35Chapter 11 Assignment (50 points) Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Use the **AdventureWorks2012** Database for all queries in this assignment

**Using MAX subquery**

1. For this questions you are building a subquery to find the PurchaseOrder that has the lastest order date. For the Purchasing.PurchaseOrderHeader, select the **maximum** order date. (6 pts)

a. Paste your query here.

select (max(poh.OrderDate))

from Purchasing.PurchaseOrderHeader poh

b. What is the Date?

2008-10-23 00:00:00.000

c. Now you are going to embed the query you just wrote in the WHERE statement of a new query. This is just like the query on page 4 of Chapter 11 Key Points. Now build your

select statement with the PurchaseOrderID and the orderdate  
From Purchasing.PurchaseOrderHeader

where orderdate = (your query from a)

You should have one row in your result set. Paste your query here.

select poh.PurchaseOrderID, poh.OrderDate

from Purchasing.PurchaseOrderHeader poh

where poh.OrderDate =

(select max(OrderDate) from Purchasing.PurchaseOrderHeader)

d. Write a simple query showing all the data for that purchaseorderid so you can check that it has the date from step b. Paste the query here.

select \*

from Purchasing.PurchaseOrderHeader poh

where poh.PurchaseOrderID = 4002

**Using MIN subquery**

2. For this questions you are building a subquery to find the PurchaseOrder numbers that have the earliest order date. For the Purchasing.PurchaseOrderHeader select the **minimum** order date. (6 pts)

a. Paste your query here.

select (min(poh.OrderDate))

from Purchasing.PurchaseOrderHeader poh

b. What is the Date?

2005-05-17 00:00:00.000

c. Embed your query into the WHERE statement like you did for 1 c. In the SELECT statement include the Purchase Order Id and order date.

You should have four rows in your result set. Paste your query here.

select poh.PurchaseOrderID, poh.OrderDate

from Purchasing.PurchaseOrderHeader poh

where poh.OrderDate =

(select min(OrderDate) from Purchasing.PurchaseOrderHeader)

**Investigating Tables and their relationships**

3. For the following tables, how many rows does each table contains. (3 pts) I don’t need to see your queries, just list your counts next to each table.

a. Production.Product

504

b. Production.ProductInventory

1069

c. Production.Location

14

4. For the following tables, indicate the Primary key or CPK. (3 pts)

a. Production.Product

ProductID

b. Production.ProductInventory

ProductID, LocationID

c. Production.Location

LocationID

5. Using the tables listed in question 4 which table will you link to which table and what field would you use to link the tables. (2 pts)

|  |  |  |
| --- | --- | --- |
| **Table** | **Table** | **Fieldname to link them** |
| Product | ProductInventory | ProductID |
| Location | ProductInventory | LocationID |

**Writing a Count query to show how many times a product’s cost has changed**

6. Using the Production tables of Product and Productcosthistory. (12 pts)

a. How many rows are in the Productcosthistory table?

395

b. What is the CPK of productcosthistory?

ProductID, StartDate

c. What does the CPK tell you about the table?

That this table is a many to one relationship with the Production.Product table. One product can have many start dates.

d. Write a query to count the number of times each ***product.productid and product.name*** appears in the Productcosthistory table.

* Use the product table so you can get the product name. Link that to the Productcosthistory table
* Give your count an alias of Nbr
* Order by Nbr descending so you see the entries that are greater than 1 at the top of the result set.

Paste your query here.

select pro.Name, count(\*) Nbr

from Production.ProductCostHistory pch

join Production.Product pro

on pro.ProductID = pch.ProductID

group by pro.Name

e. Output your query results to an excel file:

* File name is your last name and 6E.
* Total the column that contains your count values. And change the title to “Number of cost changes”. Your total in Excel should match your answer for part a of this question.

Make sure that I can just click on your file and it opens in excel looking good. Include this file with your assignment upload. (5 pts)

**Writing a Count query to show how many Vendors are providing each product**

7. Using the Purchasing tables of ProductVendor and Vendor. (5 pts)

a. How many unique productids are in the ProductVendor Table? This is similar to page 425 because you want to count the unique products.

265

b. Paste your query here.

select count(distinct pv.ProductID)

from Purchasing.ProductVendor pv

c. How many vendors supply each product? Revising the previous query, at the front of your select statement you will add productid before your count. Use the ProductVendor and Vendor tables. Since productid is before the count in your select statement, you need to add a group by statement.

* Give your count an alias of NbrofVendorsProviding
* Paste your query here.

select distinct pv.ProductID, count(distinct v.BusinessEntityID) NbrofVendorsProviding

from Purchasing.Vendor v

join Purchasing.ProductVendor pv

on pv.BusinessEntityID = v.BusinessEntityID

group by pv.ProductID

d. How many rows are in your results set? Does this number match your answer to a?

265, yes

**Writing a Count query to show how many products each Vendor supplies**

8. Using the same tables of ProductVendor and Vendor. (5 pts)

a. The vendors provide how many products?

* Your select statement will include the Vendor name and the count of unique products that they sell. Use both tables.
* Give your count an alias of NbrofProductsProviding.
* Paste your query here.

select v.Name, count(distinct ProductID) NbrofProductsProviding

from Purchasing.Vendor v

join Purchasing.ProductVendor pv

on pv.BusinessEntityID = v.BusinessEntityID

group by v.Name

Your results set should have 86 rows.

**Writing a Count query to show how many orders does each SalesPerson place**

9. New tables - Using the Sales tables of SalesOrderHeader and SalesPerson. (8 pts)

a. How many rows in the SalesOrderHeader?

31465

b. How many unique salespersonid are in the SalesOrderHeader?

17

c. To link the SalesOrderHeader and the SalesPerson table you use fields that have different names.

* WHERE SalesOrderHeader.SalesPersonid = SalesPerson.BusinessEntityId
* Use businessentityid in your select statement with your count.
* Give businessentityid the alias SalesPerson and give your count the alias OrdersPlaced
* Sort by OrdersPlaced desc (so the largest amount is at the top)..

select distinct sp.BusinessEntityID SalesPerson, count(soh.OrderDate) OrdersPlaced

from Sales.SalesOrderHeader soh

join Sales.SalesPerson sp

on Soh.SalesPersonID = sp.BusinessEntityID

group by sp.BusinessEntityID

order by OrdersPlaced desc

d. Output your query results to an excel file. Then total your count column. You don’t have to clean up the file or submit it. What is your total?

e. Is this number less or more than your answer to question 9a?

less