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CIS 310-01

Professor Guan

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Assignment 8

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

|  |  |  |
| --- | --- | --- |
| ItemID | Description | Listprice |

SELECT ITEMID, DESCRIPTION, LISTPRICE

FROM MERCHANDISE

WHERE LISTPRICE > (SELECT AVG(LISTPRICE)

FROM MERCHANDISE)

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

|  |  |  |
| --- | --- | --- |
| ItemID | Average Cost | Average Sale Price |

USE PET

CREATE VIEW DETAIL AS

SELECT M.ITEMID, M.DESCRIPTION, AVG(OI.COST) AS [AVERAGE COST], AVG(SI.SALEPRICE) AS [AVERAGE SALE PRICE]

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

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

GROUP BY M.ITEMID, M.DESCRIPTION

SELECT \*

FROM DETAIL

WHERE [AVERAGE SALE PRICE] > ([AVERAGE COST] \* 1.5)

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

|  |  |  |  |
| --- | --- | --- | --- |
| EmployeeID | LastName | TotalSales | PctSales |

SELECT E.EMPLOYEEID, E.LASTNAME, SUM(SI.SALEPRICE) AS [TOTAL SALES], ((SUM(SI.SALEPRICE)/(SELECT SUM(SALEPRICE) FROM SALEITEM))\*100) AS [PCT SALES]

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

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

GROUP BY E.EMPLOYEEID, E.LASTNAME

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

|  |  |  |
| --- | --- | --- |
| SupplierID | Name | PctShipCost |

USE PET

CREATE VIEW PO\_INFO AS

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

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

INNER JOIN PET..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([PCT SHIP COST]) \* 100 AS [AVERAGE ORDER COST]

FROM PO\_INFO

GROUPBY SUPPLIERID, NAME

SELECT \*

FROM AVGSHIPCOSTPCT

WHERE AVGORDERCOST = (SELECT MAX([AVERAGE ORDER COST])

FROM AVGSHIPCOSTPCT)

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| CustomerID | LastName | FirstName | MercTotal | AnimalTotal | GrandTotal |

USE PET

CREATE VIEW ASALETOTAL AS

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

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

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

GROUP BY C.CUSTOMERID

CREATE VIEW MSALETOTAL AS

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

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

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

GROUP BY C.CUSTOMERID

CREATE VIEW SALESTOTALS AS

SELECT C.CUSTOMERID, C.LASTNAME, C.FIRSTNAME, MST.TOTALMERCHSALES, AST.TOTALANIMALSALES, SUM(AST.TOTALANIMALSALES + MST.TOTALMERCHSALES) AS TOTAL

FROM PET..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 SALESTOTALS

WHERE TOTAL = (SELECT MAX(TOTAL)

FROM SALESTOTALS)

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

|  |  |  |  |
| --- | --- | --- | --- |
| CustomerID | LastName | FirstName | MayTotal |

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

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

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Description | ItemID | Purchased | Sold | NetIncrease |

USE PET

CREATE VIEW PREMDOGFOODPURCHASES AS

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

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

WHERE MO.RECEIVEDATE BETWEEN ‘1/1/2016’ AND ‘7/1/2016’ AND

M.DESCRIPTION LIKE ‘DOG FOOD%PREMIUM’

GROUP BY M.DESCRIPTION, M.ITEMID

CREATE VIEW PREMDOGFOODSOLD AS

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

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

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

WHERE S.SALEDATE BETWEEN ‘1/1/2016’ AND ‘7/1/2016’ AND

M.DESCRIPTION LIKE ‘DOG FOOD%PREMIUM’

GROUP BY M.DESCRIPTION, M.ITEMID

SELECT DFPURCHASED.DESCRIPTION, DFPURCHASED.ITEMID, DFPURCHASED.QUANTITYPURCHASED, DFSOLD.QUANTITYSOLD, (SUM(DFPURCHASED.QUANTITYPURCHASED) – SUM(DFSOLD.QUANTITYSOLD)) AS [NEW INCREASE]

FROM PREMDOGFOODPURCHASES DFPURCHASED FULL OUTER JOIN PREMDOGFOODSOLD DFSOLD ON DFPURCHASED.DESCRIPTION = DFSOLD.DESCRIPTION

GROUP BY DFPURCHASED.DESCRIPTION, DFPURCHASED.ITEMID, DFPURCHASED.QUANTITYPURCHASED, DFSOLD.QUANTITYSOLD

1. Which merchandise items with a list price of more than $50 had no sales July?

|  |  |  |
| --- | --- | --- |
| ItemID | Description | ListPrice |

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

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

|  |  |  |  |
| --- | --- | --- | --- |
| ItemID | Description | QuantityOnHand | ItemID |

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)

1. 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

WHERE M.QUANTITYONHAND > 100 AND

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

1. Save a query to list the 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. Must only SQL statements and include all statements used in the proper order.

Table Category

|  |  |  |
| --- | --- | --- |
| Category | Low | High |
| Weak | 0 | 200 |
| Good | 200 | 800 |
| Best | 800 | 10000 |

| **Sample Results** | | | | |
| --- | --- | --- | --- | --- |
| **CustomerID** | **LastName** | **FirstName** | **GrandTotal** | **Category** |
| 1 | Walkin | Walkin | $2,261.51 | Best |
| 2 | Cummings | Brent | $393.12 | Good |

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 C.CUSTOMERID, CST.LASTNAME, CST.TOTAL, CC.CATEGORY

FROM CSALESTOTALS CST INNER JOIN CUSTCATEGORY CC ON CST.TOTAL >= CC.LOW AND CST.TOTAL M CC.HIGH

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

ORDER BY CC.CATEGORY DESC

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

|  |  |
| --- | --- |
| Supplier Name | Order Type |

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

FROM SUPPLIER S INNERJOIN 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 MERCHCANDISEORDER MO ON S.SUPPLIERID = MO.SUPPLIERID

WHERE MONTH(MO.ORDERDATE) = 6