Mint Classics - Analyze Data in a Model Car Database with MySQL Workbench

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ASK

In response to Mint Classics Company's request, I, as a data analyst, will utilize MySQL Workbench to explore the provided data model and sample tables. I will identify key insights to recommend inventory reduction strategies while ensuring timely customer service, aiming for a 24-hour order fulfillment window. My queries will focus on understanding inventory distribution, identifying slow-moving products, and proposing actionable steps to optimize storage facilities. The goal is to provide valuable insights for informed decision-making in streamlining Mint Classics Company's inventory management processes.

Project Objectives

1. Explore products currently in inventory.

2. Determine important factors that may influence inventory reorganization/reduction.

3. Provide analytic insights and data-driven recommendations.

Business Talk with Mint Classic's Stake Holders

1. Are there products with high inventory but low sales? How can we optimize the inventory of such products?

2. Are all the warehouses currently in use still necessary? How can we review warehouses that have low or inactive inventory?

3. Is there a relationship between product prices and their sales levels? How can price adjustments impact sales?

4. Who are the customers contributing the most to sales? How can sales efforts be focused on these valuable customers?

5. How can the performance of sales employees be evaluated using sales data?

6. How can customer payment trends be analysed? .

7. How can the performance of various product lines be compared? Which products are the most successful, and which ones need improvement or removal?

8. How can the company's credit policies be evaluated? Are there any customers with credit issues that need to be addressed?

PREPARE

Task 1 – Import the Classic Model Car Relational Database

Connect to MySQL database using ODBC in R

```
# Importing essential libraries for analysis:

library(RODBC)
library(DBI)
library(odbc)

# Establish a connection to MySQL database using the "MySQL_DSN" data source name

con <- dbConnect(odbc::odbc(),"MySQL_DSN")
```
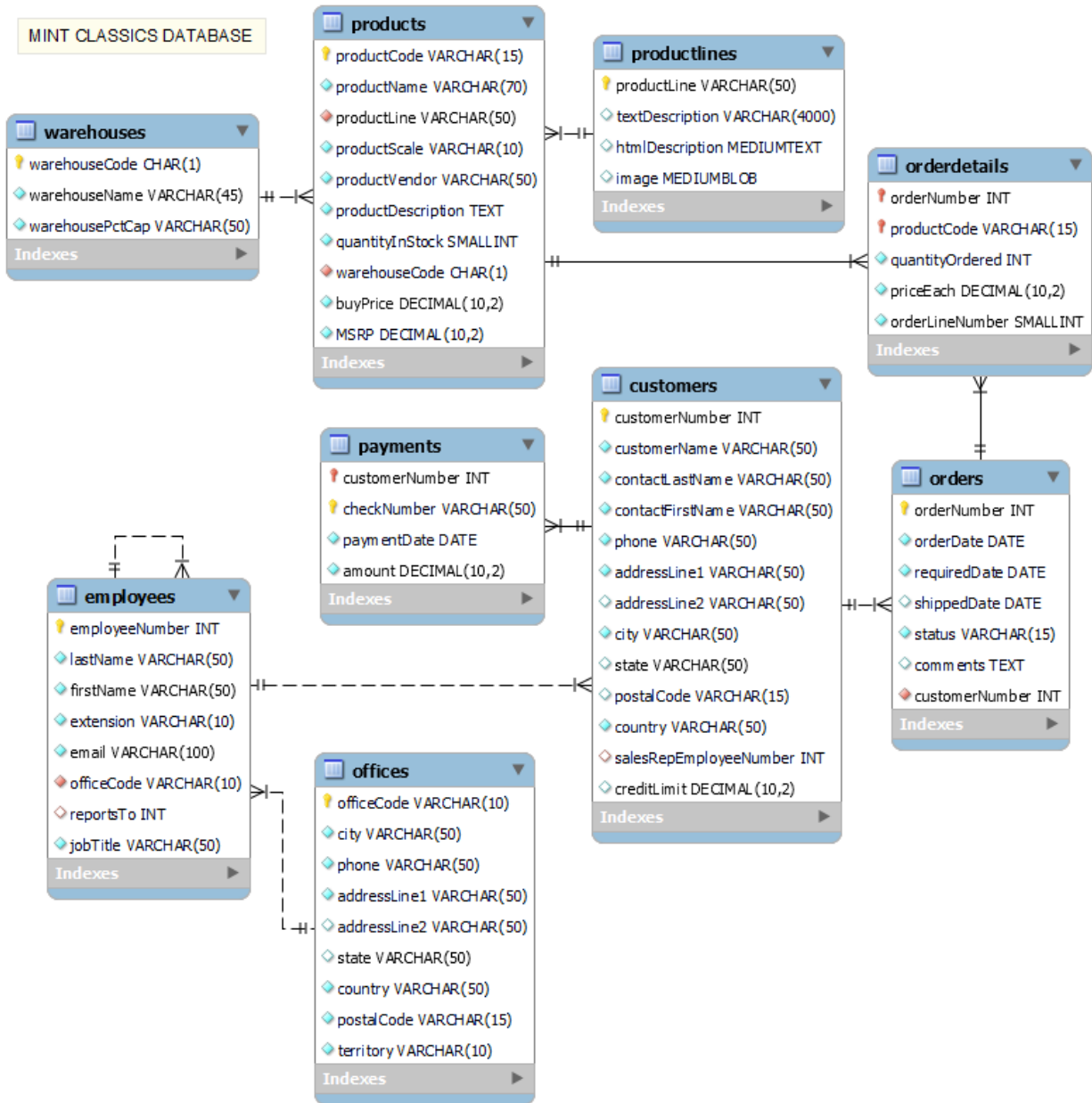
Task 2 – Familiarize yourself with the Mint Classic database and business processes.

