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Exercise 11: Problem Solving (10 points)

Instructions:

1. This is a group assignment. You only need to submit one solved exercise per group.
2. You would only submit your SQL statements one single PDF file. If there are any notes you would like me to look at, please include those with the SQL statement.
3. Every group member needs to run the SQL statements in their account. I have access to your database and will examine the individual work done.
4. Once finished, upload the file to the appropriate assignment response in blackboard.
5. You may upload as many attempts as you may like. Please note that only the most recent file uploaded file would be graded.
6. Do not handwrite any responses.
7. If you have any additional information you would like me to know about this assignment, you may provide that to me at the end of this document as a note.

Use the data model shown at the bottom of this document for this assignment:

What to do:
1. This assignment must be completed in SQL Server. No other DBMS is allowed.
2. All SQL statements written by different team members should be collated in this one single document in its appropriate area. No exceptions.
3. **Write a query for each of the following questions. The tables are in a database called PET. You can access the tables by qualifying the tables as in the following example: SELECT * FROM PET..CUSTOMER**
4. Copy paste these SQL statements in appropriate space in one single document.
5. ERD for the database is provided at the end of this document.
6. You would not create/copy this database into your account. It is included in your schema and you would access it following instructions in #3 above.

Assignment:

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

ItemID	Description	ListPrice
2	Dog Kennel-Medium	65.00
3	Dog Kennel-Large	85.00
4	Dog Kennel-Extra Large	110.00
23	Aquarium-25 gal	75.00
24	Aquarium-100 gal	150.00

SELECT SI.ItemID, M.Description, M.ListPrice

FROM PET..SALE S

INNER JOIN Pet..SaleItem SI ON S.SaleID = SI.SaleID

INNER JOIN Pet..Merchandise M ON M.ItemID = SI.ItemID

WHERE M.ListPrice > 50

AND SI.ItemID NOT IN

(SELECT SI.ItemID

FROM Pet..SaleItem SI

INNER JOIN Pet..Sale S ON S.SaleID = SI.SaleID

INNER JOIN Pet..Merchandise M ON M.ItemID = SI.ItemID

WHERE MONTH(S.SaleDate) = 07

AND M.ListPrice > 50)

GROUP BY SI.ItemID, M.Description, M.ListPrice

2. 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
12	Cat Food-Dry-5 pound	413
13	Cat Food-Dry-10 pound	224
14	Cat Food-Dry-25 pound	300
35	Collar-Cat	150

```
SELECT DISTINCT M.ITEMID, M.DESCRIPTION, M.QUANTITYONHAND
FROM PET..MERCHANDISE M
FULL OUTER JOIN PET..OrderItem OI ON M.ItemID = OI.ItemID
FULL OUTER JOIN PET..MerchandiseOrder MO ON OI.PONumber = MO.PONumber
WHERE M.QuantityOnHand > 100
AND MO.OrderDate IS NULL
```

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

ItemID	Description	QuantityOnHand
12	Cat Food-Dry-5 pound	413
13	Cat Food-Dry-10 pound	224
14	Cat Food-Dry-25 pound	300
35	Collar-Cat	150

```
SELECT ITEMID, DESCRIPTION, QUANTITYONHAND
FROM PET..MERCHANDISE
WHERE ITEMID IN (SELECT ME.ITEMID
FROM PET..MERCHANDISE ME
LEFT OUTER JOIN PET..ORDERITEM OI ON ME.ITEMID = OI.ITEMID
LEFT OUTER JOIN PET..MERCHANDISEORDER MO ON OI.PONUMBER = MO.PONUMBER
WHERE QUANTITYONHAND > 100 AND OI.ITEMID IS NULL OR YEAR(ORDERDATE) <> 2004)
```

4. List all suppliers (animals and merchandise) who sold us items in June. Identify whether they sold use animals or merchandise. One way to do this is to use a union query. You can tag the sale type by just using 'Sold Us Merchandise in June' AS 'Type of Sale' or 'Sold Us Animals in June' AS 'Type of Sale' in the query.

```sql
SELECT S.Name,'Sold Us Animals in June' AS 'Type of Sale'
FROM PET..Supplier S
INNER JOIN PET..AnimalOrder AO ON S.SupplierID = AO.SupplierID WHERE
MONTH(AO.OrderDate) = 6
UNION ALL SELECT S.Name, 'Sold Us Merchandise in June' AS 'Type of Sale'
FROM PET..Supplier S
INNER JOIN PET..MerchandiseOrder MO ON S.SupplierID = MO.SupplierID WHERE
MONTH(MO.OrderDate) = 6
ORDER BY S.Name
```

NAME	Type of Sale
Frost	Sold Us Animals in June
Harrison	Sold Us Merchandise in June
Osborne	Sold Us Merchandise in June
Parrish	Sold Us Merchandise in June