Benjamin Benoit, Cody Higdon, Allen Larmee, and Roby Pile

March 26, 2018

CIS 310-02

A7

Dr. Guan

--1 List the customers from California who bought red mountain bikes in September 2003.  Use order date as date bought.

SELECT DISTINCT C.CUSTOMERID, C.LASTNAME, C.FIRSTNAME, B.MODELTYPE, P.COLORLIST, B.ORDERDATE, B.SALESTATE

FROM CUSTOMER C INNER JOIN CITY CT ON C.CITYID = CT.CITYID INNER JOIN BICYCLE B ON C.CUSTOMERID = B.CUSTOMERID INNER JOIN PAINT P ON B.PAINTID = P.PAINTID

WHERE B.MODELTYPE = 'MOUNTAIN' AND

YEAR(B.ORDERDATE) = 2003 AND

MONTH(B.ORDERDATE) = 9 AND

P.COLORLIST = 'RED' AND

CT.STATE = 'CA'

ORDER BY C.CUSTOMERID

--2 List the employees who sold race bikes shipped to Wisconsin without the help of a retail store in 2001

SELECT DISTINCT E.EMPLOYEEID, E.LASTNAME, B.SALESTATE, B.MODELTYPE, B.STOREID, B.ORDERDATE

FROM EMPLOYEE E INNER JOIN BICYCLE B ON E.EMPLOYEEID = B.EMPLOYEEID

WHERE B.MODELTYPE = 'RACE' AND

YEAR(B.ORDERDATE) = 2001 AND

B.SALESTATE = 'WI' AND

B.STOREID IN (1,2)

--3 List all of the (distinct) rear derailleurs installed on road bikes sold in Florida in 2002.

SELECT DISTINCT CO.COMPONENTID, MN.MANUFACTURERNAME, CO.PRODUCTNUMBER

FROM COMPONENT CO INNER JOIN MANUFACTURER MN ON CO.MANUFACTURERID = MN.MANUFACTURERID INNER JOIN BIKEPARTS BP ON BP.COMPONENTID = CO.COMPONENTID INNER JOIN BICYCLE BI ON BI.SERIALNUMBER = BP.SERIALNUMBER

WHERE CO.CATEGORY = 'REAR DERAILLEUR' AND

BI.MODELTYPE = 'ROAD' AND

BI.SALESTATE = 'FL' AND

YEAR(BI.ORDERDATE) = 2002

--4 Who bought the largest (frame size) full suspension mountain bike sold in Georgia in 2004?

SELECT C.CUSTOMERID, C.LASTNAME, C.FIRSTNAME, B.MODELTYPE, B.SALESTATE, B.FRAMESIZE, B.ORDERDATE

FROM CUSTOMER C INNER JOIN BICYCLE B ON C.CUSTOMERID = B.CUSTOMERID INNER JOIN MODELTYPE M ON M.MODELTYPE = B.MODELTYPE

WHERE B.MODELTYPE = 'MOUNTAIN FULL' AND B.SALESTATE = 'GA' AND YEAR(B.ORDERDATE) = 2004 AND B.FRAMESIZE =

(SELECT MAX(FRAMESIZE)

FROM BICYCLE

WHERE MODELTYPE = 'MOUNTAIN FULL')

--5 Which manufacturer gave us the largest discount on an order in 2003?

SELECT M.MANUFACTURERID, M.MANUFACTURERNAME

FROM MANUFACTURER M INNER JOIN PURCHASEORDER P ON M.MANUFACTURERID = P.MANUFACTURERID

WHERE P.DISCOUNT =

(SELECT MAX(DISCOUNT)

FROM PURCHASEORDER

WHERE YEAR(ORDERDATE) = 2003)

--6 What is the most expensive road bike component we stock that has a quantity on hand greater than 200 units?

