

Asignatura	Datos del alumno	Fecha
Fundamentos Tecnológicos para el Tratamiento de Datos	Integrantes: Barrera Belén, García Karen, Molineros Mariela y Rosero Sebastián.	29/01/2024

Actividad: Consulta SQL (Caso Transversal)

PARTE I: SERIES TEMPORALES

```
use AdventureWorks2017;
```

```
---PARTE I: SERIES TEMPORALES
```

```
-- Consulta base
```

```
SELECT
    FORMAT(SOH.OrderDate, 'dd/MM/yyyy') AS OrderDate,
    SUM(SOD.LineTotal) AS Sales
FROM Sales.SalesOrderHeader SOH
INNER JOIN Sales.SalesOrderDetail SOD
ON SOH.SalesOrderID = SOD.SalesOrderID
WHERE YEAR(SOH.OrderDate) BETWEEN 2011 AND 2014
GROUP BY FORMAT(SOH.OrderDate, 'dd/MM/yyyy')
ORDER BY MIN(SOH.OrderDate);
```

```
--Subconsulta por región: USA
```

```
SELECT
SUM(IIF(TER.[GROUP] = 'North America', SOD.LineTotal, 0)) AS SalesUSA
FROM Sales.SalesOrderHeader SOH
INNER JOIN Sales.SalesOrderDetail SOD
ON SOH.SalesOrderID = SOD.SalesOrderID
LEFT JOIN Sales.SalesTerritory TER
ON TER.TerritoryID = SOH.TerritoryID;
```

```
--Subconsulta por región: Europe
```

```
SELECT
SUM(IIF(TER.[GROUP] = 'Europe', SOD.LineTotal, 0)) AS SalesEU
FROM Sales.SalesOrderHeader SOH
INNER JOIN Sales.SalesOrderDetail SOD
ON SOH.SalesOrderID = SOD.SalesOrderID
LEFT JOIN Sales.SalesTerritory TER
ON TER.TerritoryID = SOH.TerritoryID;
```

```
--Subconsulta por región: Pacific
```

```
SELECT
SUM(IIF(TER.[GROUP] = 'Pacific', SOD.LineTotal, 0)) AS SalesPac
FROM Sales.SalesOrderHeader SOH
INNER JOIN Sales.SalesOrderDetail SOD
ON SOH.SalesOrderID = SOD.SalesOrderID
LEFT JOIN Sales.SalesTerritory TER
ON TER.TerritoryID = SOH.TerritoryID;
```

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```
-- Serie Temporal VentasPorRegion Total
SELECT
FORMAT(SOH.OrderDate, 'dd/MM/yyyy') AS OrderDate,
SUM(SOD.LineTotal) AS Sales,
SUM(IIF(TER.[GROUP] = 'North America', SOD.LineTotal, 0)) AS SalesUSA,
SUM(IIF(TER.[GROUP] = 'Europe', SOD.LineTotal, 0)) AS SalesEU,
SUM(IIF(TER.[GROUP] = 'Pacific', SOD.LineTotal, 0)) AS SalesPac
FROM Sales.SalesOrderHeader SOH
INNER JOIN Sales.SalesOrderDetail SOD
ON SOH.SalesOrderID = SOD.SalesOrderID
LEFT JOIN Sales.SalesTerritory TER
ON TER.TerritoryID = SOH.TerritoryID
WHERE YEAR(SOH.OrderDate) BETWEEN 2011 AND 2014
GROUP BY FORMAT(SOH.OrderDate, 'dd/MM/yyyy')
ORDER BY MIN(SOH.OrderDate);
```

PARTE II: DATASET DE CLIENTES PARA REGRESION LINEAL

```
--PARTE II: DATASET DE CLIENTES PARA REGRESION LINEAL
WITH ClientesIndividuos AS (
SELECT
SOH.SubTotal AS TotalAmount,
SOH.CustomerID,
ST."Name" AS Country,
ST.CountryRegionCode,
ST."Group",
P.BusinessEntityID AS PersonID,
P.PersonType,
DATEDIFF(YEAR, PD.BirthDate, GETDATE()) - 4 AS Age
FROM Sales.SalesOrderHeader SOH
INNER JOIN Sales.Customer CU ON CU.CustomerID = SOH.CustomerID
INNER JOIN Person.Person P ON P.BusinessEntityID = CU.PersonID
INNER JOIN Sales.SalesTerritory ST ON SOH.TerritoryID = ST.TerritoryID
LEFT JOIN Sales.vPersonDemographics PD ON P.BusinessEntityID =
PD.BusinessEntityID
WHERE P.PersonType = 'IN'
)

