## Section 3: Understanding company growth and decline

Marketing team is interested in understanding the growth and decline pattern of the company in terms of new leads or sales amount by the customers.  
  
3.1) Identify the total growth on an year by year basis  
  
a. Based on Quantity of paint that's sold

**SELECT** \*

**FROM** (

**SELECT** year\_purchase, Total\_Quantity **AS** Total\_Quantity\_2022,

LAG(Total\_Quantity) OVER(**ORDER** **BY** year\_purchase) **AS** pastoffset\_1,

LAG(Total\_Quantity,**2**) OVER(**ORDER** **BY** year\_purchase) **AS** pastoffset\_2,

LAG(Total\_Quantity,**3**) OVER(**ORDER** **BY** year\_purchase) **AS** pastoffset\_3

**FROM**(

**SELECT** **EXTRACT**(**YEAR** **FROM** PurchaseDate) **AS** year\_purchase,

**SUM**(Quantity) **AS** Total\_Quantity

**FROM** CustomerTransactionData

**WHERE** **EXTRACT**(**YEAR** **FROM** PurchaseDate) < **2023**

**GROUP** **BY** **EXTRACT**(**YEAR** **FROM** PurchaseDate)) **AS** T) **AS** T

**WHERE** year\_purchase = **2022**;

b. Based on amount of paint that's sold

**SELECT** \*

**FROM** (

**SELECT** year\_purchase, Total\_Purchase **AS** Total\_Purchase\_2022,

LAG(Total\_Purchase) OVER(**ORDER** **BY** year\_purchase) **AS** pastoffset\_1,

LAG(Total\_Purchase,**2**) OVER(**ORDER** **BY** year\_purchase) **AS** pastoffset\_2,

LAG(Total\_Purchase,**3**) OVER(**ORDER** **BY** year\_purchase) **AS** pastoffset\_3

**FROM**(

**SELECT** **EXTRACT**(**YEAR** **FROM** PurchaseDate) **AS** year\_purchase,

**SUM**(PurchasingAmt) **AS** Total\_Purchase

**FROM** CustomerTransactionData

**WHERE** **EXTRACT**(**YEAR** **FROM** PurchaseDate) < **2023**

**GROUP** **BY** **EXTRACT**(**YEAR** **FROM** PurchaseDate)) **AS** T) **AS** T

**WHERE** year\_purchase = **2022**;

c. Customers that's acquired [New + Repeated]

**SELECT** \*

**FROM** (

**SELECT** year\_purchase, NewUsers **AS** NewUsers\_2022,

LAG(NewUsers) OVER(**ORDER** **BY** year\_purchase) **AS** pastoffset\_1,

LAG(NewUsers,**2**) OVER(**ORDER** **BY** year\_purchase) **AS** pastoffset\_2,

LAG(NewUsers,**3**) OVER(**ORDER** **BY** year\_purchase) **AS** pastoffset\_3

**FROM**(

**SELECT** **EXTRACT**(**YEAR** **FROM** PurchaseDate) **AS** year\_purchase,

**COUNT**(**DISTINCT** Cust\_Id) **AS** NewUsers

**FROM** CustomerTransactionData

**WHERE** **EXTRACT**(**YEAR** **FROM** PurchaseDate) < **2023**

**GROUP** **BY** **EXTRACT**(**YEAR** **FROM** PurchaseDate)) **AS** T) **AS** T

**WHERE** year\_purchase = **2022**;

d. Segregate the above By OrderType

**SELECT** \*

**FROM** (

**SELECT** year\_purchase, OrderType,

NewUsers **AS** NewUsers\_2022,

LAG(NewUsers) OVER(PARTITION **BY** OrderType **ORDER** **BY** year\_purchase) **AS** pastoffset\_1,

LAG(NewUsers,**2**) OVER(PARTITION **BY** OrderType **ORDER** **BY** year\_purchase) **AS** pastoffset\_2,

LAG(NewUsers,**3**) OVER(PARTITION **BY** OrderType **ORDER** **BY** year\_purchase) **AS** pastoffset\_3

**FROM**(

**SELECT** **EXTRACT**(**YEAR** **FROM** PurchaseDate) **AS** year\_purchase,

OrderType,

**COUNT**(**DISTINCT** Cust\_Id) **AS** NewUsers

**FROM** CustomerTransactionData

**WHERE** **EXTRACT**(**YEAR** **FROM** PurchaseDate) < **2023**

**GROUP** **BY** **EXTRACT**(**YEAR** **FROM** PurchaseDate), OrderType) **AS** T) **AS** T

**WHERE** year\_purchase = **2022**;

**Based on the above results, we can see that the overall growth has declined in the past 1 year compared to recent years. It's very apparent from total quantities sold, total sales as well as customers acquired.**