



Universidad Don Bosco, El Salvador

Datawarehouse y Minería de Datos

DMD941 G01T

“DESAFÍO 1”

Instructora

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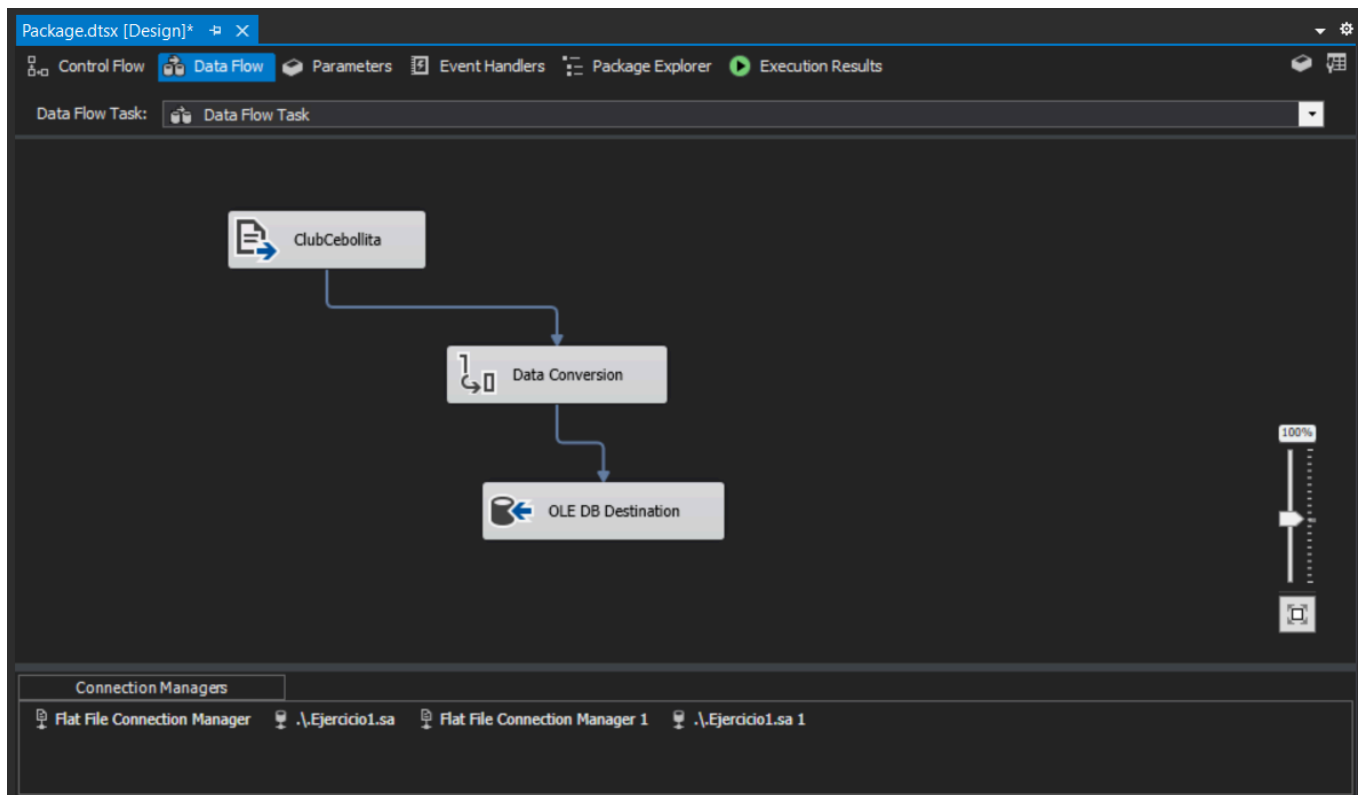
Enlace al vídeo

 DMD - Desafio 1

Sábado 14 de septiembre de 2024

Ejercicio 1

- DATA FLOW.



Flat File Source Editor

Configure the properties used to connect to and obtain data from a text file.

Connection Manager
Columns
Error Output

Available External Columns

External Column	Output Column
Name	Name
Nationality	Nationality
National_Position	National_Position
National_Kit	National_Kit
Club	Club
Club_Position	Club_Position
Club_Kit	Club_Kit
Club_Joining	Club_Joining
Contract_Expiry	Contract_Expiry

OK Cancel Help

• DATA CONVERSION

1 Data Conversion Transformation Editor

— □ ×

Configure the properties used to convert the data type of an input column to a different data type. Depending on the data type to which the column is converted, set the length, precision, scale, and code page of the column.

Available Input Columns

<input type="checkbox"/>	Name
<input checked="" type="checkbox"/>	Name
<input checked="" type="checkbox"/>	Nationality
<input checked="" type="checkbox"/>	National_Position
<input checked="" type="checkbox"/>	National_Kit
<input checked="" type="checkbox"/>	Club
<input checked="" type="checkbox"/>	Club_Position

Input Column	Output Alias	Data Type	Length	Precision	Scale	Code Page
Club_Kit	Copy of Club_Kit	string [DT_STR]	50			1252 (ANSI - Latin I)
Club_Joining	Copy of Club_Joining	date [DT_DATE]				
Contract_Expiry	Copy of Contract_Expi...	string [DT_STR]	50			1252 (ANSI - Latin I)
Rating	Copy of Rating	string [DT_STR]	50			1252 (ANSI - Latin I)
Height	Copy of Height	string [DT_STR]	50			1252 (ANSI - Latin I)
Weight	Copy of Weight	string [DT_STR]	50			1252 (ANSI - Latin I)
Preffered_Foot	Copy of Preffered_Foot	string [DT_STR]	50			1252 (ANSI - Latin I)
Birth_Date	Copy of Birth_Date	string [DT_STR]	50			1252 (ANSI - Latin I)
Age	Copy of Age	string [DT_STR]	50			1252 (ANSI - Latin I)
Preffered_Position	Copy of Preffered_Pos...	string [DT_STR]	50			1252 (ANSI - Latin I)
Work_Rate	Copy of Work_Rate	string [DT_STR]	50			1252 (ANSI - Latin I)
Weak_foot	Copy of Weak_foot	string [DT_STR]	50			1252 (ANSI - Latin I)
Skill_Moves	Copy of Skill_Moves	string [DT_STR]	50			1252 (ANSI - Latin I)
Ball_Control	Copy of Ball_Control	string [DT_STR]	50			1252 (ANSI - Latin I)
Dribbling	Copy of Dribbling	string [DT_STR]	50			1252 (ANSI - Latin I)
Marking	Copy of Marking	string [DT_STR]	50			1252 (ANSI - Latin I)

Configure Error Output...

OK

Cancel

Help

• OLE DB DESTINATION

OLE DB Destination Editor

Configure the properties used to insert data into a relational database using an OLE DB provider.

Connection Manager
Mappings
Error Output

Specify an OLE DB connection manager, a data source, or a data source view, and select the data access mode. If using the SQL command access mode, specify the SQL command either by typing the query or by using Query Builder. For fast-load data access, set the table update options.

OLE DB connection manager:
.\Ejercicio1.sa 1 New...

Data access mode:
Table or view - fast load

Name of the table or the view:
[PlayerName] New...

☐ Keep identity ☒ Table lock
☐ Keep nulls ☒ Check constraints

Rows per batch:

Maximum insert commit size:

OLE DB Destination Editor

Configure the properties used to insert data into a relational database using an OLE DB provider.

