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-- 1
-- LIST THE PRODUCTS WITH A LIST PRICE GREATER THAN THE AVERAGE LIST PRICE OF ALL
PRODUCTS
SELECT ITEMID, DESCRIPTION, LISTPRICE
FROM PET..MERCHANDISE
WHERE LISTPRICE > ANY
      (SELECT AVG(LISTPRICE)
       FROM PET..MERCHANDISE)

-- 2
-- WHICH MERCHANDISE ITEMS HAVE AN AVERAGE SALE PRICE MORE THAN 50% HIGHER THAN THEIR
AVERAGE PURCHASE COST?
SELECT M.ITEMID, AVG(O.COST) AS 'AVERAGE COST', AVG(S.SALEPRICE) AS 'AVERAGE SALE PRICE'
FROM PET..ORDERITEM O INNER JOIN PET..MERCHANDISE M ON O.ITEMID = M.ITEMID
      INNER JOIN PET..SALEITEM S ON M.ITEMID = S.ITEMID
GROUP BY M.ITEMID
HAVING AVG(S.SALEPRICE) > 1.5*AVG(O.COST)

-- 3
-- LIST THE EMPLOYEES AND THEIR TOTAL MERCHANDISE SALES EXPRESSED AS A PERCENTAGE OF
TOTAL MERCHANDISE SALES
-- FOR ALL EMPLOYEES
CREATE VIEW TOTAL_SALES AS
SELECT E.EMPLOYEEID, SUM(I.SALEPRICE*I.QUANTITY) AS 'TOTALSALES'
FROM PET..EMPLOYEE E INNER JOIN PET..SALE S ON E.EMPLOYEEID = S.EMPLOYEEID
      INNER JOIN PET..SALEITEM I ON S.SALEID = I.SALEID
GROUP BY E.EMPLOYEEID

SELECT DISTINCT E.EMPLOYEEID, E.LASTNAME, T.TOTALSALES, (T.TOTALSALES/(SELECT
SUM(SALEPRICE*QUANTITY)
      FROM PET..SALEITEM)*100) AS 'PCTSALES'
FROM TOTALSALES T INNER JOIN PET..EMPLOYEE E ON T.EMPLOYEEID = E.EMPLOYEEID
      INNER JOIN PET..SALE S ON E.EMPLOYEEID = S.EMPLOYEEID
ORDER BY E.EMPLOYEEID

DROP VIEW TOTALSALES

-- 4
-- ON AVERAGE, WHICH SUPPLIER CHARGES THE HIGHEST SHIPPING COST AS A PERCENT OF THE
MERCHANDISE ORDER TOTAL?
SELECT TOP 1 S.SUPPLIERID, S.NAME, SUM(M.SHIPPINGCOST)/(SELECT SUM(M.SHIPPINGCOST)
      FROM PET..MERCHANDISEORDER M)*100 AS 'PCT SHIPPING COST'
FROM PET..SUPPLIER S INNER JOIN PET..MERCHANDISEORDER M ON S.SUPPLIERID = M.SUPPLIERID
GROUP BY S.SUPPLIERID, S.NAME
ORDER BY "PCT SHIPPING COST" DESC

-- 5
-- WHICH CUSTOMER HAS GIVEN US THE MOST TOTAL MONEY FOR ANIMALS AND MERCHANDISE?
SELECT TOP 1 C.CUSTOMERID, C.LASTNAME, C.FIRSTNAME, SUM(I.SALEPRICE*I.QUANTITY) AS
'MERCTOTAL', SUM(A.SALEPRICE) AS 'ANIMALTOTAL', SUM(I.SALEPRICE*I.QUANTITY + A.SALEPRICE)
AS 'GRANDTOTAL'
FROM PET..CUSTOMER C INNER JOIN PET..SALE S ON C.CUSTOMERID = S.CUSTOMERID
      INNER JOIN PET..SALEITEM I ON S.SALEID = I.SALEID
      INNER JOIN PET..SALEANIMAL A ON S.SALEID = A.SALEID
GROUP BY C.CUSTOMERID, C.LASTNAME, C.FIRSTNAME
ORDER BY "GRANDTOTAL" DESC

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-- 6
-- WHICH CUSTOMERS WHO BOUGHT MORE THAN $100 IN MERCHANDISE IN MAY ALSO SPENT MORE THAN
$50 ON MERCHANDISE IN
-- OCTOBER?
SELECT DISTINCT C.CUSTOMERID, C.LASTNAME, C.FIRSTNAME, SUM(SI.SALEPRICE*SI.QUANTITY) AS
'MAYTOTAL'
FROM PET..CUSTOMER C INNER JOIN PET..SALE S ON C.CUSTOMERID = S.CUSTOMERID
      INNER JOIN PET..SALEITEM SI ON S.SALEID = SI.SALEID
WHERE MONTH(S.SALEDATE) = 5
GROUP BY C.CUSTOMERID, C.LASTNAME, C.FIRSTNAME
HAVING SUM(SI.SALEPRICE*SI.QUANTITY) > 100 AND C.CUSTOMERID IN
      (SELECT CUSTOMERID
      FROM PET..SALE S INNER JOIN PET..SALEITEM SI ON S.SALEID = SI.SALEID
      GROUP BY S.CUSTOMERID, MONTH(SALEDATE)
      HAVING MONTH(S.SALEDATE) = 10 AND SUM(SI.SALEPRICE*SI.QUANTITY) > 50)