In the Mint Classics Company's database, there are 9 tables, each serving a specific purpose:

1. Warehouses: Compiles data on the company's warehouses used for storing product inventory.

2. Products: Compiles data about product types, stock quantities, sales quantities, purchase prices, and more.

3.Product Lines:Compiles data about the descriptions of each product line the company sells.

4.Customers: Compiles data about customer profiles, including names, addresses, credit limits, and other details.

5. Payments: Compiles data about payments made by customers, including payment dates and amounts.

6. Orders: Compiles data regarding customer orders for specific products.

7. Order Details: Compiles data about orders for specific products, including the quantity of products ordered and the price of each product.

8. Employees: Compiles data about company employees, including names, addresses, offices, and more.

9. Offices: Compiles data about company office profiles.

These tables collectively store information essential for managing inventory, tracking sales, handling customer orders, processing payments, managing employees, and organizing the company's physical infrastructure.

```
knitr::include_graphics("C:/Users/RAGHU-DESKTOP/Desktop/Case study/01 Mint Classics- SQL/jBRNreo5Sh-41b3
```

MINT CLASSICS DATABASE

warehouses
- 🔑 warehouseCode CHAR(1)
- 🔷 warehouseName VARCHAR(45)
- 🔷 warehousePctCap VARCHAR(50)
- Indexes

products
- 🔑 productCode VARCHAR(15)
- 🔷 productName VARCHAR(70)
- 🔶 productLine VARCHAR(50)
- 🔷 productScale VARCHAR(10)
- 🔷 productVendor VARCHAR(50)
- 🔷 productDescription TEXT
- 🔷 quantityInStock SMALLINT
- 🔶 warehouseCode CHAR(1)
- 🔷 buyPrice DECIMAL(10,2)
- 🔷 MSRP DECIMAL(10,2)
- Indexes

productlines
- 🔑 productLine VARCHAR(50)
- 🔷 textDescription VARCHAR(4000)
- 🔷 htmlDescription MEDIUMTEXT
- 🔷 image MEDIUMBLOB
- Indexes

orderdetails
- 🔑 orderNumber INT
- 🔑 productCode VARCHAR(15)
- 🔷 quantityOrdered INT
- 🔷 priceEach DECIMAL(10,2)
- 🔷 orderLineNumber SMALLINT
- Indexes