Connection Manager
Mappings
Error Output

Available Input Columns:

- Name
- Name
- Nationality
- National_Position
- National_Kit
- Club
- Club_Position
- Club_Kit

Available Destination Columns:

- Name
- Name
- Nationality
- National_Position
- National_Kit
- Club
- Club_Position
- Club_Kit

Input Column Mapping:

Input Column	Destination Column
Name	Name
Nationality	Nationality
National_Position	National_Position
National_Kit	National_Kit
Club	Club
Club_Position	Club_Position
Club_Kit	Club_Kit
Club_Joining	Club_Joining
Contract_Expiry	Contract_Expiry
Rating	Rating
Height	Height
Weight	Weight
Preferred_Foot	Preferred_Foot
Birth_Date	Birth_Date
Age	Age
Preferred_Position	Preferred_Position

OK Cancel Help

● Calcular Correlacion Rating, Edad .

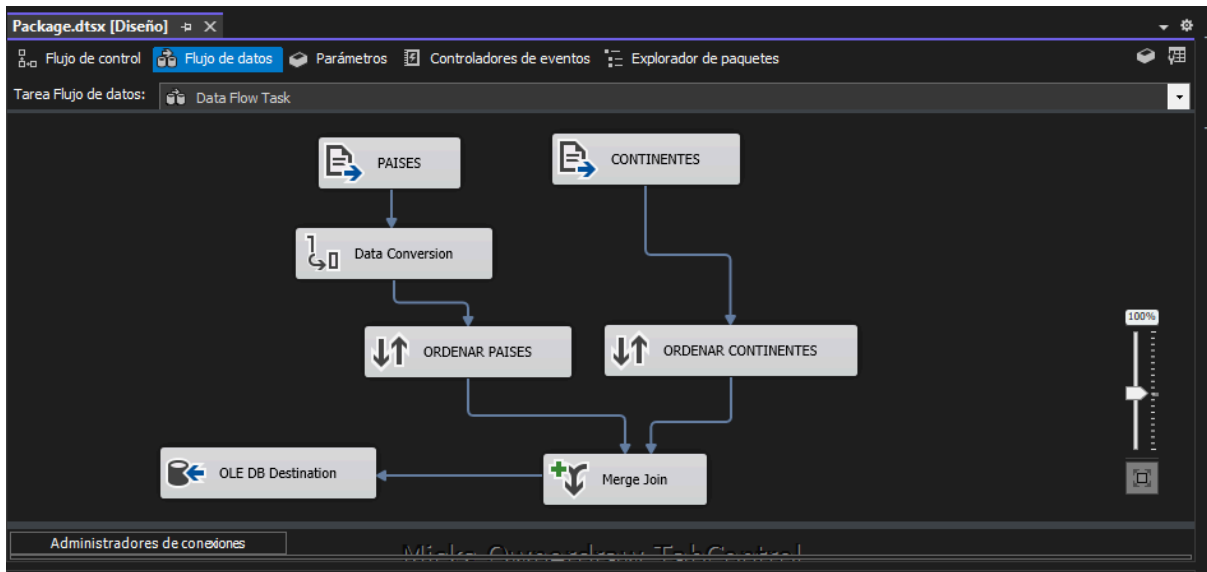
```
USE [Ejercicio1]
GO
/***** Object: StoredProcedure [dbo].[CalcularCorrelacionRatingEdad]    Script Date: 9/14/2024 2:26:10 PM *****/
SET ANSI_NULLS ON
GO
SET QUOTED_IDENTIFIER ON
GO
ALTER PROCEDURE [dbo].[CalcularCorrelacionRatingEdad]
AS
BEGIN
    -- Obtener la media de rating y age
    WITH AvgValues AS (
        SELECT
            AVG(CAST(Rating AS FLOAT)) AS PromedioRating,
            AVG(CAST(Age AS FLOAT)) AS PromedioEdad
        FROM
            dbo.PlayerName
    ),
    -- Obtener la suma de las diferencias
    Covariance AS (
        SELECT
            SUM((CAST(Rating AS FLOAT) - AvgValues.PromedioRating) * (CAST(Age AS FLOAT) - AvgValues.PromedioEdad)) AS Covarianza,
            COUNT(*) AS NumeroFilas
        FROM
            dbo.PlayerName, AvgValues
    ),
    -- Obtener la desviación estándar
    StdDevs AS (
        SELECT
            STDEV(CAST(Rating AS FLOAT)) AS DesvEstRating,
            STDEV(CAST(Age AS FLOAT)) AS DesvEstEdad
        FROM
            dbo.PlayerName
    )
    -- Calcular la correlación
    SELECT
        ROUND((Covariance.Covarianza / (Covariance.NumeroFilas - 1)) /
            (StdDevs.DesvEstRating * StdDevs.DesvEstEdad), 4) AS Correlacion_Rating_Edad
    FROM
        Covariance, StdDevs;
END;
```

● Calcular Estadisticas Jugadores.

```
USE [Ejercicio1]
GO
/***** Object: StoredProcedure [dbo].[CalcularEstadisticasJugadores]    Script Date: 9/14/2024 2:26:14 PM *****/
SET ANSI_NULLS ON
GO
SET QUOTED_IDENTIFIER ON
GO
ALTER PROCEDURE [dbo].[CalcularEstadisticasJugadores]
AS
BEGIN
    WITH CleanedData AS (
        SELECT
            Age AS Edad,
            -- Limpiar y convertir Height y Weight a FLOAT
            TRY_CAST(REPLACE(REPLACE(Height, ' cm', ''), ', ', '' ) AS FLOAT) AS HeightCleaned,
            TRY_CAST(REPLACE(REPLACE(Weight, ' kg', ''), ', ', '' ) AS FLOAT) AS WeightCleaned,
            TRY_CAST(Rating AS FLOAT) AS RatingCleaned
        FROM
            dbo.PlayerName
        WHERE
            -- Asegurarse de que después de eliminar las unidades, los valores pueden convertirse a números
            TRY_CAST(REPLACE(REPLACE(Height, ' cm', ''), ', ', '' ) AS FLOAT) IS NOT NULL
            AND TRY_CAST(REPLACE(REPLACE(Weight, ' kg', ''), ', ', '' ) AS FLOAT) IS NOT NULL
            AND TRY_CAST(Rating AS FLOAT) IS NOT NULL -- Asegurarse de que Rating también sea numérico
    )
    -- Calcular las estadísticas
    SELECT
        Edad,
        ROUND(AVG(HeightCleaned), 2) AS Altura_Promedio_cm,
        ROUND(STDEV(HeightCleaned), 2) AS Desviacion_Estandar_Altura_cm,
        ROUND(AVG(WeightCleaned), 2) AS Peso_Promedio_kg,
        ROUND(STDEV(WeightCleaned), 2) AS Desviacion_Estandar_Peso_kg,
        ROUND(AVG(RatingCleaned), 2) AS Calificacion_Promedio,
        ROUND(STDEV(RatingCleaned), 2) AS Desviacion_Estandar_Calificacion
    FROM
        CleanedData
    GROUP BY
        Edad
    ORDER BY
        Edad;
END;
```

Ejercicio 2

Creación de ETL



Orígenes de datos

Columnas externas disponibles		
<input checked="" type="checkbox"/>	Nombre	
<input checked="" type="checkbox"/>	Country	
<input checked="" type="checkbox"/>	AveragScore	
<input checked="" type="checkbox"/>	SafetySecurity	
<input checked="" type="checkbox"/>	PersonelFreedom	
<input checked="" type="checkbox"/>	Governance	
<input checked="" type="checkbox"/>	SocialCapital	
<input checked="" type="checkbox"/>	InvestmentEnvironment	

Columna externa	Columna de salida
Country	Country
AveragScore	AveragScore
SafetySecurity	SafetySecurity
PersonelFreedom	PersonelFreedom
Governance	Governance
SocialCapital	SocialCapital
InvestmentEnvironment	InvestmentEnvironment
EnterpriseConditions	EnterpriseConditions
MarketAccessInfrastructure	MarketAccessInfrastructure

