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ASSIGNMENT 7

CIS 310-01

DUE 3/16/2011

--1. List the products with a list price greater than the average list price of all products.

USE CIS310A7

SELECT ITEMID, DESCRIPTION, LISTPRICE

FROM MERCHANDISE

WHERE LISTPRICE >

(

SELECT AVG(LISTPRICE)

FROM MERCHANDISE

)

--2. On average, which sold in less time: male cats or female cats?

--The difference in days between order date and sale date determines what gender sold in less time. List the average time it takes to sell each gender.

SELECT A.GENDER, AVG(DATEDIFF(DD,AO.ORDERDATE,S.SALEDATE)) AS [DELAY IN DAYS]

FROM ANIMALORDER AO INNER JOIN ANIMALORDERITEM AOI ON AO.ORDERID = AOI.ORDERID

INNER JOIN ANIMAL A ON AOI.ANIMALID = A.ANIMALID

INNER JOIN SALEANIMAL SA ON A.ANIMALID = SA.ANIMALID

INNER JOIN SALE S ON SA.SALEID = S.SALEID

WHERE A.CATEGORY = 'CAT'

GROUP BY A.GENDER

--3. List the cats that took longer than average cats to sell.

SELECT A.ANIMALID, A.NAME, DATEDIFF(DD,AO.ORDERDATE,S.SALEDATE) AS [DELAY]

FROM ANIMALORDER AO INNER JOIN ANIMALORDERITEM AOI ON AO.ORDERID = AOI.ORDERID

INNER JOIN ANIMAL A ON AOI.ANIMALID = A.ANIMALID

INNER JOIN SALEANIMAL SA ON A.ANIMALID = SA.ANIMALID

INNER JOIN SALE S ON SA.SALEID = S.SALEID

WHERE CATEGORY = 'CAT' AND (DATEDIFF(DD,AO.ORDERDATE,S.SALEDATE)) >

(

SELECT AVG(DATEDIFF(DD,AO.ORDERDATE,S.SALEDATE))

FROM ANIMALORDER AO INNER JOIN ANIMALORDERITEM AOI ON AO.ORDERID = AOI.ORDERID

INNER JOIN ANIMAL A ON AOI.ANIMALID = A.ANIMALID

INNER JOIN SALEANIMAL SA ON A.ANIMALID = SA.ANIMALID

INNER JOIN SALE S ON SA.SALEID = S.SALEID

WHERE A.CATEGORY = 'CAT'

)

ORDER BY A.ANIMALID

--4. Which merchandise items have an average sale price more than 50 percent higher than their average purchase cost?

USE CIS31007

CREATE VIEW ITEMDETAIL AS

SELECT M.ITEMID, M.DESCRIPTION,

ROUND(AVG(OI.COST),2) AS [AvgOfCost],

ROUND(AVG(SI.SALEPRICE),2) AS [AvgOfSalePrice]

FROM CIS310A7..ORDERITEM OI INNER JOIN CIS310A7..MERCHANDISE M ON OI.ITEMID = M.ITEMID

INNER JOIN CIS310A7..SALEITEM SI ON M.ITEMID = SI.ITEMID

GROUP BY M.ITEMID, M.DESCRIPTION

SELECT \*

FROM ITEMDETAIL

WHERE AVGOFSALEPRICE > (AVGOFCOST \*1.5)

--5. List the employees and their total merchandise sales expressed as a percentage of total merchandise sales for all employees.

USE CIS310A7

SELECT E.EMPLOYEEID, E.LASTNAME, SUM(SI.SALEPRICE) AS [TOTALSALES],

((SUM(SI.SALEPRICE) / (SELECT SUM(SALEPRICE)FROM SALEITEM)) \*100) AS [PCTOFSALES]

FROM EMPLOYEE E INNER JOIN SALE S ON E.EMPLOYEEID = S.EMPLOYEEID

INNER JOIN SALEITEM SI ON S.SALEID = SI.SALEID

GROUP BY E.EMPLOYEEID, E.LASTNAME

--6. On average, which supplier charges the highest shipping cost as a percent of the merchandise order total?

