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CSCI 3287 – Database Systems

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Homework 5

-- Question 1

SELECT C.CustomerName, C.Gender, S.SalesPersonName, S.City FROM Fact\_ProductSales P

INNER JOIN Dim\_Customer C ON P.CustomerID = C.CustomerID

INNER JOIN Dim\_SalesPerson S ON P.SalesPersonID = S.SalesPersonID

INNER JOIN Dim\_Date D ON P.SalesDateKey = D.DateKey

WHERE D.MONTHNAME = "September" AND D.YEAR = 2015 AND P.SalesPrice > 20 AND P.Quantity > 8;

-- Question 2

SELECT S.StoreName, S.City, Pr.ProductName FROM Fact\_ProductSales P

INNER JOIN Dim\_Store S ON P.StoreID = S.StoreID

INNER JOIN Dim\_Product Pr ON P.ProductID = Pr.ProductKey

INNER JOIN Dim\_Date D ON P.SalesDateKey = D.DateKey

WHERE D.MONTHNAME = "March" AND D.YEAR = 2017 AND P.ProductCost < 50 AND S.City = "Boulder";

-- Question 3

SELECT SalesPersonName, SUM(P.SalesPrice \* P.Quantity) AS `Total Revenue` FROM Fact\_ProductSales P

INNER JOIN Dim\_SalesPerson S ON P.SalesPersonID = S.SalesPersonID

INNER JOIN Dim\_Date D ON P.SalesDateKey = D.DateKey

WHERE D.YEAR = 2017

GROUP BY S.SalesPersonID

ORDER BY `Total Revenue` DESC

LIMIT 2;

-- Question 4

SELECT C.CustomerName, SUM(P.SalesPrice \* P.Quantity) AS `Total Revenue` FROM Fact\_ProductSales P

INNER JOIN Dim\_Customer C ON P.CustomerID = C.CustomerID

INNER JOIN Dim\_Date D ON P.SalesDateKey = D.DateKey

WHERE D.YEAR = 2017

GROUP BY C.CustomerID

ORDER BY `Total Revenue` ASC

LIMIT 1;

-- Question 5

SELECT S.StoreName, SUM(P.SalesPrice) AS `Total Sales Price` FROM Fact\_ProductSales P

INNER JOIN Dim\_Store S ON P.StoreID = S.StoreID

INNER JOIN Dim\_Date D ON P.SalesDateKey = D.DateKey

WHERE D.YEAR > 2010 AND D.YEAR < 2017

GROUP BY S.StoreID

ORDER BY S.StoreName ASC;

-- Question 6

SELECT S.StoreName, Pr.ProductName, SUM((SalesPrice\*Quantity)-(ProductCost\*Quantity)) AS `Total Profits` FROM Fact\_ProductSales P

INNER JOIN Dim\_Store S ON P.StoreID = S.StoreID

INNER JOIN Dim\_Product Pr ON P.ProductID = Pr.ProductKey

INNER JOIN Dim\_Date D ON P.SalesDateKey = D.DateKey

WHERE D.Year = 2010 AND Pr.ProductName LIKE '%Jasmine Rice%'

GROUP BY S.StoreID, Pr.ProductName;

-- Question 7

SELECT SUM(P.SalesPrice \* P.Quantity) AS `Total Revenue`, D.Quarter FROM Fact\_ProductSales P

INNER JOIN Dim\_Date D ON P.SalesDateKey = D.DateKey

INNER JOIN Dim\_Store S ON P.StoreID = S.StoreID

WHERE D.YEAR = 2016 AND S.StoreName = "ValueMart Boulder"

GROUP BY D.QUARTER

ORDER BY D.QUARTER ASC;

-- Question 8

SELECT C.CustomerName, SUM(P.SalesPrice) AS `Total Sales Price` FROM Fact\_ProductSales P

INNER JOIN Dim\_Customer C ON P.CustomerID = C.CustomerID

WHERE C.CustomerName = "Melinda Gates" OR C.CustomerName = "Harrison Ford"

GROUP BY C.CustomerID;

-- Question 9

SELECT S.StoreName, P.SalesPrice, Quantity FROM Fact\_ProductSales P

INNER JOIN Dim\_Store S ON P.StoreID = S.StoreID

INNER JOIN Dim\_Date D ON P.SalesDateKey = D.DateKey

WHERE D.YEAR = 2017 AND D.MONTHNAME = "March" AND D.DAYOFMONTH = 12;

-- Question 10

SELECT S.SalesPersonName, SUM(P.SalesPrice \* P.Quantity) AS `Total Revenue` FROM Fact\_ProductSales P

INNER JOIN Dim\_SalesPerson S ON P.SalesPersonID = S.SalesPersonID

GROUP BY S.SalesPersonID

ORDER BY `Total Revenue` DESC

LIMIT 1;

-- Question 11

-- PLEASE NOTE

-- The instructions were ambiguous on this one on whether or not to show the total profit column

-- I interpreted the instructions to mean just show the product name (organized by highest total profit) but don't show the profit column

-- IF you meant show the profit column, just remove the outer Select statement from the below, and you'll get the top 3 product names and total profits organized by max profit.

SELECT x.ProductName FROM (

SELECT Pr.ProductName, SUM((SalesPrice\*Quantity)-(ProductCost\*Quantity)) AS `Total Profit` FROM Fact\_ProductSales P

INNER JOIN Dim\_Product Pr ON P.ProductID = Pr.ProductKey

GROUP BY P.ProductID

ORDER BY `Total Profit` DESC

LIMIT 3

) as x;

-- Question 12

SELECT D.YEAR, D.MONTHNAME, SUM(P.SalesPrice \* P.Quantity) AS `Total Revenue` FROM Fact\_ProductSales P

INNER JOIN Dim\_Date D ON P.SalesDateKey = D.DateKey

WHERE D.Year = 2017 AND D.MONTH >= 1 AND D.MONTH <= 3

GROUP BY D.MONTHNAME;

-- Question 13

SELECT Pr.ProductName, ROUND(AVG(P.ProductCost),2) AS `Average Product Cost`, ROUND(AVG(P.SalesPrice),2) AS `Average Sales Price` FROM Fact\_ProductSales P

INNER JOIN Dim\_Product Pr ON P.ProductID = Pr.ProductKey

INNER JOIN Dim\_Date D ON P.SalesDateKey = D.DateKey

WHERE D.YEAR = 2017

GROUP BY Pr.ProductName;

-- Question 14

SELECT C.CustomerName, ROUND(AVG(P.SalesPrice),2) AS `Average Sales Price`, ROUND(AVG(P.Quantity),2) AS `Average Quantity` FROM Fact\_ProductSales P

INNER JOIN Dim\_Customer C ON P.CustomerID = C.CustomerID

WHERE C.CustomerName = "Melinda Gates"

GROUP BY C.CustomerName;

-- Question 15

SELECT S.StoreName, ROUND(MAX(P.SalesPrice),2) AS `Maximum Sales Price`, ROUND(MIN(P.SalesPrice),2) AS `Minimum Sales Price` FROM Fact\_ProductSales P

INNER JOIN Dim\_Store S ON P.StoreID = S.StoreID

WHERE S.City = "Boulder"

GROUP BY S.StoreName;