<div> <div>Columnas externas di...</div> <div> <input checked="" type="checkbox"/> Nombre <input checked="" type="checkbox"/> nombre <input checked="" type="checkbox"/> name <input checked="" type="checkbox"/> nom <input checked="" type="checkbox"/> iso2 <input checked="" type="checkbox"/> iso3 <input checked="" type="checkbox"/> phone_code </div> </div>	
Columna externa	Columna de salida
nombre	nombre
name	name
nom	nom
iso2	iso2
iso3	iso3
phone_code	phone_code
continente	continente

Conversión de datos

<div> <div>Columnas de entrada dispo...</div> <div> <input checked="" type="checkbox"/> Nombre <input type="checkbox"/> Country <input checked="" type="checkbox"/> AveragScore <input checked="" type="checkbox"/> SafetySecurity <input checked="" type="checkbox"/> PersonelFreedom <input checked="" type="checkbox"/> Governance </div> </div>						
Input Column	Output Alias	Data Type	Length	Precision	Scale	Code Pag
AveragScore	Copy of AveragScore	decimal [DT_DECIMAL]			0	
SafetySecurity	Copy of SafetySecurity	decimal [DT_DECIMAL]			0	
PersonelFreedom	Copy of PersonelFree...	decimal [DT_DECIMAL]			0	
Governance	Copy of Governance	decimal [DT_DECIMAL]			0	
SocialCapital	Copy of SocialCapital	decimal [DT_DECIMAL]			0	
InvestmentEnvironment	Copy of InvestmentEn...	decimal [DT_DECIMAL]			0	
EnterpriseConditions	Copy of EnterpriseCo...	decimal [DT_DECIMAL]			0	
MarketAccessInfrastru...	Copy of MarketAccess...	decimal [DT_DECIMAL]			0	
EconomicQuality	Copy of EconomicQu...	decimal [DT_DECIMAL]			0	

Orden de orígenes de datos

Sort Transformation Editor

Specify the columns to sort, and set their sort type and their sort order. All nonselected columns are copied unchanged.

Columnas de entrada disponibles

<input type="checkbox"/>	Nombre	Paso a través
<input checked="" type="checkbox"/>	Country	<input type="checkbox"/>
<input type="checkbox"/>	AveragScore	<input checked="" type="checkbox"/>
<input type="checkbox"/>	SafetySecurity	<input checked="" type="checkbox"/>
<input type="checkbox"/>	PersonelFreedom	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Governance	<input checked="" type="checkbox"/>

Input Column	Output Alias	Sort Type	Sort Order	Con
Country	Country	ascending	1	

☐ Remove rows with duplicate sort values

OK

Cancel

Ayuda

Columnas de entrada disponibles

<input checked="" type="checkbox"/>	Nombre	Paso a través
<input type="checkbox"/>	nombre	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	name	<input checked="" type="checkbox"/>
<input type="checkbox"/>	nom	<input type="checkbox"/>
<input type="checkbox"/>	iso2	<input type="checkbox"/>
<input type="checkbox"/>	iso3	<input type="checkbox"/>

Input Column	Output Alias	Sort Type	Sort Order	Con
name	name	ascending	1	

Unificación de datos

Join type: Inner join

Swap Inputs

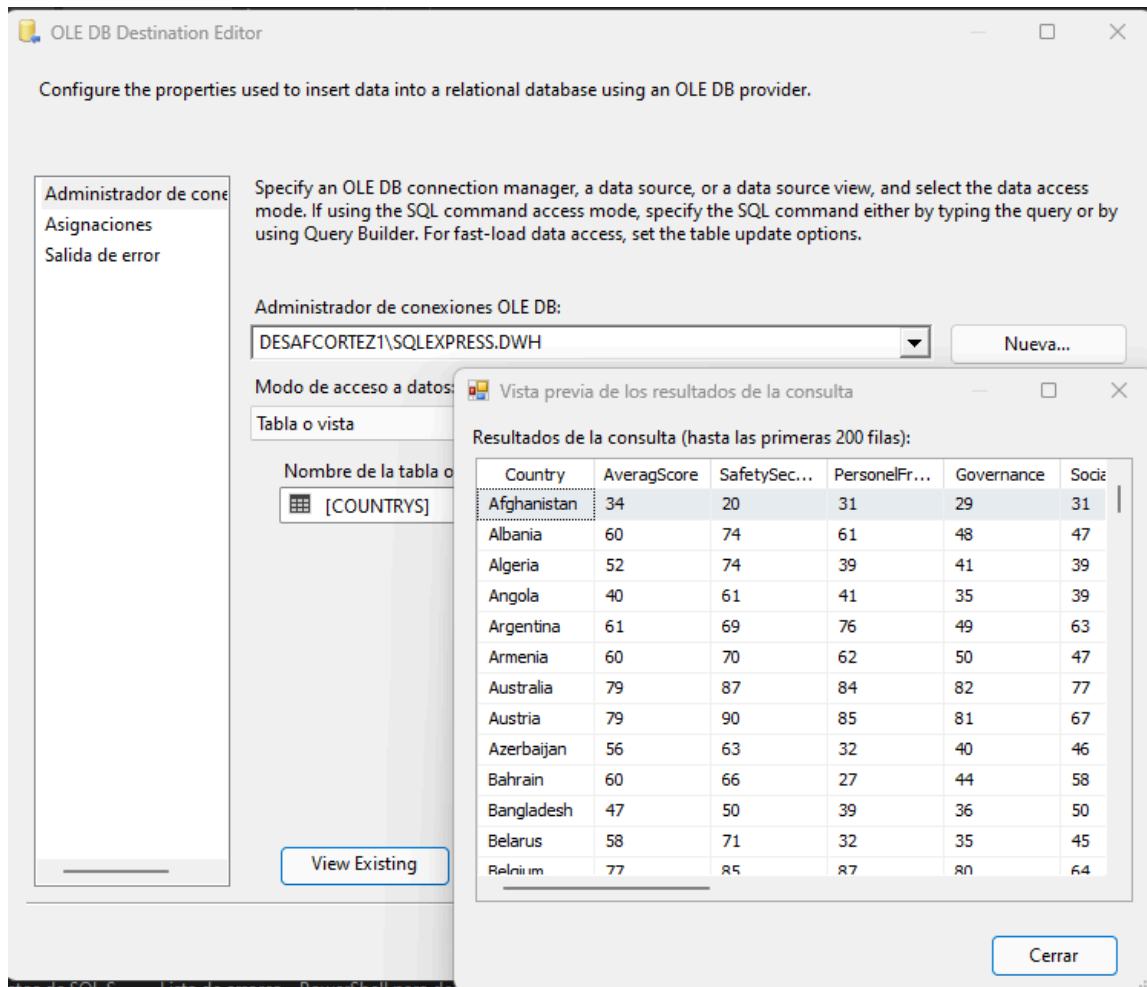
ORDENAR PAISES

<input checked="" type="checkbox"/>	Nombre	Orden	Clave...
<input checked="" type="checkbox"/>	Country	1	<input checked="" type="checkbox"/>
<input type="checkbox"/>	AveragScore	0	<input type="checkbox"/>
<input type="checkbox"/>	SafetySecurity	0	<input type="checkbox"/>
<input type="checkbox"/>	PersonelFreedom	0	<input type="checkbox"/>
<input type="checkbox"/>	Governance	0	<input type="checkbox"/>

ORDENAR CONTINENTES

<input checked="" type="checkbox"/>	Nombre	Orden	Clave...
<input type="checkbox"/>	nombre	0	<input type="checkbox"/>
<input type="checkbox"/>	name	1	<input checked="" type="checkbox"/>

