12-31'

GROUP BY date_trunc('month',s.ORDERDATE), p.PRODUCTNAME

)


SELECT

PRODUCTNAME,

min(REVENUE) AS MIN_REV,

max(REVENUE) AS MAX_REV,

avg(REVENUE) AS AVG_REV,

stddev(REVENUE) AS STD_DEV_REV

FROM monthly_revenue

GROUP BY PRODUCTNAME
```

SOLUTION PROCESS

- Date_Trunc and JOIN functions: Returns only the month of the subscription with a timestamp that falls within the year 2022 as defined by the WHERE function. **PRODUCTS** table is joined because board members would not be able to interpret the *ProductID* alone from the **SUBSCRIPTION** table with naming the product
- CTE function: Calculate the total revenue for each product by its name during every month in the year 2022
- Select and Aggregative functions: Returns the distribution of the revenue data for each product

OUTPUT

```
------------------------------------------------------------------

| PRODUCTNAME | MIN_REV | MAX_REV | AVG_REV | STD_DEV_REV        |

------------------------------------------------------------------

| Basic       | 500     | 28000   | 13188   | 8123.763642197237  |

| Expert      | 3000    | 46000   | 18000   | 13796.134724383252 |

------------------------------------------------------------------
```

The findings show that the most lucrative subscription of 2022 was the **Expert** subscription with the highest revenue overall and highest monthly average revenue. However, the **Basic** subscription's revenue was more stable that year with it's average revenue being less than $5000 away from its more lucrative counterpart.