payments
- 🔑 customerNumber INT
- 🔑 checkNumber VARCHAR(50)
- 🔷 paymentDate DATE
- 🔷 amount DECIMAL(10,2)
- Indexes

customers
- 🔑 customerNumber INT
- 🔷 customerName VARCHAR(50)
- 🔷 contactLastName VARCHAR(50)
- 🔷 contactFirstName VARCHAR(50)
- 🔷 phone VARCHAR(50)
- 🔷 addressLine1 VARCHAR(50)
- 🔷 addressLine2 VARCHAR(50)
- 🔷 city VARCHAR(50)
- 🔷 state VARCHAR(50)
- 🔷 postalCode VARCHAR(15)
- 🔷 country VARCHAR(50)
- 🔶 salesRepEmployeeNumber INT
- 🔷 creditLimit DECIMAL(10,2)
- Indexes

orders
- 🔑 orderNumber INT
- 🔷 orderDate DATE
- 🔷 requiredDate DATE
- 🔷 shippedDate DATE
- 🔷 status VARCHAR(15)
- 🔷 comments TEXT
- 🔶 customerNumber INT
- Indexes

employees
- 🔑 employeeNumber INT
- 🔷 lastName VARCHAR(50)
- 🔷 firstName VARCHAR(50)
- 🔷 extension VARCHAR(10)
- 🔷 email VARCHAR(100)
- 🔶 officeCode VARCHAR(10)
- 🔶 reportsTo INT
- 🔷 jobTitle VARCHAR(50)
- Indexes

offices
- 🔑 officeCode VARCHAR(10)
- 🔷 city VARCHAR(50)
- 🔷 phone VARCHAR(50)
- 🔷 addressLine1 VARCHAR(50)
- 🔷 addressLine2 VARCHAR(50)
- 🔷 state VARCHAR(50)
- 🔷 country VARCHAR(50)
- 🔷 postalCode VARCHAR(15)
- 🔷 territory VARCHAR(10)
- Indexes

Task 3 – Investigate the business problem and identify tables impacted.

PROCESS AND ANALYSE

Question 1 : Are there products with high inventory but low sales? How can we optimize the inventory of such products?

```sql
-- To Get the products with high inventory but low sales

Select productName,
       quantityInStock,
       sum(quantityOrdered),
       (quantityInStock-sum(quantityOrdered)) as Current_Inventory,
       (sum(quantityOrdered) / avg(quantityInStock)) as Inventory_Turnover_Ratio
from products as p
left join orderdetails as o
  on p.productCode = o . productCode
  group by productName,quantityInStock
  order by Inventory_Turnover_Ratio
  limit 20
```

```
# The products with high inventory but low sales

print(Question_1)
```

```
##                                productName quantityInStock
## 1                        1985 Toyota Supra            7733
## 2                        1995 Honda Civic             9772
## 3                      2002 Chevy Corvette            9446
## 4                        1982 Ducati 996 R            9241
## 5                     1976 Ford Gran Torino           9127
## 6                      1965 Aston Martin DB5           9042
## 7                        1968 Dodge Charger           9123
## 8            America West Airlines B757-200            9653
## 9                  1932 Model A Ford J-Coupe           9354
## 10                        2002 Suzuki XREO            9997
## 11            1999 Indy 500 Monte Carlo SS            8164
## 12            1948 Porsche Type 356 Roadster          8990
## 13             1912 Ford Model T Delivery Wagon        9173
## 14    1950's Chicago Surface Lines Streetcar          8601
## 15                 1948 Porsche 356-A Roadster         8826
## 16 1936 Mercedes-Benz 500K Special Roadster           8635
## 17                 1966 Shelby Cobra 427 S/C           8197
## 18                 1982 Lamborghini Diablo             7723
## 19                     1904 Buick Runabout             8290
## 20                     1961 Chevrolet Impala           7869
##    sum(quantityOrdered) Current_Inventory Inventory_Turnover_Ratio
```

```
## 1                 NA              NA                    NA
## 2                917            8855                0.0938
## 3                894            8552                0.0946
## 4                906            8335                0.0980
## 5                915            8212                0.1003
## 6                914            8128                0.1011
## 7                925            8198                0.1014
## 8                984            8669                0.1019
## 9                957            8397                0.1023
## 10              1028            8969                0.1028
## 11               855            7309                0.1047
## 12               948            8042                0.1055
## 13               991            8182                0.1080
## 14               934            7667                0.1086
## 15               972            7854                0.1101
## 16               960            7675                0.1112
## 17               915            7282                0.1116
## 18               912            6811                0.1181
## 19               990            7300                0.1194
## 20               941            6928                0.1196
```