Destino de datos



Consulta de estadísticas

SQLQuery4.sql - DESAFCORTEZ1\FINSA\Fcortez (70) - X

```
--Analizar cuáles países tienen las mejores condiciones de vida
SELECT Country, AveragScore
FROM [DWH].[dbo].[COUNTRYS]
ORDER BY AveragScore DESC;

--Comparar la seguridad y libertad personal por país
SELECT Country, SafetySecurity, PersonelFreedom
FROM [DWH].[dbo].[COUNTRYS]
ORDER BY SafetySecurity DESC, PersonelFreedom DESC;

--Calcular el promedio de estas puntuaciones por continente
SELECT Continente,
       AVG(AveragScore) AS AvgAveragScore,
       AVG(SafetySecurity) AS AvgSafetySecurity,
       AVG(PersonelFreedom) AS AvgPersonelFreedom
FROM [DWH].[dbo].[COUNTRYS]
GROUP BY Continente;
```

Results

Country	AveragScore
Denmark	84
Finland	83
Norway	83

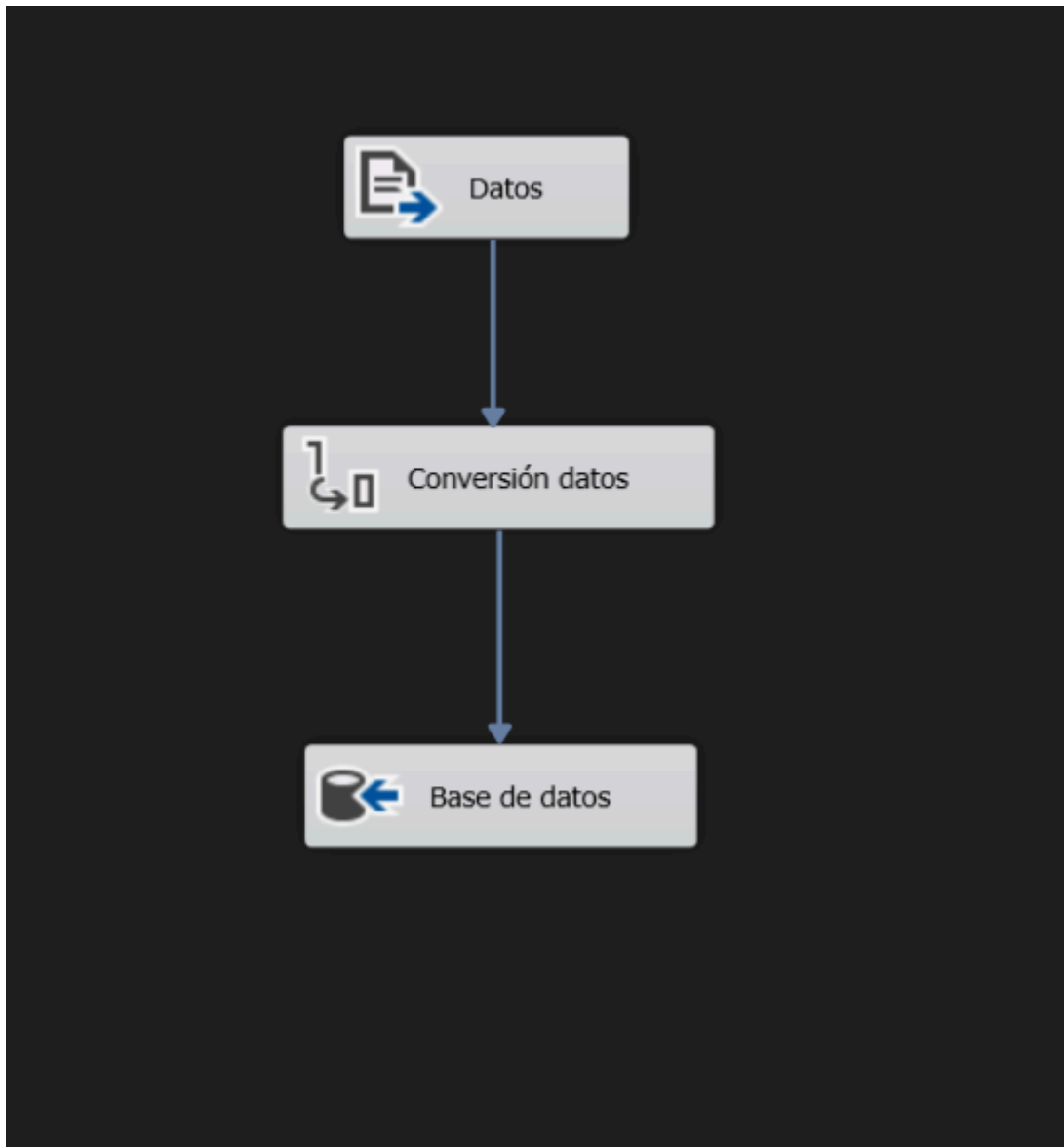
Country	SafetySecurity	PersonelFreedom
Luxembourg	96	89
Switzerland	95	87
Norway	93	94

Continente	AvgAveragScore	AvgSafetySecurity	AvgPersonelFreedom
Africa	46.120000	57.700000	47.580000
América	58.192307	64.153846	62.923076
Asia	57.441860	64.534883	43.465116
Australia ...	68.333333	78.000000	78.333333
Europa	72.102564	83.512820	76.051282

Query executed successfully. DESAFCORTEZ1\SQLEXPRESS (16...) REDSERFINSA\Fcortez (70) DWH 00:00:00 327 rows

Ejercicio 3

Data flow



Carga de datos desde el csv

Flat File Source Editor

Configure the properties used to connect to and obtain data from a text file.

Connection Manager
Columnas
Salida de error

Columnas externas dis...

<input checked="" type="checkbox"/>	Nombre
<input checked="" type="checkbox"/>	Columna 0
<input checked="" type="checkbox"/>	userName
<input checked="" type="checkbox"/>	content
<input checked="" type="checkbox"/>	score
<input checked="" type="checkbox"/>	thumbsUpCount
<input checked="" type="checkbox"/>	at

Columna externa	Columna de salida
Columna 0	Columna 0
userName	userName
content	content
score	score
thumbsUpCount	thumbsUpCount
at	at

< >

Aceptar Cancelar Ayuda

Conversión de datos

Data Conversion Transformation Editor

Configure the properties used to convert the data type of an input column to a different data type. Depending on the data type to which the column is converted, set the length, precision, scale, and code page of the column.

Columnas de entrada dis...

- ☒ Nombre
- ☒ Columna 0
- ☒ userName
- ☒ content
- ☒ score
- ☒ thumbsUpCount
- ☒ at

Input Column	Output Alias	Data Type	Length	Precision	Scale
Columna 0	index	four-byte signed integer [DT_I4]			
userName	Copy of userName	string [DT_STR]	50		
score	Copy of score	four-byte signed integer [DT_I4]			
thumbsUpCount	Copy of thumbsUpC...	four-byte signed integer [DT_I4]			
at	Copy of at	database timestamp [DT_DBTIMESTAMP]			
content	Copy of content	text stream [DT_TEXT]			

< >

Configure Error Output...

OK

Cancel

Ayuda

Carga de datos

OLE DB Destination Editor

Configure the properties used to insert data into a relational database using an OLE DB provider.

Administrador de co
Asignaciones
Salida de error

Columnas de entrada dispo...

Nombre
score
thumbsUpCount
at
index
Copy of userN...
Copy of score
Copy of thumb...
Copy of at
Copy of content

Columnas de destino disp...