SELECT C.COMPONENTID, M.MANUFACTURERNAME, C.PRODUCTNUMBER, C.ROAD, C.CATEGORY, C.LISTPRICE, C.QUANTITYONHAND

FROM COMPONENT C INNER JOIN MANUFACTURER M ON C.MANUFACTURERID = M.MANUFACTURERID

WHERE C.LISTPRICE = (

SELECT MAX(LISTPRICE)

FROM COMPONENT

WHERE QUANTITYONHAND > 200 AND

ROAD = 'ROAD') AND

QUANTITYONHAND > 200 AND

ROAD = 'ROAD'

--7 Which inventory item represents the most money sitting on the shelf—based on estimated cost?

SELECT C.COMPONENTID, M.MANUFACTURERNAME, C.PRODUCTNUMBER, C.CATEGORY, C.YEAR, (C.ESTIMATEDCOST \* C.QUANTITYONHAND) AS VALUE

FROM COMPONENT C INNER JOIN MANUFACTURER M ON C.MANUFACTURERID = M.MANUFACTURERID

WHERE C.ESTIMATEDCOST \* C.QUANTITYONHAND IN (

SELECT MAX(ESTIMATEDCOST\*QUANTITYONHAND)

FROM COMPONENT)

--8 What is the greatest number of components ever installed in one day by one employee?

Select B.EmployeeID, E.LastName, B.DateInstalled, Count(\*) as CountOfComponent

From Component C INNER JOIN Manufacturer M on C.ManufacturerID = M.ManufacturerID

INNER JOIN BikeParts B on B.ComponentID = C.ComponentID

INNER JOIN Employee E on B.EmployeeID = E.EmployeeID

Where B.EmployeeID = (select top 1 EmployeeID

from BikeParts

where DateInstalled IS NOT NULL

group by EmployeeID, DateInstalled

order by Count(\*) desc ) AND

B.DateInstalled = (select top 1 DateInstalled

from BikeParts

where DateInstalled IS NOT NULL

group by EmployeeID, DateInstalled

order by Count(\*) desc

)

Group By B.EmployeeID, E.LastName, B.DateInstalled

--9 What was the most popular letter style on race bikes in 2003?

Select LetterStyleID, Count(SerialNumber) as CountOfSerialNumber

From Bicycle

Where Year(OrderDate) = 2003 AND ModelType = 'Race'

Group by LetterStyleID

Having Count(\*) = (select top 1 count(\*)

from Bicycle

where Year(OrderDate) = 2003 AND ModelType = 'Race'

group by LetterStyleID

order by count(\*) desc

)

--10 Which customer spent the most money with us and how many bicycles did that person buy in 2002?

Select C.CustomerID, C.LastName, C.FirstName,

(

Select Count(\*)

from Customer C INNER JOIN Bicycle B on C.CustomerID = B.CustomerID

where year(B.OrderDate) = 2002

group by C.CustomerID, C.LastName, C.FirstName

having sum(B.SalePrice + B.SalesTax) = (select top 1 SUM(SalePrice + SalesTax)

from Bicycle

group by CustomerID

order by Sum(SalePrice + SalesTax) desc

)

) as [Number of Bikes], SUM(B.SalePrice + B.SalesTax) as [Amount Spent]

From Customer C INNER JOIN Bicycle B on C.CustomerID = B.CustomerID

Group by C.CustomerID, C.LastName, C.FirstName

Having SUM(B.SalePrice + B.SalesTax) = (select top 1 SUM(SalePrice + SalesTax)

from Bicycle

group by CustomerID

order by Sum(SalePrice + SalesTax) desc

)

--11 Have the sales of mountain bikes (full suspension or hard tail) increased or decreased from 2000 to 2004 (by count not by value)?

Select Year(OrderDate) as [Sales Year], Count(SerialNumber) as CountOfSerialNumber

From Bicycle

Where Year(OrderDate) BETWEEN 2000 AND 2004

AND(ModelType = 'Mountain Full' OR ModelType LIKE '%mountain%')

Group by Year(OrderDate)

Order by Year(OrderDate) desc

--12 Which component did the company spend the most money on in 2003?