USE CIS31007

CREATE VIEW PO\_INFORMATION AS

SELECT MO.PONUMBER, SU.SUPPLIERID, SU.NAME, MO.SHIPPINGCOST / SUM(OI.COST) AS [PCTSHIPOFCOST]

FROM CIS310A7..SUPPLIER SU INNER JOIN CIS310A7..MERCHANDISEORDER MO ON SU.SUPPLIERID = MO.SUPPLIERID

INNER JOIN CIS310A7..ORDERITEM OI ON MO.PONUMBER = OI.PONUMBER

GROUP BY MO.PONUMBER, SU.SUPPLIERID, SU.NAME, MO.SHIPPINGCOST

CREATE VIEW AVGSHIPCOSTPCT AS

SELECT SUPPLIERID, NAME, AVG(PCTSHIPOFCOST) \*100 AS [AVGORDERCOST]

FROM PO\_INFORMATION

GROUP BY SUPPLIERID, NAME

SELECT \*

FROM AVGSHIPCOSTPCT

WHERE AVGORDERCOST =

(SELECT MAX(AVGORDERCOST)

FROM AVGSHIPCOSTPCT)

--7. Which customer has given us the most total money for animals and merchandise?

USE CIS31007

CREATE VIEW ANIMALSALESTOTALS AS

SELECT C.CUSTOMERID, SUM(SA.SALEPRICE) AS [TOTALANIMALSALES]

FROM CIS310A7..CUSTOMER C INNER JOIN CIS310A7..SALE S ON C.CUSTOMERID = S.CUSTOMERID

INNER JOIN CIS310A7..SALEANIMAL SA ON S.SALEID = SA.SALEID

GROUP BY C.CUSTOMERID

CREATE VIEW MERCHSALESTOTALS AS

SELECT C.CUSTOMERID, SUM(SI.SALEPRICE) AS [TOTALMERCHSALES]

FROM CIS310A7..CUSTOMER C INNER JOIN CIS310A7..SALE S ON C.CUSTOMERID = S.CUSTOMERID

INNER JOIN CIS310A7..SALEITEM SI ON S.SALEID = SI.SALEID

GROUP BY C.CUSTOMERID

CREATE VIEW CUSTSALESTOTALS AS

SELECT C.CUSTOMERID, C.LASTNAME, C.FIRSTNAME, MST.TOTALMERCHSALES, AST.TOTALANIMALSALES,

SUM(AST.TOTALANIMALSALES + MST.TOTALMERCHSALES) AS [GRANDTOTAL]

FROM CIS310A7..CUSTOMER C INNER JOIN ANIMALSALESTOTALS AST ON C.CUSTOMERID = AST.CUSTOMERID

INNER JOIN MERCHSALESTOTALS MST ON AST.CUSTOMERID = MST.CUSTOMERID

GROUP BY C.CUSTOMERID,C.LASTNAME,C.FIRSTNAME, MST.TOTALMERCHSALES, AST.TOTALANIMALSALES

SELECT \*

FROM CUSTSALESTOTALS

WHERE GRANDTOTAL = (SELECT MAX(GRANDTOTAL)

FROM CUSTSALESTOTALS)

--8. Which customers who bought more than $100 in merchandise in May also spent more than $50 on merchandise in October?

USE CIS310A7

SELECT C.CUSTOMERID, C.LASTNAME, C.FIRSTNAME, SUM(SI.SALEPRICE) AS [MAYTOTAL]

FROM CUSTOMER C INNER JOIN SALE S ON C.CUSTOMERID = S.CUSTOMERID

INNER JOIN SALEITEM SI ON S.SALEID = SI.SALEID

WHERE MONTH(S.SALEDATE) = 5 AND

C.CUSTOMERID IN

(SELECT C.CUSTOMERID

FROM CUSTOMER C INNER JOIN SALE S ON C.CUSTOMERID = S.CUSTOMERID

INNER JOIN SALEITEM SI ON S.SALEID = SI.SALEID

WHERE MONTH(S.SALEDATE) = 10

GROUP BY C.CUSTOMERID

HAVING SUM(SI.SALEPRICE) > 50)

GROUP BY C.CUSTOMERID, C.LASTNAME, C.FIRSTNAME

HAVING SUM(SI.SALEPRICE) > 100

--9. List the customers who bought dogs in the first quarter and also bought dog food in the fourth quarter.