Observations in the analysis:

Products like "1985 Toyota Supra" have high inventory and low sales. Optimization includes targeted promotions, adjusting pricing, and improving demand forecasting to reduce excess stock and enhance overall inventory turnover.

Question 2: Are all the warehouses currently in use still necessary? How can we review warehouses that have low or inactive inventory?

```
-- Total Available stock WRT Product Line

Select w.warehouseName,
       p.productLine,
       sum(p.quantityInStock) as Available_Stock
from products as p
inner join warehouses as w
   on p.warehouseCode = w.warehouseCode
   group by w.warehouseName,p.productLine
   order by Available_Stock desc
```

```
# Total Available stock WRT Product Line
print(Question_2a)
```

```
##   warehouseName     productLine Available_Stock
```

```
## 1         East     Classic Cars          219183
## 2         West     Vintage Cars          124880
## 3        North      Motorcycles           69401
## 4        North           Planes           62287
## 5        South Trucks and Buses           35851
## 6        South            Ships           26833
## 7        South           Trains           16696
```

```sql
-- Total Available stock WRT warehouse name

Select w.warehouseName,
       sum(p.quantityInStock) as Available_Stock
from products as p
inner join warehouses as w
    on p.warehouseCode = w.warehouseCode
    group by w.warehouseName
    order by Available_Stock desc
```

```r
# Total Available stock WRT warehouse name

print(Question_2b)
```

```
##    warehouseName Available_Stock
## 1          East          219183
## 2         North          131688
## 3          West          124880
## 4         South           79380
```

Observations in the analysis:

Based on the analysis of available stock across warehouses, it appears that all warehouses are still necessary. Each warehouse holds substantial stock for different product lines, indicating ongoing operational relevance. Consider optimizing inventory distribution but retaining all warehouses to ensure timely service and accommodate varying product demands across regions.

Question 3: Is there a relationship between product prices and their sales levels? How can price adjustments impact sales?

```sql
-- To Find Correlation between Buy price and Quantity_Ordered

Select p.productCode,
       p.productName,
       p.buyPrice,sum(od.quantityOrdered) as Quantity_Ordered
from products as p
```

```
left join orderdetails as od
    on p.productCode = od.productCode
    Group by p.productCode,productName
    order by buyPrice desc
    Limit 20
```

```
print(Question_3)
```

```
##     productCode                                productName buyPrice Quantity_Ordered
## 1     S10_4962                 1962 LanciaA Delta 16V   103.42              932
## 2     S18_2238        1998 Chrysler Plymouth Prowler   101.51              986
## 3     S10_1949               1952 Alpine Renault 1300    98.58              961
## 4     S24_3856               1956 Porsche 356A Coupe    98.30             1052
## 5     S12_1108                      2001 Ferrari Enzo    95.59             1019
## 6     S12_1099                       1968 Ford Mustang    95.34              933
## 7     S18_1984                       1995 Honda Civic    93.89              917
## 8     S18_4027                 1970 Triumph Spitfire    91.92              945
## 9     S10_4698 2003 Harley-Davidson Eagle Drag Bike    91.02              985
## 10    S12_3148               1969 Corvair Monza    89.14              963
## 11    S18_1749            1917 Grand Touring Sedan    86.70              918
## 12    S10_4757                 1972 Alfa Romeo GTA    85.68             1030
## 13    S18_4600                      1940s Ford truck    84.76             1061
## 14    S18_1129                       1993 Mazda RX-7    83.51              947
## 15    S12_3891                       1969 Ford Falcon    83.05              965
## 16    S24_2011               18th century schooner    82.34             1011
## 17    S12_1666                       1958 Setra Bus    77.90              972
## 18    S18_3232          1992 Ferrari 360 Spider red    77.90             1808
## 19    S18_1662          1980s Black Hawk Helicopter    77.27             1040
## 20    S12_3380                      1968 Dodge Charger    75.16              925
```

```
# Correlation between Buy price and Quantity_Ordered

# Load ggplot2

library(ggplot2)

# Create a scatter plot
ggplot(Question_3, aes(x = buyPrice, y = Quantity_Ordered)) +
  geom_point() +
  geom_smooth(method = "lm", se = FALSE) +
  labs(title = "Correlation Between Buying Price and Quantity Ordered",
       x = "Buying Price",
       y = "Quantity Ordered")
```

```
## `geom_smooth()` using formula = 'y ~ x'
```