SELECT
SUM(CI.TotalAmount) AS TotalAmount,
CI.CustomerID,
CI.Country,
CI.CountryRegionCode,
CI."Group",
CI.PersonID,
CI.PersonType,
FORMAT(PD.DateFirstPurchase, 'dd/MM/yyyy') AS DateFirstPurchase,
FORMAT(PD.BirthDate, 'dd/MM/yyyy') AS BirthDate,
CI.Age,
PD.MaritalStatus,
PD.YearlyIncome,
PD.Gender,
PD.totalChildren,
PD.Education,
PD.Occupation,
PD.HomeOwnerFlag,
```

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```

PD.NumberCarsOwned
FROM ClientesIndividuos CI
INNER JOIN Sales.vPersonDemographics PD ON CI.PersonID = PD.BusinessEntityID
GROUP BY PD.TotalPurchaseYTD, CI.CustomerID, CI.Country,
CI.CountryRegionCode,
CI."Group",
CI.PersonID,
CI.PersonType,
DateFirstPurchase,
BirthDate,
CI.Age,
PD.MaritalStatus,
PD.YearlyIncome,
PD.Gender,
PD.totalChildren,
PD.Education,
PD.Occupation,
PD.HomeOwnerFlag,
PD.NumberCarsOwned
ORDER BY CI.CustomerID ASC, CI.Country ASC, DateFirstPurchase ASC;

```

PARTE III: DATASET DE CLIENTES PARA CLASIFICACIÓN (REGRESIÓN LOGÍSTICA)

--PARTE III: DATASET DE CLIENTES PARA CLASIFICACIÓN (REGRESIÓN LOGÍSTICA)

```

WITH ClientesIndividuos AS (
    SELECT
        SOH.SubTotal AS TotalAmount,
        CASE WHEN MAX(CASE WHEN PS.ProductSubcategoryID IN (1, 2, 3) THEN 1
ELSE 0 END) OVER (PARTITION BY SOH.CustomerID) > 0 THEN 1 ELSE 0 END AS
BikePurchasing,
        SOH.CustomerID,
        ST."Name" AS Country,
        ST.CountryRegionCode,
        ST."Group",
        P.BusinessEntityID AS PersonID,
        P.PersonType,
        DATEDIFF(YEAR, PD.BirthDate, GETDATE()) - 4 AS Age
    FROM
        Sales.SalesOrderHeader SOH
        INNER JOIN Sales.Customer CU ON CU.CustomerID = SOH.CustomerID
        INNER JOIN Person.Person P ON P.BusinessEntityID = CU.PersonID
        INNER JOIN Sales.SalesTerritory ST ON SOH.TerritoryID = ST.TerritoryID
        INNER JOIN Sales.SalesOrderDetail SOD ON SOH.SalesOrderID =
SOD.SalesOrderID
        INNER JOIN Production.Product PP ON SOD.ProductID = PP.ProductID
        INNER JOIN Production.ProductSubcategory PS ON PP.ProductSubcategoryID
= PS.ProductSubcategoryID
        LEFT JOIN Sales.vPersonDemographics PD ON P.BusinessEntityID =
PD.BusinessEntityID
        WHERE P.PersonType = 'IN'
)

```

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SELECT

```

SUM(CI.TotalAmount) AS TotalAmount,
CI.BikePurchasing,
CI.CustomerID,
CI.Country,
CI.CountryRegionCode,
CI."Group",
CI.PersonID,
CI.PersonType,
FORMAT(PD.DateFirstPurchase, 'dd/MM/yyyy') AS DateFirstPurchase,
FORMAT(PD.BirthDate, 'dd/MM/yyyy') AS BirthDate,
CI.Age,
PD.MaritalStatus,
PD.YearlyIncome,
PD.Gender,
PD.totalChildren,
PD.Education,
PD.Occupation,
PD.HomeOwnerFlag,
PD.NumberCarsOwned
FROM ClientesIndividuos CI
INNER JOIN Sales.vPersonDemographics PD ON CI.PersonID = PD.BusinessEntityID
GROUP BY PD.TotalPurchaseYTD, CI.CustomerID, CI.Country,
CI.BikePurchasing,
CI.CountryRegionCode,
CI."Group",
CI.PersonID,
CI.PersonType,
DateFirstPurchase,
BirthDate,
CI.Age,
PD.MaritalStatus,
PD.YearlyIncome,
PD.Gender,
PD.totalChildren,
PD.Education,
PD.Occupation,
PD.HomeOwnerFlag,
PD.NumberCarsOwned
ORDER BY DateFirstPurchase ASC;
```