Nombre
index
contenido
puntaje
me_gusta
fecha
usuario

Columna de entrada	Columna de destino
index	index
Copy of content	contenido
Copy of score	puntaje
Copy of thumbsUpCount	me_gusta
Copy of at	fecha
Copy of userName	usuario

Aceptar Cancelar Ayuda

Selección de datos general

The screenshot shows a SQL IDE with a query window and a results window. The query is as follows:

```
-- Selección de datos general
SELECT * FROM feedback;

-- Agrupación de puntajes con datos de me gustas
WITH total_registros AS (
    SELECT
        COUNT(*) AS total
    FROM
        feedback
)
SELECT
    puntaje as 'Puntaje',
    COUNT(*) AS 'Total',
    SUM(me_gusta) AS 'Cantidad de me gustas',
    FORMAT((COUNT(*) * 100.0) / (SELECT total FROM total_registros), 'N2') AS 'Porcentaje (%)'
FROM
    feedback
```

The results window displays a table with the following data:

index	contenido	puntaje	me_gusta	fecha	usuario	
1	0	excellent Im impressed ?? ??	5	0	2024-06-28 21:07:00.000	T H (Trudyh20)
2	1	perfect	5	0	2024-06-28 20:56:00.000	Muhammad bassam adam
3	2	its been so helpful...love it	5	0	2024-06-28 20:54:00.000	Chinaza Okoli
4	3	It's amazing tools help me a lot with my work.	5	0	2024-06-28 20:51:00.000	Project House Group Ltd
5	4	I enjoyed ChatGPT. But last update ruined everyth...	1	0	2024-06-28 20:50:00.000	Safoan Riyad
6	5	this is the best app I've ever seen!!!	5	0	2024-06-28 20:45:00.000	LEISHA PALLETT
7	6	very Nice app	5	0	2024-06-28 20:41:00.000	M Rizwan
8	7	Your guidance is really great and you can answer...	5	0	2024-06-28 20:39:00.000	Mehdi Hajavi
9	8	This app is very important but sometimes it gives L...	4	0	2024-06-28 20:35:00.000	Habimana Therese
10	9	Absolutely fantastic app. ChatGPT is such a versat...	5	0	2024-06-28 20:29:00.000	Xia Bij
11	10	Great insights	5	0	2024-06-28 20:28:00.000	Sylvia Geoffrey
12	11	Wonderful app, i just aastonished. love this app...	5	0	2024-06-28 20:26:00.000	Shahidatun jannat
13	12	Ferramenta ótima, de resposta fácil e eficaz. Sup...	5	0	2024-06-28 20:25:00.000	Bruno Simões
14	13	great, but sometimes provides wrong.	4	0	2024-06-28 20:17:00.000	Nabillah Masnun
15	14	good	1	0	2024-06-28 20:09:00.000	Haroondiamond
16	15	Superb Apk	5	0	2024-06-28 20:06:00.000	Al'amin Ahmad
17	16	Anymore I try to get the app to work. It tells me "an...	2	0	2024-06-28 19:55:00.000	Rawan R

Query executed successfully. DESKTOP-U84PO74 (16.0 RTM) DESKTOP-U84PO74\Firear... ejercicio3 00:00:01 149,719 rows

Selección de registros con suma de puntajes y porcentajes equivalentes

The screenshot shows a SQL IDE with a query window and a results window. The query is as follows:

```
-- Agrupación de puntajes con datos de me gustas
WITH total_registros AS (
    SELECT
        COUNT(*) AS total
    FROM
        feedback
)
SELECT
    puntaje as 'Puntaje',
    COUNT(*) AS 'Total',
    SUM(me_gusta) AS 'Cantidad de me gustas',
    FORMAT((COUNT(*) * 100.0) / (SELECT total FROM total_registros), 'N2') AS 'Porcentaje (%)'
FROM
    feedback
GROUP BY
    puntaje
ORDER BY
    puntaje;
```

The results window displays a table with the following data:

Puntaje	Total	Cantidad de me gustas	Porcentaje (%)
1	9555	7710	6.38
2	2589	4552	1.73
3	6256	8872	4.18
4	17581	11583	11.74
5	113738	37085	75.97

Query executed successfully. DESKTOP-U84PO74 (16.0 RTM) DESKTOP-U84PO74\Firear... ejercicio3 00:00:00 5 rows

Procedimiento con detalles estadísticos

```
-- Tendencia de datos
CREATE PROCEDURE ObtenerTendenciaAvaluaciones
AS
BEGIN
    -- Media (Promedio) del Puntaje
    SELECT
        AVG(puntaje) AS promedio_puntaje
    FROM
        feedback;

    -- Mediana del Puntaje
    SELECT
        AVG(puntaje) AS mediana_puntaje
    FROM (
        SELECT
            puntaje
        FROM
            feedback
        ORDER BY
            puntaje
        OFFSET ((SELECT COUNT(*) FROM feedback) - 1) / 2 ROWS
        FETCH NEXT 2 ROWS ONLY
    ) AS subquery;

    -- Modo del puntaje
    SELECT TOP 1
        puntaje,
        COUNT(*) AS frecuencia
    FROM
        feedback
    GROUP BY
        puntaje
    ORDER BY
        frecuencia DESC;

    -- Evolución del Puntaje a lo Largo del Tiempo
    SELECT
        CAST fecha AS DATE AS fecha, -- Agrupa por día; ajusta según el período deseado
        AVG(puntaje) AS promedio_puntaje
    FROM
        feedback
    GROUP BY
        CAST fecha AS DATE
    ORDER BY
        fecha;
END;

EXEC obtenerTendenciaAvaluaciones
```

68 %

Results Messages

Query executed successfully. DESKTOP-U84PO74 (16.0 RTM) DESKTOP-U84PO74\Firear... ejercicio3 00:00:00 337 rows