-- 7
-- WHAT WAS THE NET CHANGE IN QUANTITY ON HAND FOR PREMIUM CANNED DOG FOOD BETWEEN
JANUARY 1 AND JULY 1?
SELECT Q.DESCRPTION, Q.ITEMID, Q2.PURCHASED, Q.SOLD, (Q2.PURCHASED-Q.SOLD) AS
'NETINCREASE'
FROM (SELECT M.DESCRPTION, M.ITEMID, SUM(SI.QUANTITY) as "SOLD"
      FROM PET..SALE S LEFT OUTER JOIN PET..SALEITEM SI ON SI.SALEID = S.SALEID
      LEFT OUTER JOIN PET..MERCHANDISE M ON M.ITEMID = SI.ITEMID
      WHERE M.DESCRPTION = 'Dog Food-Can-Premium' AND S.SALEDATE BETWEEN '2004-
01-01' AND '2004-06-01'
      GROUP BY M.DESCRPTION, M.ITEMID) Q,

      (SELECT M.DESCRPTION, M.ITEMID, SUM(O.QUANTITY) AS "PURCHASED"
      FROM PET..MERCHANDISE M
      LEFT OUTER JOIN PET..ORDERITEM O ON O.ITEMID = M.ITEMID
      LEFT OUTER JOIN PET..MERCHANDISEORDER MO ON MO.PONUMBER
= O.PONUMBER
      WHERE M.DESCRPTION = 'Dog Food-Can-Premium' AND MO.ORDERDATE BETWEEN
'2004-01-01' AND '2004-06-01'
      GROUP BY M.DESCRPTION, M.ITEMID) Q2

-- 8
-- WHICH MERCHANDISE ITEMS WITH A LIST PRICE OF MORE THAN $50 HAD NO SALES IN JULY?
SELECT DISTINCT M.ITEMID, M.DESCRPTION, M.LISTPRICE
FROM PET..MERCHANDISE M INNER JOIN PET..SALEITEM I ON M.ITEMID = I.ITEMID
      INNER JOIN PET..SALE S ON I.SALEID = S.SALEID
WHERE M.LISTPRICE > 50 AND I.ITEMID NOT IN
      (SELECT ITEMID
      FROM PET..SALEITEM
      WHERE MONTH(S.SALEDATE) = 7)

-- 9
-- WHICH MERCHANDISE ITEMS WITH MORE THAN 100 UNITS ON HAND HAVE NOT BEEN ORDERED IN
2004? USE AN OUTER JOIN
SELECT M.ITEMID, M.DESCRPTION, M.QUANTITYONHAND, O.ITEMID
FROM PET..ORDERITEM O LEFT OUTER JOIN PET..MERCHANDISE M ON O.ITEMID = M.ITEMID
      LEFT OUTER JOIN PET..MERCHANDISEORDER MO ON O.PONUMBER = MO.PONUMBER
WHERE M.QUANTITYONHAND > 100 AND YEAR(MO.ORDERDATE) <> 2004

-- 10
-- WHICH MERCHANDISE ITEMS WITH MORE THAN 100 UNITS ON HAND HAVE NOT BEEN ORDERED IN
2004? USE A SUBQUERY

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SELECT M.ITEMID, M.DESCRPTION, M.QUANTITYONHAND, O.ITEMID
FROM PET..ORDERITEM O INNER JOIN PET..MERCHANDISE M ON O.ITEMID = M.ITEMID
      INNER JOIN PET..MERCHANDISEORDER MO ON O.PONUMBER = MO.PONUMBER
WHERE M.QUANTITYONHAND > 100 AND ORDERDATE NOT IN
      (SELECT ORDERDATE
       FROM PET..MERCHANDISEORDER
       WHERE YEAR(ORDERDATE) = 2004)

-- 11
-- 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.
CREATE TABLE CustomerCategory
(CATEGORY VARCHAR(4) NOT NULL, LOW INT, HIGH INT)
INSERT INTO CUSTOMERCATEGORY (CATEGORY, LOW, HIGH)
VALUES ('WEAK',0,200), ('GOOD',200,800), ('BEST',800,10000)

SELECT Q.CUSTOMERID, Q.LASTNAME, Q.FIRSTNAME, Q.GRANDTOTAL, (SELECT CATEGORY FROM
CUSTOMERCATEGORY WHERE Q.GRANDTOTAL >= LOW AND Q.GRANDTOTAL < HIGH) AS "CATEGORY"
FROM (SELECT C.CUSTOMERID, C.LASTNAME, C.FIRSTNAME,
SUM(A.SALEPRICE)+SUM(I.SALEPRICE*I.QUANTITY) AS "GRANDTOTAL"
FROM PET..CUSTOMER C LEFT OUTER JOIN PET..SALE S ON C.CUSTOMERID =
S.SALEID
      LEFT OUTER JOIN PET..SALEANIMAL A ON S.SALEID = A.SALEID
      LEFT OUTER JOIN PET..SALEITEM I ON S.SaleID = I.SALEID
GROUP BY C.CUSTOMERID, C.LASTNAME, C.FIRSTNAME) Q
WHERE GRANDTOTAL IS NOT NULL

-- 12
-- LIST ALL SUPPLIERS (ANIMALS AND MERCHANDISE) WHO SOLD US ITEMS IN JUNE. IDENTIFY
WHETHER THEY SOLD USE
-- ANIMALS OR MERCHANDISE.
SELECT DISTINCT S.NAME AS "SUPPLIERNAME", 'ANIMAL' AS "ORDERTYPE"
FROM PET..SUPPLIER S INNER JOIN PET..ANIMALORDER A ON S.SUPPLIERID = A.SUPPLIERID
WHERE MONTH(A.ORDERDATE) = 6
UNION ALL

SELECT DISTINCT S.NAME AS "SUPPLIERNAME", 'MERCHANDISE' AS "ORDERTYPE"
FROM PET..SUPPLIER S INNER JOIN PET..MERCHANDISEORDER M ON S.SUPPLIERID = M.SUPPLIERID
WHERE MONTH(M.ORDERDATE) = 6
ORDER BY S.NAME

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