Select C.ComponentID, M.ManufacturerName, C.ProductNumber, C.Category, Sum(P.PricePaid) as Value

From Manufacturer M INNER JOIN Component C on M.ManufacturerID = C.ManufacturerID

INNER JOIN PurchaseItem P on C.ComponentID = P.ComponentID

INNER JOIN PurchaseOrder PO on P.PurchaseID = PO.PurchaseID

Where Year(PO.OrderDate) = 2003

Group by C.ComponentID, M.ManufacturerName, C.ProductNumber, C.Category

Having Sum(P.PricePaid) = (select top 1 Sum(P.PricePaid)

from Manufacturer M INNER JOIN Component C on M.ManufacturerID = C.ManufacturerID

INNER JOIN PurchaseItem P on C.ComponentID = P.ComponentID

INNER JOIN PurchaseOrder PO on P.PurchaseID = PO.PurchaseID

where year(PO.OrderDate) = 2003

group by C.ComponentID, M.ManufacturerName, C.ProductNumber, C.Category

order by Sum(P.PricePaid) desc)

-- 13 Which employee painted the most red race bikes in May 2003?

Select E.EmployeeID, E.LastName, Count(\*) as [Number Painted]

From Employee E INNER JOIN Bicycle B on E.EmployeeID = B.Painter

INNER JOIN Paint P on B.PaintID = P.PaintID

Where Year(B.OrderDate) = 2003 AND

Month(B.OrderDate) = 5 AND

P.ColorList = 'Red' AND

B.ModelType = 'Race'

Group by E.EmployeeID, E.LastName

Having Count(\*) = (select top 1 count(\*)

from Employee E INNER JOIN Bicycle B on E.EmployeeID = B.Painter

INNER JOIN Paint P on B.PaintID = P.PaintID

Where Year(B.OrderDate) = 2003 AND

Month(B.OrderDate) = 5 AND

P.ColorList = 'Red' AND

B.ModelType = 'Race'

group by E.EmployeeID, E.LastName

Order by count(\*) desc

)

--14 Which California bike shop helped sell the most bikes (by value) in 2003?

SELECT TOP 1 R.STOREID, R.STORENAME, C.CITY, SUM(B.SALEPRICE) AS SUMOFSALEPRICE

FROM BIKE..BICYCLE B INNER JOIN BIKE..RETAILSTORE R ON B.STOREID = R.STOREID

INNER JOIN BIKE..CITY C ON R.CITYID = C.CITYID

WHERE B.SALESTATE = 'CA' AND

YEAR(B.ORDERDATE) = 2003 AND

B.SALEPRICE > 0

GROUP BY R.STOREID, R.STORENAME, C.CITY

ORDER BY SUMOFSALEPRICE DESC

--15 What is the total weight of the components on bicycle 11356?

SELECT SUM(C.WEIGHT) AS TOTALWEIGHT

FROM BIKE..COMPONENT C INNER JOIN BIKE..BIKEPARTS BP ON C.COMPONENTID = BP.COMPONENTID

WHERE BP.SERIALNUMBER = 11356

--16 What is the total list price of all items in the 2002 Campy Record groupo?

SELECT G.GROUPNAME, SUM(C.LISTPRICE) AS SUMOFLISTPRICE

FROM BIKE..GROUPO G INNER JOIN BIKE..GROUPCOMPONENTS GC ON G.COMPONENTGROUPID = GC.GROUPID

INNER JOIN BIKE..COMPONENT C ON GC.COMPONENTID = C.COMPONENTID

WHERE G.GROUPNAME = 'CAMPY RECORD 2002'

GROUP BY G.GROUPNAME

--17 In 2003, were more race bikes built from carbon or titanium (based on the down tube)?