USE CIS310A7

SELECT C.CUSTOMERID, C.LASTNAME, C.FIRSTNAME, S.SALEDATE, A.CATEGORY

FROM ANIMAL A INNER JOIN SALEANIMAL SA ON A.ANIMALID = SA.ANIMALID

INNER JOIN SALE S ON SA.SALEID = S.SALEID

INNER JOIN CUSTOMER C ON S.CUSTOMERID = C.CUSTOMERID

INNER JOIN SALEITEM SI ON S.SALEID = SI.SALEID

INNER JOIN MERCHANDISE M ON SI.ITEMID = M.ITEMID

WHERE A.CATEGORY = 'DOG'

AND MONTH(S.SALEDATE) BETWEEN 1 AND 3

AND C.CUSTOMERID IN

(SELECT C.CUSTOMERID

FROM ANIMAL A INNER JOIN SALEANIMAL SA ON A.ANIMALID = SA.ANIMALID

INNER JOIN SALE S ON SA.SALEID = S.SALEID

INNER JOIN CUSTOMER C ON S.CUSTOMERID = C.CUSTOMERID

INNER JOIN SALEITEM SI ON S.SALEID = SI.SALEID

INNER JOIN MERCHANDISE M ON SI.ITEMID = M.ITEMID

WHERE M.DESCRIPTION LIKE 'DOG FOOD%' AND (MONTH(S.SALEDATE) BETWEEN 10 AND 12))

GROUP BY C.CUSTOMERID, C.LASTNAME, C.FIRSTNAME, S.SALEDATE, A.CATEGORY

ORDER BY S.SALEDATE

--10. What was the net change in quantity on hand for premium canned dog food between January 1 and July 1?

--Could not determine any other way to specify Jan. 1 - July 1 without specifying a specific year.

USE CIS31007

CREATE VIEW PREMIUMDOGFOODPURCH AS

SELECT SUM(OI.QUANTITY) AS [QUANTITYPURCHASED], M.DESCRIPTION, M.ITEMID

FROM CIS310A7..MERCHANDISEORDER MO INNER JOIN CIS310A7..ORDERITEM OI ON MO.PONUMBER = OI.PONUMBER

INNER JOIN CIS310A7..MERCHANDISE M ON OI.ITEMID = M.ITEMID

WHERE MO.RECEIVEDATE BETWEEN '1/1/2004' AND '7/1/2004'

AND M.DESCRIPTION LIKE 'DOG FOOD%PREMIUM'

GROUP BY M.DESCRIPTION, M.ITEMID

CREATE VIEW PREMIUMDOGFOODSOLD AS

SELECT SUM(SI.QUANTITY) AS [QUANTITYSOLD], M.DESCRIPTION, M.ITEMID

FROM CIS310A7..MERCHANDISE M INNER JOIN CIS310A7..SALEITEM SI ON M.ITEMID = SI.ITEMID

INNER JOIN CIS310A7..SALE S ON SI.SALEID = S.SALEID

WHERE S.SALEDATE BETWEEN '1/1/2004' AND '7/1/2004'

AND M.DESCRIPTION LIKE 'DOG FOOD%PREMIUM'

GROUP BY M.DESCRIPTION, M.ITEMID

SELECT DFP.DESCRIPTION, DFP.ITEMID, DFP.QUANTITYPURCHASED, DFS.QUANTITYSOLD,

(SUM(DFP.QUANTITYPURCHASED) - SUM(DFS.QUANTITYSOLD)) AS [NETINCREASE]

FROM PREMIUMDOGFOODPURCH DFP FULL OUTER JOIN PREMIUMDOGFOODSOLD DFS ON DFP.DESCRIPTION = DFS.DESCRIPTION

GROUP BY DFP.DESCRIPTION, DFP.ITEMID, DFP.QUANTITYPURCHASED, DFS.QUANTITYSOLD

--11. Which merchandise items with a list price of more than $50 hand no sales July?

USE CIS310A7

SELECT M.ITEMID, M.DESCRIPTION, M.LISTPRICE

FROM MERCHANDISE M INNER JOIN SALEITEM SI ON M.ITEMID = SI.ITEMID

INNER JOIN SALE S ON SI.SALEID = S.SALEID

WHERE M.LISTPRICE > 50 AND MONTH(S.SALEDATE) <> 7

GROUP BY M.ITEMID, M.DESCRIPTION, M.LISTPRICE

--12. Which merchandise items with more than 100 units on hand have not been ordered in 2004? Use an outer join to answer the question.

