

Project: Querying a Large Relational Database

Problem Statement:

How to get details about customers by querying a database?

Topics:

In this project, you will work on downloading a database and restoring it on the server. You will then query the database to get customer details like name, phone number, email ID, sales made in a particular month, increase in month-on-month sales and even the total sales made to a particular customer.

3. Perform the following with help of the above database:

- a. Get all the details from the person table including email ID, phone number and phone number type
- b. Get the details of the sales header order made in May 2011
- c. Get the details of the sales details order made in the month of May 2011
- d. Get the total sales made in May 2011
- e. Get the total sales made in the year 2011 by month order by increasing sales
- f. Get the total sales made to the customer with FirstName='Gustavo' and LastName ='Achong'

use AdventureWorks2022

```
select * from Person.PersonPhone
select * from person.EmailAddress
select * from person.PhoneNumberType
```

/*3. Perform the following with help of the above database:

a. Get all the details from the person table including email ID, phone Number and phone number type*/

```
SELECT p.BusinessEntityID, p.PhoneNumber,
p.modifieddate AS phone_modifieddate, pnt.name AS phonenumbertype,
e.EmailAddressID, e.EmailAddress, e.modifieddate AS email_modifieddate
```

```
FROM person.PersonPhone p
INNER JOIN person.PhoneNumberType pnt
    ON p.PhoneNumberTypeID = pnt.PhoneNumberTypeID
INNER JOIN PERSON.EmailAddress e
    ON p.BusinessEntityID = e.BusinessEntityID
```

-- b. Get the details of the sales header order made in May 2011

```
select * from sales.SalesOrderHeader
```

```
SELECT * FROM sales.SalesOrderHeader
WHERE orderdate BETWEEN '2011-05-01' AND '2011-05-31';
```

-- c. Get the details of the sales details order made in the month of May 2011

```
select * from sales.SalesOrderDetail
select * from sales.SalesOrderHeader
```

```
SELECT * FROM
sales.SalesOrderHeader soh
INNER JOIN sales.SalesOrderDetail sod
    ON soh.salesorderid = sod.salesorderid
WHERE orderdate BETWEEN '2011-05-01' AND '2011-05-31'
```

-- d. Get the total sales made in May 2011

```
SELECT SUM(sod.orderqty * sod.unitprice) AS total_sales
FROM   sales.SalesOrderDetail sod
       INNER JOIN sales.SalesOrderHeader soh
       ON sod.salesorderid = soh.salesorderid
WHERE  soh.orderdate BETWEEN '2011-05-01' AND '2011-05-31';
```

-- e. Get the total sales made in the year 2011 by month order by increasing sales

```
SELECT DATEPART(MONTH, soh.orderdate) AS order_month,
SUM(sod.orderqty * sod.unitprice) AS total_sales
FROM   sales.SalesOrderDetail sod
       INNER JOIN sales.SalesOrderHeader soh
       ON sod.salesorderid = soh.salesorderid
WHERE  YEAR(soh.orderdate) = 2011
GROUP BY DATEPART(MONTH, soh.orderdate)
ORDER BY total_sales ASC;
```

--f. Get the total sales made to the customer with FirstName='Gustavo' and LastName='Achong'

```
SELECT p.Title, p.FirstName, p.MiddleName, p.LastName, tmp.TotalAmount
FROM Sales.Customer c
     INNER JOIN Person.Person p
     ON p.BusinessEntityID = c.PersonID

     INNER JOIN ( SELECT soh.CustomerID, SUM(LineTotal) AS TotalAmount
                  FROM Sales.SalesOrderDetail AS sod
                  INNER JOIN Sales.SalesOrderHeader AS soh
                  ON soh.SalesOrderID=sod.SalesOrderID
                  GROUP BY soh.CustomerID ) tmp

ON tmp.CustomerID = c.CustomerID
where firstName='Gustavo' and LastName='Achong'
```