Correlation Between Buying Price and Quantity Ordered

Observations in the analysis:

The correlation chart visually depicts the relationship between buying price and quantity ordered for Mint Classics Company's products. The linear regression line suggests a potential positive correlation, indicating that as buying prices increase, the quantity ordered tends to rise. Further statistical analysis may be needed for a precise correlation assessment.

Question 4: Who are the customers contributing the most to sales? How can sales efforts be focused on these valuable customers?

```sql
-- Customers contributing the most to sales

Select p.customerNumber as Customer_Number,
       c.customerName as Customer_Name,
       round(sum(amount),0) as Total_Sales_Amount
  from payments as p
  inner join customers as c
```

```
        on  p.customerNumber=c.customerNumber
        group by p.customerNumber
        Order by Total_Sales_Amount desc
        Limit 15
```

```
print(Question_4)
```

```
##    Customer_Number                   Customer_Name Total_Sales_Amount
## 1             141        Euro+ Shopping Channel             715739
## 2             124 Mini Gifts Distributors Ltd.             584188
## 3             114   Australian Collectors, Co.             180585
## 4             151             Muscle Machine Inc             177914
## 5             148         Dragon Souveniers, Ltd.             156251
## 6             323   Down Under Souveniers, Inc             154622
## 7             187                 AV Stores, Co.             148410
## 8             276       Anna's Decorations, Ltd             137034
## 9             321       Corporate Gift Ideas Co.             132341
## 10            146         Saveley & Henriot, Co.             130305
## 11            278                 Rovelli Gifts             127530
## 12            353             Reims Collectables             126983
## 13            119             La Rochelle Gifts             116950
## 14            363 Online Diecast Creations Co.             116449
## 15            496             Kelly's Gift Shop             114497
```

Observations in the analysis:

The top contributing customers to sales are Euro+ Shopping Channel and Mini Gifts Distributors Ltd. To focus sales efforts on these valuable customers, implement personalized marketing strategies, offer exclusive promotions, and ensure excellent customer service. Analyze their preferences to tailor product recommendations, fostering long-term relationships and maximizing revenue.

Question 5: How can the performance of sales employees be evaluated using sales data?

```
-- Performance of Sales Employees

select  e.employeeNumber as Employee_Number,
        concat(e.firstName," ",e.lastName) as Employee_Name,
        sum(od.priceEach * od.quantityOrdered) as Total_Sales_Amount
from employees as e
   left join customers as c
     on e.employeeNumber = c.salesRepEmployeeNumber
   left join orders as o
     on c.customerNumber = o.customerNumber
```

```
    left join orderdetails as od
        on o.orderNumber = od.orderNumber
    group by e.employeeNumber,e.lastName,e.firstName
    order by Total_Sales_Amount desc
    limit 15
```

```
# Performance of Sales Employees
```

```
print(Question_5)
```

```
##      Employee_Number      Employee_Name Total_Sales_Amount
## 1              1370 Gerard Hernandez           1258577.8
## 2              1165  Leslie Jennings           1081530.5
## 3              1401  Pamela Castillo            868220.6
## 4              1501      Larry Bott             732096.8
## 5              1504      Barry Jones            704853.9
## 6              1323    George Vanauf            669377.1
## 7              1612      Peter Marsh            584593.8
## 8              1337      Loui Bondur            569485.8
## 9              1611      Andy Fixter            562582.6
## 10             1216  Steve Patterson            505875.4
## 11             1286   Foon Yue Tseng            488212.7
## 12             1621      Mami Nishi             457110.1
## 13             1702    Martin Gerard            387477.5
## 14             1188   Julie Firrelli            386663.2
## 15             1166  Leslie Thompson            347533.0
```