Resultado de ejecución

68 %

Results Messages

promedio_puntaje	
1	4

mediana_puntaje	
1	5

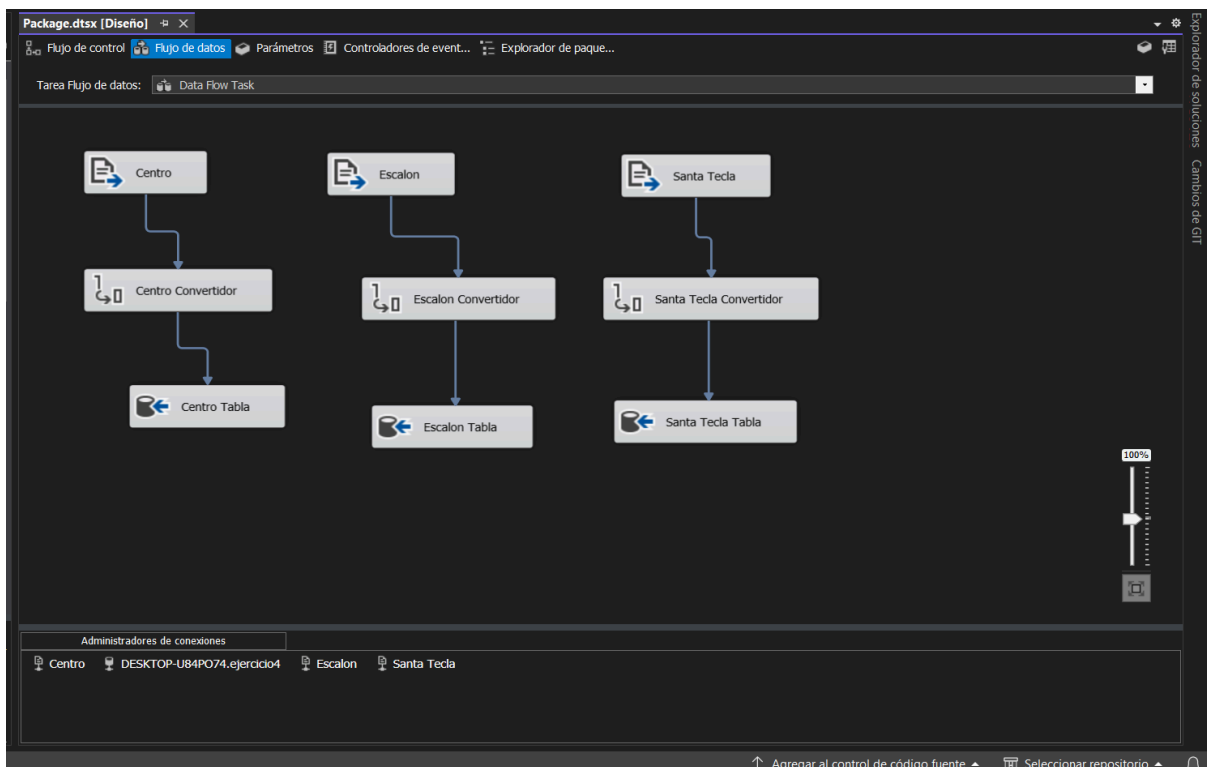
puntaje	frecuencia
5	113738

fecha	promedio_puntaje
2023-07-25	4
2023-07-26	4
2023-07-27	4
2023-07-28	4
2023-07-29	4
2023-07-30	4
2023-07-31	4
2023-08-01	4
2023-08-02	4
2023-08-03	4
2023-08-04	4
2023-08-05	3
2023-08-06	3
2023-08-07	3
2023-08-08	3
2023-08-09	4
2023-08-10	4
2023-08-11	4
2023-08-12	4
2023-08-13	4
2023-08-14	4
2023-08-15	4
2023-08-16	4
2023-08-17	4
2023-08-18	4
2023-08-19	4
2023-08-20	4
2023-08-21	4
2023-08-22	4

Query executed successfully. DESKTOP-U84PO74 (16.0 RTM) DESKTOP-U84PO74\Firear... ejercicio3 00:00:00 337 rows

Ejercicio 4

Data flow general



Obtención de datos (Igual para los tres casos)

Flat File Source Editor

Configure the properties used to connect to and obtain data from a text file.

Connection Manager: **Columnas**

Salida de error


Columnas externa...

- ☒ Nombre
- ☒ nombre
- ☒ Sexo
- ☒ ingresos
- ☒ PromVisit
- ☒ Edad
- ☒ Sauna
- ☒ Masaje
- ☒ Hidro
- ☒ Yoga

Columna externa	Columna de salida
nombre	nombre
Sexo	Sexo
ingresos	ingresos
PromVisit	PromVisit
Edad	Edad
Sauna	Sauna
Masaje	Masaje
Hidro	Hidro
Yoga	Yoga

Aceptar Cancelar Ayuda

Conversión de datos (Igual en los tres casos)

 Data Conversion Transformation Editor

Configure the properties used to convert the data type of an input column to a different data type. Depending on the data type to which the column is converted, set the length, precision, scale, and code page of the column.

Columnas de entrada...

- ☒ Nombre
- ☒ nombre
- ☒ Sexo
- ☒ ingresos
- ☒ PromVisit
- ☒ Edad
- ☒ Sauna
- ☒ Masaje
- ☒ Hidro
- ☒ Yoga

Input Column	Output Alias	Data Type	Length	Precision	Scale	Code Page
nombre	Copy of nombre	string [DT_STR]	50			1252 (ANS)
Sexo	Copy of Sexo	Boolean [DT_BOOL]				
ingresos	Copy of ingresos	numeric [DT_NUMERIC]		18	2	
PromVisit	Copy of PromVisit	numeric [DT_NUMERIC]		18	2	
Edad	Copy of Edad	four-byte signed integ...				
Sauna	Copy of Sauna	Boolean [DT_BOOL]				
Masaje	Copy of Masaje	Boolean [DT_BOOL]				
Hidro	Copy of Hidro	Boolean [DT_BOOL]				
Yoga	Copy of Yoga	Boolean [DT_BOOL]				

< >

Configure Error Output... OK Cancel Ayuda

Asignación de datos (Idéntico en los tres procesos)

OLE DB Destination Editor

Configure the properties used to insert data into a relational database using an OLE DB provider.

Administrador de co
Asignaciones
Salida de error

Columnas de entra...

Nombre
Masaje
Hidro
Yoga
Copy of nombre
Copy of Sexo
Copy of ingres...
Copy of Prom...
Copy of Edad
Copy of Sauna
Copy of Masaje
Copy of Hidro
Copy of Yoga

Columnas de destin...

Nombre
id
nombre
sexo
ingresos
promedio_visitas
edad
sauna
masaje
hidro
yoga

Columna de entrada	Columna de destino
<omitir>	id
Copy of nombre	nombre
Copy of Sexo	sexo
Copy of ingresos	ingresos
Copy of PromVisit	promedio_visitas
Copy of Edad	edad
Copy of Sauna	sauna
Copy of Masaje	masaje
Copy of Hidro	hidro
Copy of Yoga	yoga

< >

Aceptar Cancelar Ayuda

Creación de tablas

```
--USE ejercicio4;

CREATE TABLE centro (
  id INT IDENTITY(1,1) PRIMARY KEY,
  nombre VARCHAR(255),
  ingresos DECIMAL(18, 2),
  promedio_visitas DECIMAL(18, 2),
  edad INT,
  sauna BIT,
  masaje BIT,
  hidro BIT,
  yoga BIT
);

CREATE TABLE escalon (
  id INT IDENTITY(1,1) PRIMARY KEY,
  nombre VARCHAR(255),
  ingresos DECIMAL(18, 2),
  promedio_visitas DECIMAL(18, 2),
  edad INT,
  sauna BIT,
  masaje BIT,
  hidro BIT,
  yoga BIT
);

CREATE TABLE santa_tecla (
  id INT IDENTITY(1,1) PRIMARY KEY,
  nombre VARCHAR(255),
  ingresos DECIMAL(18, 2),
  promedio_visitas DECIMAL(18, 2),
  edad INT,
  sauna BIT,
  masaje BIT,
  hidro BIT,
  yoga BIT
);
```

83 %

Messages

Command completed successfully.

Completion time: 2024-09-16T09:41:40.860000-06:00

83 %

Query executed successfully.

DESKTOP-U84P074 (16.0 RTM) | DESKTOP-U84P074\Firear... | ejercicio4 | 00:00:00 | 0 rows

Ln 31 Col 37 Ch 37 INS

Ejecución de procedimientos Conteo por grupo

```
--USE ejercicio4;

) AS Unida
GROUP BY
  sauna, masaje, hidro, yoga;

END

RETURN;
END;

-- Uso
SELECT * FROM ConteoPorGrupo(0);
SELECT * FROM ConteoPorGrupo(1);
```

133 %

Results Messages

	Tabla	sauna	masaje	hidro	yoga	cantidad_personas
1	centro	0	0	0	0	2
2	centro	0	0	1	1	1
3	centro	0	1	0	0	3
4	centro	0	1	0	1	2
5	centro	0	1	1	0	2
6	centro	0	1	1	1	1
7	centro	1	0	0	0	3
8	centro	1	0	0	1	1
9	centro	1	0	1	0	1
10	centro	1	1	0	0	15
11	centro	1	1	0	1	7
12	centro	1	1	1	0	10
13	centro	1	1	1	1	2
14	sant...	0	0	0	0	29
15	sant...	0	0	0	1	54
16	sant...	0	0	1	0	11
17	sant...	0	0	1	1	10
18	sant...	0	1	0	0	34
19	sant...	0	1	0	1	38

Query executed successfully.