SELECT TOP 1 TM.MATERIAL, COUNT(B.SERIALNUMBER) AS COUNTOFSERIALNUMBER

FROM BIKE..BIKETUBES BT INNER JOIN BIKE..BICYCLE B ON BT.SERIALNUMBER = B.SERIALNUMBER

INNER JOIN BIKE..BICYCLETUBEUSAGE BTU ON B.SERIALNUMBER = BTU.SERIALNUMBER

INNER JOIN BIKE..TUBEMATERIAL TM ON BTU.TUBEID = TM.TUBEID

WHERE B.MODELTYPE = 'RACE' AND

TM.MATERIAL = 'TITANIUM' OR

TM.MATERIAL = 'CARBON FIBER' AND

BT.TUBENAME = 'DOWN'

GROUP BY TM.MATERIAL

ORDER BY COUNTOFSERIALNUMBER DESC

--18 What is the average price paid for the 2001 Shimano XTR rear derailleurs?

SELECT AVG(P.PRICEPAID) AS AVGOFPRICEPAID

FROM BIKE..COMPONENT C INNER JOIN BIKE..PURCHASEITEM P ON C.COMPONENTID = P.COMPONENTID

INNER JOIN BIKE..GROUPCOMPONENTS GC ON C.COMPONENTID = GC.COMPONENTID

INNER JOIN BIKE..GROUPO G ON GC.GROUPID = G.COMPONENTGROUPID

WHERE C.CATEGORY = 'REAR DERAILLEUR' AND

G.GROUPNAME = 'SHIMANO XTR 2001'

--19 What is the average top tube length for a 54 cm (frame size) road bike built in 1999? Use Order Date.

SELECT AVG(TOPTUBE) AS AVGOFTOPTUBE

FROM BIKE..BICYCLE

WHERE FRAMESIZE = 54 AND

MODELTYPE = 'ROAD' AND

YEAR(ORDERDATE) = 1999

--20 On average, which costs (list price) more: road tires or mountain bike tires?

SELECT TOP 1 ROAD, AVG(LISTPRICE) AS AVGOFLISTPRICE

FROM BIKE..COMPONENT

WHERE (ROAD = 'ROAD' OR

ROAD = 'MTB') AND

CATEGORY LIKE '%TIRE%'

GROUP BY ROAD

ORDER BY AVGOFLISTPRICE DESC

--21 In May 2003, which employees sold road bikes that they also painted?

SELECT DISTINCT E.EMPLOYEEID, E.LASTNAME

FROM BIKE..EMPLOYEE E INNER JOIN BIKE..BICYCLE B ON E.EMPLOYEEID = B.EMPLOYEEID

WHERE YEAR(B.ORDERDATE) = 2003 AND

MONTH(B.ORDERDATE) = 5 AND

B.PAINTER = E.EMPLOYEEID AND

B.MODELTYPE = 'ROAD'

--22 In 2002, was the Old English letter style more popular with some paint jobs?

SELECT P.PAINTID, P.COLORNAME, COUNT(B.SERIALNUMBER) AS [NUMBER OF BIKES PAINTED]

FROM BIKE..BICYCLE B INNER JOIN BIKE..PAINT P ON B.PAINTID = P.PAINTID

WHERE YEAR(B.ORDERDATE) = 2002 AND

B.LETTERSTYLEID = 'ENGLISH'

GROUP BY P.PAINTID, P.COLORNAME

ORDER BY [NUMBER OF BIKES PAINTED] DESC

--23 Which race bikes in 2003 sold for more than the average price of race bikes in 2002?

SELECT SERIALNUMBER, MODELTYPE, ORDERDATE, SALEPRICE

FROM BIKE..BICYCLE

WHERE MODELTYPE = 'RACE' AND

YEAR(ORDERDATE) = 2003 AND

SALEPRICE > (SELECT AVG(SALEPRICE)

FROM BICYCLE

WHERE MODELTYPE = 'RACE' AND

YEAR(ORDERDATE) = 2002

)

--24 Which component that had no sales (installations) in 2004 has the highest inventory value (cost basis)? Inventory value is defined as [EstimatedCost]\*[QuantityOnHand].