Observations in the analysis:

Gerard Hernandez leads in total sales among employees, demonstrating strong sales performance. To enhance overall sales, consider leveraging Hernandez's strategies and providing targeted training. Recognize and reward top performers, fostering a competitive yet collaborative sales environment that motivates the team to achieve higher revenue goals.

Question 6: How can customer payment trends be analysed?

```
-- Customer Payment Trends

 Select c.customerName as Customer_Name,
        c.customerNumber as Customer_Number,
        orderDate as Order_Date,
        paymentDate as Payment_Date,
        datediff(paymentDate,orderDate) as Date_Difference,
        amount as Payment_Amount
```

```
from payments as p
inner join orders as o
  on  p.customerNumber = o.customerNumber
inner join customers as c
  on c.customerNumber = p.customerNumber
  order by date_difference desc
  limit 30
```

```
# Customer Payment Trends
```

```
print(Question_6)
```

```
##                   Customer_Name Customer_Number Order_Date Payment_Date
## 1       Euro+ Shopping Channel             141 2003-01-31   2005-05-19
## 2       Euro+ Shopping Channel             141 2003-01-31   2005-03-25
## 3       Euro+ Shopping Channel             141 2003-01-31   2005-03-18
## 4          Reims Collectables             353 2003-05-07   2005-06-09
## 5  Mini Gifts Distributors Ltd.            124 2003-03-26   2005-04-16
## 6       Euro+ Shopping Channel             141 2003-06-06   2005-05-19
## 7        Dragon Souveniers, Ltd.           148 2003-04-16   2005-03-27
## 8  Mini Gifts Distributors Ltd.            124 2003-03-26   2005-03-05
## 9          Reims Collectables             353 2003-07-10   2005-06-09
## 10               Alpha Cognac             242 2003-07-04   2005-06-03
## 11      Euro+ Shopping Channel             141 2003-01-31   2004-12-31
## 12   Down Under Souveniers, Inc            323 2003-06-25   2005-05-23
## 13      Euro+ Shopping Channel             141 2003-06-27   2005-05-19
## 14          Kelly's Gift Shop             496 2003-07-07   2005-05-25
## 15             Lyon Souveniers            250 2003-07-01   2005-05-17
## 16 Online Diecast Creations Co.            363 2003-01-06   2004-11-17
## 17        Blauer See Auto, Co.            128 2003-01-09   2004-11-18
## 18             Vitachrome Inc.            181 2003-01-10   2004-11-16
## 19         Baane Mini Imports             121 2003-01-29   2004-11-28
## 20                Royale Belge            381 2003-04-11   2005-02-03
## 21     Danish Wholesale Imports            145 2003-02-11   2004-12-01
## 22      Euro+ Shopping Channel             141 2003-06-06   2005-03-25
## 23              Rovelli Gifts             278 2003-02-17   2004-12-05
## 24 Mini Gifts Distributors Ltd.            124 2003-07-02   2005-04-16
## 25      Euro+ Shopping Channel             141 2003-06-06   2005-03-18
## 26           Land of Toys Inc.            131 2003-02-24   2004-12-02
## 27         Baane Mini Imports             121 2003-01-29   2004-11-04
## 28 Mini Gifts Distributors Ltd.            124 2003-03-26   2004-12-27
## 29      Euro+ Shopping Channel             141 2003-01-31   2004-11-01
## 30      Euro+ Shopping Channel             141 2003-06-27   2005-03-25
##    Date_Difference Payment_Amount
## 1              839       46895.48
## 2              784       65071.26
## 3              777      120166.58
## 4              764       46656.94
## 5              752       83598.04
## 6              713       46895.48
## 7              711        3516.04
## 8              710      101244.59
## 9              700       46656.94
```

```
## 10            700      12432.32
## 11            700     116208.40
## 12            698      75020.13
## 13            692      46895.48
## 14            688      30253.75
## 15            686      17928.09
## 16            681      50799.69
## 17            679       7466.32
## 18            676      44400.50
## 19            669      34638.14
## 20            664      14379.90
## 21            659      20564.86
## 22            658      65071.26
## 23            657      37654.09
## 24            654      83598.04
## 25            651     120166.58
## 26            647      50025.35
## 27            645      17876.32
## 28            642      47142.70
## 29            640      36140.38
## 30            637      65071.26
```