DESKTOP-U84P074 (16.0 RTM) | DESKTOP-U84P074\Firear... | ejercicio4 | 00:00:00 | 45 rows

Promedio por grupos

```
-- Consultas
SELECT * FROM PromedioPorGrupo(0);
SELECT * FROM PromedioPorGrupo(1);

-- Conteo por actividad

CREATE FUNCTION ConteoPorActividad (@Separado BIT)
RETURNS @Resultado TABLE
(
    Tabla NVARCHAR(50),

```

133 %

Results Messages

	Tabla	sauna	masaje	hidro	yoga	promedio_ingresos	promedio_edad
1	centro	0	0	0	0	1939.02	38.00
2	centro	0	0	1	1	2749.35	41.00
3	centro	0	1	0	0	1617.95	35.00
4	centro	0	1	0	1	1573.06	28.00
5	centro	0	1	1	0	1834.42	48.00
6	centro	0	1	1	1	1945.28	47.00
7	centro	1	0	0	0	1834.08	33.00
8	centro	1	0	0	1	2457.09	64.00
9	centro	1	0	1	0	699.14	34.00
10	centro	1	1	0	0	1977.04	45.00
11	centro	1	1	0	1	1484.04	43.00
12	centro	1	1	1	0	1608.64	45.00
13	centro	1	1	1	1	1214.32	55.00
14	santa_tecia	0	0	0	0	1554.98	39.00
15	santa_tecia	0	0	0	1	1679.13	42.00
16	santa_tecia	0	0	1	0	1810.23	38.00
17	santa_tecia	0	0	1	1	1402.54	41.00
18	santa_tecia	0	1	0	0	1641.82	43.00
19	santa_tecia	0	1	0	1	1697.27	43.00

Query executed successfully.

DESKTOP-U84PO74 (16.0 RTM) | DESKTOP-U84PO74\Firear... | ejercicio4 | 00:00:00 | 45 rows

Ln 211 Col 1 Ch 1 INS

Conteo por actividad

```
END

RETURN;
END;

-- Consultas
SELECT * FROM ConteoPorActividad(0);
SELECT * FROM ConteoPorActividad(1);

-- Distribución por la edad

CREATE FUNCTION DistribucionEdadPorActividad (@Separado BIT)
RETURNS @Resultado TABLE

```

133 %

Results Messages

	Tabla	Actividad	personas_actividad
1	centro	Sauna	39
2	santa_tecia	Sauna	51
3	escalon	Sauna	194
4	centro	Masaje	42
5	santa_tecia	Masaje	124
6	escalon	Masaje	200
7	centro	Hidro	17
8	santa_tecia	Hidro	55
9	escalon	Hidro	199
10	centro	Yoga	14
11	santa_tecia	Yoga	148
12	escalon	Yoga	199

Query executed successfully.

DESKTOP-U84PO74 (16.0 RTM) | DESKTOP-U84PO74\Firear... | ejercicio4 | 00:00:00 | 12 rows

Distribución por actividad

The screenshot shows a SQL query window with the following code:

```
RETURN;  
END;  
  
-- Consultas  
SELECT * FROM DistribucionEdadPorActividad(0);  
SELECT * FROM DistribucionEdadPorActividad(1);  
  
-- Combinaciones  
CREATE FUNCTION CombinacionMasComun (@Separado BIT)  
RETURNS @Resultado TABLE  
(  
  Tabla  
  Actividad  
  promedio_edad  
)
```

The Results pane displays two tables. The first table shows the distribution of average age by activity for each location. The second table shows the combination of location and activity with the most common average age.

Tabla	Actividad	promedio_edad
Unida	Sauna	42.00
Unida	Masaje	43.00
Unida	Hidro	42.00
Unida	Yoga	42.00

Tabla	Actividad	promedio_edad
centro	Sauna	44.00
santa_tecia	Sauna	41.00
escalon	Sauna	42.00
centro	Masaje	44.00
santa_tecia	Masaje	42.00
escalon	Masaje	43.00
centro	Hidro	46.00
santa_tecia	Hidro	39.00
escalon	Hidro	43.00
centro	Yoga	44.00
santa_tecia	Yoga	42.00

Query executed successfully. DESKTOP-U84PO74 (16.0 RTM) DESKTOP-U84PO74\Firear... ejercicio4 00:00:00 16 rows

Por combinaciones

The screenshot shows a SQL query window with the following code:

```
RETURN;  
END;  
  
-- Consultas  
SELECT * FROM CombinacionMasComun(0);  
SELECT * FROM CombinacionMasComun(1);
```

The Results pane displays a table showing the combination of location and activity with the most common average age.

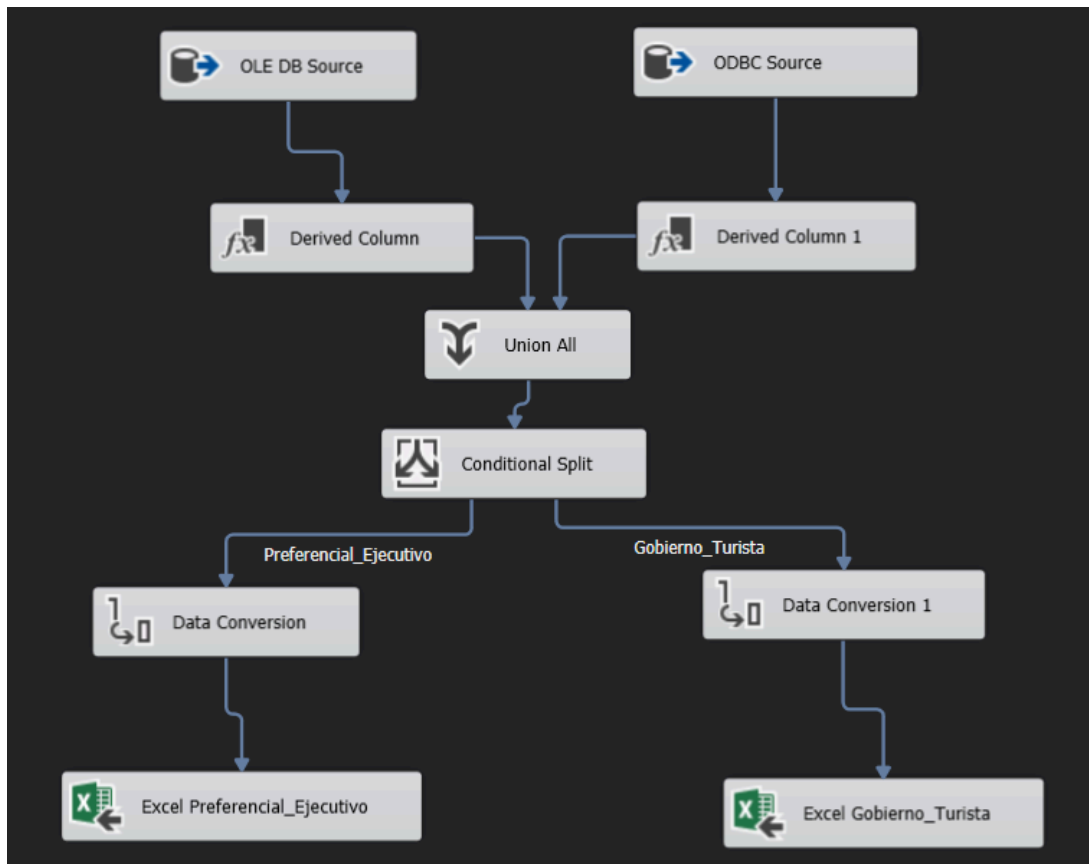
Tabla	sauna	masaje	hidro	yoga	cantidad_personas
centro	1	1	0	0	15
santa_tecia	0	0	0	1	54
escalon	0	0	0	0	39