SELECT TOP 1 M.MANUFACTURERNAME, C.PRODUCTNUMBER, C.CATEGORY, SUM(C.ESTIMATEDCOST\*C.QUANTITYONHAND) AS VALUE, C.COMPONENTID

FROM BIKE..MANUFACTURER M INNER JOIN BIKE..COMPONENT C ON M.MANUFACTURERID = C.MANUFACTURERID

INNER JOIN BIKE..BIKEPARTS BP ON C.COMPONENTID = BP.COMPONENTID

WHERE YEAR(BP.DATEINSTALLED) <> 2004

GROUP BY M.MANUFACTURERNAME, C.PRODUCTNUMBER, C.CATEGORY, C.COMPONENTID

ORDER BY VALUE DESC

--25 Create a vendor contacts list of all manufacturers and retail stores in California. Include only the columns for VendorName and Phone. The retail stores should only include stores that participated in the sale of at least one bicycle in 2004

SELECT R.STORENAME AS VENDORNAME, R.PHONE

FROM BIKE..RETAILSTORE R INNER JOIN BIKE..BICYCLE B ON B.STOREID = R.STOREID

INNER JOIN BIKE..CITY C ON C.CITYID = R.CITYID

WHERE YEAR(B.ORDERDATE) = 2004 AND

C.STATE = 'CA'

GROUP BY R.STORENAME, R.PHONE

UNION

SELECT M.MANUFACTURERNAME, M.PHONE

FROM BIKE..MANUFACTURER M INNER JOIN BIKE..CITY C ON M.CITYID = C.CITYID

WHERE C.STATE = 'CA'

--26 List all of the employees who report to Venetiaan.

SELECT EREPORT.LASTNAME, E.EMPLOYEEID, E.LASTNAME, E.FIRSTNAME, E.TITLE

FROM BIKE..EMPLOYEE E INNER JOIN BIKE..EMPLOYEE EREPORT ON E.CURRENTMANAGER = EREPORT.EMPLOYEEID

WHERE EREPORT.LASTNAME = 'VENETIAAN'

--27 List the components where the company purchased at least 25 percent more units than it used through June 30, 2000.

SELECT C.COMPONENTID, M.MANUFACTURERNAME, C.PRODUCTNUMBER, C.CATEGORY, P.QUANTITYRECEIVED AS TOTALRECEIVED, COUNT(BP.DATEINSTALLED) AS TOTALUSED,

((COUNT(BP.DATEINSTALLED)-P.QUANTITYRECEIVED)\*(C.LISTPRICE-P.PRICEPAID)) AS NETGAIN, ((COUNT(BP.DATEINSTALLED)-P.QUANTITYRECEIVED)/(C.LISTPRICE-P.PRICEPAID)) AS NETPCT, C.LISTPRICE

FROM BIKE..MANUFACTURER M INNER JOIN BIKE..COMPONENT C ON M.MANUFACTURERID = C.MANUFACTURERID

INNER JOIN BIKE..PURCHASEITEM P ON C.COMPONENTID = P.COMPONENTID

INNER JOIN BIKE..BIKEPARTS BP ON C.COMPONENTID = BP.COMPONENTID

INNER JOIN BIKE..PURCHASEORDER PO ON P.PURCHASEID = PO.PURCHASEID

WHERE PO.RECEIVEDATE <= '2000-06-30 23:59:59'

GROUP BY C.COMPONENTID, M.MANUFACTURERNAME, C.PRODUCTNUMBER, C.CATEGORY, C.LISTPRICE, P.QUANTITYRECEIVED, P.PRICEPAID

HAVING P.QUANTITYRECEIVED >= 1.25\*COUNT(BP.DATEINSTALLED)

--28 In which years did the average build time for the year exceed the overall average build time for all years?  The build time is the difference between order date and ship date.

SELECT YEAR(ORDERDATE) AS YEAR, AVG(DATEDIFF(DAY, ORDERDATE, SHIPDATE)) AS BUILDTIME

FROM BIKE..BICYCLE

GROUP BY YEAR(ORDERDATE)

HAVING AVG(DATEDIFF(DAY, ORDERDATE, SHIPDATE)) > (SELECT AVG(DATEDIFF(DAY, ORDERDATE, SHIPDATE))

FROM BICYCLE)