USE CIS310A7

SELECT M.ITEMID AS [Merchandise.ItemId], M.DESCRIPTION, M.QUANTITYONHAND, OI.ITEMID AS [OrderItem.ItemId]

FROM MERCHANDISE M FULL OUTER JOIN ORDERITEM OI ON M.ITEMID = OI.ITEMID

FULL OUTER JOIN MERCHANDISEORDER MO ON OI.PONUMBER = MO.PONUMBER

WHERE M.QUANTITYONHAND > 100 AND

(YEAR(MO.ORDERDATE) <> 2004 OR YEAR(MO.ORDERDATE) IS NULL)

--13. Which merchandise items with more than 100 units on hand have not been ordered in 2004? Use a subquery to answer the question.

SELECT M.ITEMID, M.DESCRIPTION, M.QUANTITYONHAND

FROM MERCHANDISE M

WHERE M.ITEMID IN (SELECT M.ITEMID

FROM MERCHANDISE M INNER JOIN ORDERITEM OI ON M.ITEMID = OI.ITEMID

INNER JOIN MERCHANDISEORDER MO ON OI.PONUMBER = MO.PONUMBER

WHERE M.QUANTITYONHAND > 100 AND (YEAR(MO.ORDERDATE) <> 2004 OR YEAR(MO.ORDERDATE) IS NULL)

--14. Which cat products with a quantity on hand greater than 500 have not been sold in the month of July?

USE CIS310A7

SELECT M.ITEMID, M.DESCRIPTION, M.QUANTITYONHAND

FROM MERCHANDISE M INNER JOIN SALEITEM SI ON M.ITEMID = SI.ITEMID

INNER JOIN SALE S ON SI.SALEID = S.SALEID

WHERE M.QUANTITYONHAND > 500 AND

MONTH(S.SALEDATE) <> 7

GROUP BY M.ITEMID, M.DESCRIPTION, M.QUANTITYONHAND

--15. Which dog breeds have never been sold at the pet store? Use an outer join to answer the question.

USE CIS31007

CREATE VIEW DOGBREEDSSOLD AS

SELECT A.BREED

FROM CIS310A7..ANIMAL A RIGHT JOIN CIS310A7..SALEANIMAL SA ON A.ANIMALID = SA.ANIMALID

WHERE A.CATEGORY = 'DOG'

GROUP BY A.BREED

SELECT B.BREED

FROM CIS310A7..BREED B LEFT JOIN DOGBREEDSSOLD DBS ON B.BREED = DBS.BREED

WHERE B.CATEGORY = 'DOG' AND B.BREED NOT IN

(SELECT \*

FROM DOGBREEDSSOLD)

--16. Which dog breeds have never been sold at the pet store? Use a subquery to answer the question.

USE CIS310A7

SELECT BREED

FROM BREED

WHERE CATEGORY = 'DOG' AND

BREED NOT IN

(SELECT A.BREED

FROM ANIMAL A INNER JOIN SALEANIMAL SA ON A.ANIMALID = SA.ANIMALID

WHERE A.CATEGORY = 'DOG'

GROUP BY A.BREED)

--17. List the employees who report to Gibson.

USE CIS310A7

SELECT MANAGER.LASTNAME AS [MANAGERLASTNAME], EE.EMPLOYEEID, EE.LASTNAME AS [EMPLOYEELASTNAME], EE.FIRSTNAME, EE.TITLE

FROM EMPLOYEE EE INNER JOIN EMPLOYEE MANAGER ON EE.MANAGERID = MANAGER.EMPLOYEEID

WHERE MANAGER.LASTNAME = 'GIBSON'

--18. Save a query to answer Exercise 7: total amount of money spent by each customer.

-- Create the table shown to categorize customers based on sales.

-- Write a query that lists each customer from the first query and displays the proper label. May use views.