Observations in the analysis:

The analysis reveals notable payment trends among customers. Euro+ Shopping Channel consistently exhibits extended date differences, potentially impacting cash flow. Mini Gifts Distributors Ltd. and Reims Collectables also demonstrate significant variations. Strategies for prompt communication, targeted promotions, and credit term adjustments may be considered to optimize payment cycles and enhance financial stability.

Question 7: How can the performance of various product lines be compared? Which products are the most successful, and which ones need improvement or removal?

```sql
-- Performance of various product lines

Select p.productLine,
       sum(quantityInStock) as Total_Inventory,
       sum(quantityOrdered) as Total_sales,
       sum(quantityOrdered*priceEach) as Total_Revenue,
       (sum(quantityOrdered)/sum(quantityInStock))*100 as Sales_to_Inventory_Percentage
 from products as p
 left join productlines as pl
    on p.productLine = pl.productLine
 left join orderdetails as od
```

```
    on p.productCode = od.productCode
    group by p.productLine
    order by Total_Revenue desc
```

```
# Performance of various product lines
```

```
print(Question_7)
```

```
##         productLine Total_Inventory Total_sales Total_Revenue
## 1      Classic Cars         5851766       35582     3853922.5
## 2      Vintage Cars         3439570       22933     1797559.6
## 3       Motorcycles         1915517       12778     1121426.1
## 4  Trucks and Buses         1003828       11001     1024113.6
## 5            Planes         1744036       11872      954637.5
## 6             Ships          732251        8532      663998.3
## 7            Trains          450792        2818      188532.9
##   Sales_to_Inventory_Percentage
## 1                        0.6081
## 2                        0.6667
## 3                        0.6671
## 4                        1.0959
## 5                        0.6807
## 6                        1.1652
## 7                        0.6251
```

Observations in the analysis:

The performance analysis of various product lines indicates notable findings. "Trucks and Buses" and "Ships" stand out with high Sales-to-Inventory percentages, demonstrating effective inventory turnover and strong demand. However, "Planes" and "Classic Cars" show room for improvement, suggesting potential adjustments in marketing or inventory management to enhance their performance.

