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| Names:  Teh Huan Xi Kester (P1922897)  Alwinderjit Singh Basant (P1935996)  Jason Lou (P1837902)  Wong En Ting Kelyn (P1935800)  Class: DIT/FT/2B/21  Insightful queries. |
| **Group Query 1: [Sales]** |
| 1. List the least profitable product and order by the office that contributed to the most loss. Show each offices’ loss percentage in relation to the total loss. |
| Query |
| Select \*, data.Difference/data.Loss \* 100 as 'Difference % of Loss' from  (  -- First Query  SELECT productName, priceEach, buyPrice,buyPrice-priceEach as 'Difference', SUM(buyPrice - priceEach) OVER(PARTITION BY productName)  AS Loss, O.officeCode, O.city  FROM SalesFacts S  INNER JOIN ProductsDIM P ON S.ProductSK = P.ProductSK  INNER JOIN OfficesDIM O on S.OfficesSK = O.OfficesSK  WHERE priceEach < buyPrice  --  ) as data order by Loss desc, 8 desc |
| Explanation: |
| Allows the business owner to identify the least profitable product and the offices related to the loss so that necessary action (Such as prioritising the importation of stock) can be made towards changing it. |
| Sample Questions: |
| 1. What is the product that produced the most loss?  2. Which is the office of said product that contributed most to that loss? |
| Screenshot: |
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| **Group Query 2: [Staff / Offices]** |
| 2. Best performing office based on total sales during a defined period. (Between 2003 and 2004) |
| Query |
| select O.officeCode, O.city, COUNT(S.orderNumber) as 'No. of orders', ROUND(SUM(S.quantityOrdered\*S.priceEach),2) as 'Total Revenue'  from SalesFacts S  inner join OfficesDIM O on O.OfficesSK = S.OfficesSK  inner join TimeDIM T on T.Timekey = S.orderDate  WHERE T.Year >= '2003' AND T.Year <= '2004' -- Date Where Clauses.  group by O.officeCode, O.city  order by 4 desc; |
| Explanation: |
| Allows the business owner to identify offices that done well during a specified period by descending order of total revenue earned. |
| Sample Questions: |
| 1. What is the best performing office in terms of total sales between 2003 and 2004? |
| Screenshot: |
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| **Group Query 3:** |
| 3. Give the percentage of orderStatus(shipped, cancelled, disputed, inprocess, resolved, on hold) over total orders over the 4 quarters of each year. |
| Query |
| ----- Final Select  SELECT \*, ROUND((CAST(TheFinalData.[Orders Count] AS FLOAT) / CAST(TheFinalData.[Total Orders] AS FLOAT)) \* 100, 4) 'Percentage' FROM  (  ---- Third Select (Get total count of orders)  SELECT \*, SUM(FinalData.[Orders Count]) OVER() 'Total Orders' FROM  (  --- Second Select (Get count of orders in quarter)  SELECT Count(Data.orderNumber) 'Orders Count', Data.orderStatus, Data.Quarter  FROM  (  -- First Select (Get Basic Data)  select orderNumber, orderStatus, TimeDIM.Quarter from SalesFacts  inner join TimeDIM ON TimeDIM.TimeKey = SalesFacts.orderDate  group by orderNumber, orderStatus, TimeDIM.Quarter  --  ) AS Data GROUP BY Data.OrderStatus, Data.Quarter  ---  ) AS FinalData  ----  ) AS TheFinalData;  ----- |
| Explanation: |
| Allows the business owner to see which order makes up the most percentage in a certain quarter to uncover weak points in the business in the business delivery system. |
| Sample questions: |
| 1. What is the percentage of each orderStatus type over the 4 quarters of the year? |
| Screenshot: |
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| **Group Query 4:** |
| 4. Compute the money spent by each customer based on their orders. Also, show each customer's spending as a percentage of total spending by all customers. Sort by percentage spent. |
| Query: |
| --- Secondary Select  SELECT \*, (SpendingData.[Customer Spent] / SpendingData.[Total Spent]) \*100 'Percentange Spent' FROM  (  -- First Select  SELECT CustomersDIM.customerNumber, ROUND(SUM(quantityOrdered \* priceEach), 2) 'Customer Spent',  (SELECT ROUND(SUM(quantityOrdered \* priceEach), 2) 'Total Money Spent' FROM SalesFacts) AS 'Total Spent' FROM SalesFacts /\* Get total spent \*/  INNER JOIN CustomersDIM ON CustomersDIM.CustomerSK = SalesFacts.CustomerSK  GROUP BY CustomersDIM.customerNumber  --  ) AS SpendingData  ORDER BY (SpendingData.[Customer Spent] / SpendingData.[Total Spent]) \* 100 DESC;  --- |
| **Explanation:** |
| To analyse who are their frequent customers so as to better address their needs. |
| Sample Questions: |
| 1. List the customers who spent the most to the least.  2. What is the percentage of what this customer spent over the total revenue. |
| Screenshot: |
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