USE CIS31007

CREATE TABLE CUSTCATEGORY

(

CATEGORY VARCHAR(10),

LOW INT NOT NULL,

HIGH INT NOT NULL

)

INSERT INTO CUSTCATEGORY (CATEGORY, LOW, HIGH)

VALUES ('Weak', 0, 200)

INSERT INTO CUSTCATEGORY (CATEGORY, LOW, HIGH)

VALUES ('Good', 200, 800)

INSERT INTO CUSTCATEGORY (CATEGORY, LOW, HIGH)

VALUES ('Best', 800, 10000)

SELECT CST.CUSTOMERID, CST.LASTNAME, CST.FIRSTNAME, CST.GRANDTOTAL, CC.CATEGORY

FROM CUSTSALESTOTALS CST INNER JOIN CUSTCATEGORY CC ON CST.GRANDTOTAL >= CC.LOW AND CST.GRANDTOTAL < CC.HIGH

GROUP BY CST.CUSTOMERID, CST.LASTNAME, CST.FIRSTNAME, CST.GRANDTOTAL, CC.CATEGORY

ORDER BY CC.CATEGORY DESC

--19. List all suppliers (animals and merchandise) who sold us items in June. Identify whether they sold use animals or merchandise.

USE CIS310A7

SELECT S.SUPPLIERID, S.NAME, AO.ORDERID, 'ANIMAL' AS [ITEM PURCHASED]

FROM SUPPLIER S INNER JOIN ANIMALORDER AO ON S.SUPPLIERID = AO.SUPPLIERID

WHERE MONTH(AO.ORDERDATE) = 6

UNION

SELECT S.SUPPLIERID, S.NAME, MO.PONUMBER, 'MERCH' AS [ITEM PURCHASED]

FROM SUPPLIER S INNER JOIN MERCHANDISEORDER MO ON S.SUPPLIERID = MO.SUPPLIERID

WHERE MONTH(MO.ORDERDATE) = 6

--20. List the states for which our customers have spent more than seven times as much money on animals than on merchandise (in total).

USE CIS31007

SELECT CY.STATE, SUM(CST.TOTALANIMALSALES) AS [ANIMALSALES], SUM(CST.TOTALMERCHSALES) AS [MERCHSALES]

FROM CUSTSALESTOTALS CST INNER JOIN CIS310A7..CUSTOMER C ON CST.CUSTOMERID = C.CUSTOMERID

INNER JOIN CIS310A7..CITY CY ON C.CITYID = CY.CITYID

GROUP BY CY.STATE

HAVING SUM(CST.TOTALANIMALSALES) > (7 \* SUM(CST.TOTALMERCHSALES))

--21. Write a query to create the table shown in Exercise 18.

CREATE TABLE CUSTCATEGORY

(

CATEGORY VARCHAR(10),

LOW INT NOT NULL,

HIGH INT NOT NULL

)

SELECT \*

FROM CUSTCATEGORY

--22. Write a query to insert the first row of data for the table in Exercise 18.

INSERT INTO CUSTCATEGORY (CATEGORY, LOW, HIGH)

VALUES ('Weak', 0, 200)

--23. Write a query to change the High value to 400 in the first row of the table in Exercise 18.

USE CIS31007

UPDATE CUSTCATEGORY

SET HIGH = 400

WHERE CATEGORY = 'Weak'

--24. Create a query to delete the first row of the table in Exercise 18.

DELETE FROM CUSTCATEGORY

WHERE CATEGORY = 'Weak'

--25. Create a copy of the Employee table structure. Use a delete query to remove all data from the copy.Write a query to copy from the original employee table into the new one.

USE CIS31007

SELECT \*

INTO EMPLOYEE\_COPY

FROM CIS310A7..EMPLOYEE

DELETE FROM EMPLOYEE\_COPY

SET IDENTITY\_INSERT EMPLOYEE\_COPY ON

INSERT INTO EMPLOYEE\_COPY (EMPLOYEEID, LASTNAME, FIRSTNAME, PHONE, ADDRESS, ZIPCODE, CITYID, TAXPAYERID, DATEHIRED, DATERELEASED, MANAGERID, EMPLOYEELEVEL, TITLE)

SELECT EMPLOYEEID, LASTNAME, FIRSTNAME, PHONE, ADDRESS, ZIPCODE, CITYID, TAXPAYERID, DATEHIRED, DATERELEASED, MANAGERID, EMPLOYEELEVEL, TITLE

FROM CIS310A7..EMPLOYEE

SELECT \*

FROM EMPLOYEE\_COPY