Question 8: How can the company's credit policies be evaluated? Are there any customers with credit issues that need to be addressed?

```
-- Company's credit policies evaluation

Select c.customerName as Customer_Name,
        c.customerNumber as Customer_Number,
        sum(c.creditLimit) as Credit_Limit,
      sum(p.amount) as Total_payment,
```

```
        (sum(p.amount)-sum(c.creditLimit)) as Credit_Limit_Diff
 from payments as p
 left join customers as c
   on p.customerNumber = c.customerNumber
   Group by c.customerNumber,c.creditLimit
   Having
   sum(p.amount) < sum(c.creditLimit)
   order by Total_payment
   Limit 15
```

```
# Company's credit policies evaluation
```

```
print(Question_8)
```

```
##                           Customer_Name Customer_Number Credit_Limit
## 1                 Boards & Toys Co.             219        22000
## 2           Auto-Moto Classics Inc.             198        69000
## 3                 Atelier graphique             103        63000
## 4              Frau da Collezione             473        69600
## 5                    Royale Belge             381        94000
## 6                  Microscale Inc.             456        79600
## 7        Double Decker Gift Stores, Ltd        489        86600
## 8  Bavarian Collectables Imports, Co.         415        77000
## 9         Cambridge Collectables Co.             173        86800
## 10               Gifts4AllAges.com             362        83800
## 11        Tekni Collectables Inc.             328        86000
## 12        Men 'R' US Retailers, Ltd.            347       115400
## 13        Signal Collectibles Ltd.             487       120600
## 14        Volvo Model Replicas, Co             144       106200
## 15        West Coast Collectables Co.            475       110800
##    Total_payment Credit_Limit_Diff
## 1        7918.60        -14081.40
## 2       21554.26        -47445.74
## 3       22314.36        -40685.64
## 4       25358.32        -44241.68
## 5       29217.18        -64782.82
## 6       29230.43        -50369.57
## 7       29586.15        -57013.85
## 8       31310.09        -45689.91
## 9       32198.69        -54601.31
## 10      33533.47        -50266.53
## 11      38281.51        -47718.49
## 12      41506.19        -73893.81
## 13      42570.37        -78029.63
## 14      43680.65        -62519.35
## 15      43748.72        -67051.28
```

Observations in the analysis:

The evaluation of the company's credit policies reveals concerning credit limit discrepancies for several customers. Notably, "Boards & Toys Co.," "Auto-Moto Classics Inc.," and "Royale Belge" have exceeded their credit limits, indicating potential credit issues that need urgent attention. Addressing these discrepancies promptly and reassessing credit policies may mitigate financial risks and enhance credit management practices.

Task 4 – Formulate suggestions and recommendations for solving the business problem.

SHARE AND ACT

Inventory Optimization: Targeted promotions, pricing adjustments, and improved forecasting for slow-moving products like "1985 Toyota Supra."

Warehouse Efficiency: Regularly review inventory levels in each warehouse, optimizing distribution while retaining operational relevance for timely service.

Price-Sales Relationship: Leverage the positive correlation between buying price and quantity ordered for strategic price adjustments to potentially boost overall sales.

Customer-Centric Strategies: Implement personalized marketing and promotions for top contributing customers like Euro+ Shopping Channel and Mini Gifts Distributors Ltd.

Sales Employee Recognition: Recognize top-performing sales employees like Gerard Hernandez, fostering a competitive and collaborative environment through targeted training and rewards.

Payment Cycle Optimization: Address extended date differences for consistent customers like Euro+ Shopping Channel and Reims Collectables through proactive communication and credit term adjustments.

Product Line Enhancement: Focus on improving sales for product lines like "Planes" and "Classic Cars" through targeted marketing and inventory management adjustments.

Credit Policy Review: Address credit limit discrepancies for customers like "Boards & Toys Co." and "Auto-Moto Classics Inc." by promptly reassessing and adjusting credit policies.

CONCLUSION

In conclusion, the analysis of various aspects of Mint Classics Company's operations provides valuable insights and recommendations for enhancing overall business performance. The company can optimize inventory by implementing targeted promotions and pricing adjustments for slow-moving products, ensuring efficient distribution across all warehouses. The positive correlation between product prices and sales levels suggests strategic pricing adjustments can positively impact sales. Focusing sales efforts on top-contributing customers like Euro+ Shopping Channel and Mini Gifts Distributors Ltd. is crucial, involving personalized marketing and exceptional customer service. Recognizing and rewarding top-performing sales employees, exemplified by Gerard Hernandez, can foster a competitive yet collaborative sales environment. Proactive measures, such as communication and credit term adjustments, are recommended to optimize customer payment cycles. The performance analysis of product lines highlights the need for marketing and inventory management adjustments, especially for "Planes" and "Classic Cars." Lastly, credit policies should be promptly reviewed and adjusted to address credit limit discrepancies and mitigate financial risks. Overall, these recommendations aim to enhance efficiency, customer satisfaction, and profitability for Mint Classics Company.

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# Disconnect using odbc

dbDisconnect(con)

# Gratitude to Google and Coursera for invaluable learning opportunities.
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