Query executed successfully. DESKTOP-U84PO74 (16.0 RTM) DESKTOP-U84PO74\Firear... ejercicio4 00:00:00 3 rows

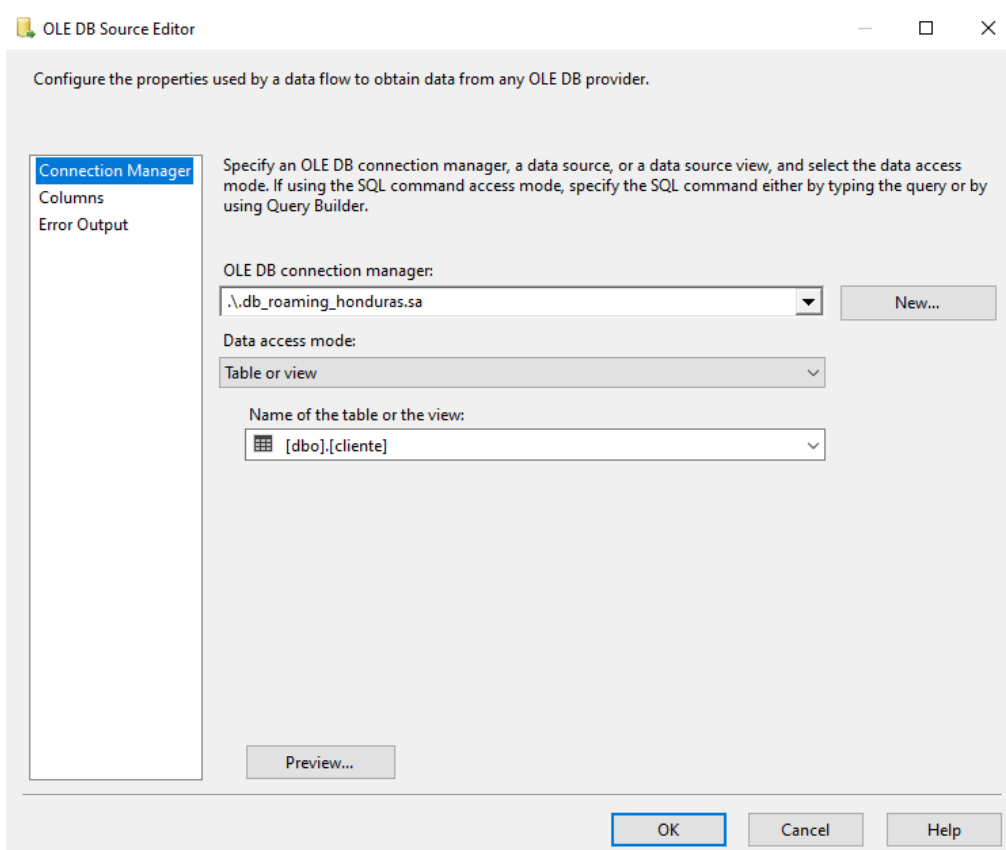
Ejercicio 5

Ejercicio 6

- Data flow general



- SQL SERVER



Configure the properties used by a data flow to obtain data from any OLE DB provider.

Connection Manager

Columns

Error Output

Available External Columns

- ☒ Name
- ☒ codigo_cliente
- ☒ dui
- ☒ nit
- ☒ apellidos
- ☒ nombres
- ☒ sexo
- ☒ numero_telef...
- ☒ estado

External Column	Output Column
idcliente	idcliente
idtipocliente	idtipocliente
codigo_cliente	codigo_cliente
dui	dui
nit	nit
apellidos	apellidos
nombres	nombres
sexo	sexo
numero_telefono	numero_telefono
estado	estado

● MYSQL SERVER

ODBC Source Editor

Configure the properties used by a data flow to obtain data from any ODBC provider.

Connection Manager

Columns

Error Output

Specify an ODBC connection manager, a data source, or a data source view, and select the data access mode. If using the SQL command access mode, specify the SQL command by typing the query.

ODBC connection manager:

localhost.db_roaming_costarica.root

New...

Data access mode:

Table Name

Name of the table or the view:

cliente

Preview...

Configure the properties used by a data flow to obtain data from any ODBC provider.

Connection Manager
Columns
Error Output

Available External Columns

- ☒ Name
- ☒ idcliente
- ☒ idtipocliente
- ☒ codigo_cliente
- ☒ dui
- ☒ nit
- ☒ apellidos
- ☒ nombres

External Column	Output Column
idcliente	idcliente
idtipocliente	idtipocliente
codigo_cliente	codigo_cliente
dui	dui
nit	nit
apellidos	apellidos
nombres	nombres
sexo	sexo
numero_telefono	numero_telefono
estado	estado

- Derived column Transformation SQL y MYSQL.

Specify the expressions used to create new column values, and indicate whether the values update existing columns or populate new columns.

+

 Variables and Parameters

+

 Columns

+

 Mathematical Functions

+

 String Functions

+

 Date/Time Functions

+

 NULL Functions

+

 Type Casts

+

 Operators

Description:

Derived Column Name	Derived Column	Expression	Data Type	Length
codigo_pais	<add as new column>	SUBSTRING(codigo_cliente,1,2)	Unicode string [DT_WS...	2

Derived Column Transformation Editor

Specify the expressions used to create new column values, and indicate whether the values update existing columns or populate new columns.

+

 Variables and Parameters

+

 Columns

+

 Mathematical Functions

+

 String Functions

+

 Date/Time Functions

+

 NULL Functions

+

 Type Casts

+

 Operators


Description:

Union All Transformation Editor

Configure the properties used to merge multiple inputs into one output by creating mappings between columns.

Output Column Name	Union All Input 1	Union All Input 2
idcliente	idcliente	idcliente
idtipocliente	idtipocliente	idtipocliente
codigo_cliente	codigo_cliente	ODBC Source.codigo_cliente
dui	dui	dui
nit	nit	nit
apellidos	apellidos	apellidos
nombres	nombres	nombres
sexo	sexo	sexo
numero_telefono	numero_telefono	numero_telefono
estado	estado	estado
codigo_pais	codigo_pais	Derived Column 1.codigo_cliente

• Conditional Split

 Conditional Split Transformation Editor — □ ×

Specify the conditions used to direct input rows to specific outputs. If an input row matches no condition, the row is directed to a default output.

+

 Variables and Parameters

+

 Columns

+

 Mathematical Functions

+

 String Functions

+

+

+

+

Description:


↑

↓

Default output name:

Conditional Split Default Output

• Data Conversion.

 Data Conversion Transformation Editor

Configure the properties used to convert the data type of an input column to a different data type. Depending on the data type to which the column is converted, set the length, precision, scale, and code page

Available Input Columns

- ☒ Name
- ☒ idcliente
- ☒ idtipocliente
- ☒ codigo_cliente
- ☒ dui
- ☒ nit

Input Column	Output Alias	Data Type	Length	Precision	Scale	Code Page
idcliente	Copy of idcliente	Unicode string [DT_WSTR]	50			
idtipocliente	Copy of idtipocliente	Unicode string [DT_WSTR]	50			
codigo_cliente	Copy of codigo_cliente	Unicode string [DT_WSTR]	50			
dui	Copy of dui	Unicode string [DT_WSTR]	9			
nit	Copy of nit	Unicode string [DT_WSTR]	14			
apellidos	Copy of apellidos	Unicode string [DT_WSTR]	250			
nombres	Copy of nombres	Unicode string [DT_WSTR]	250			
sexo	Copy of sexo	Unicode string [DT_WSTR]	1			
numero_telefono	Copy of numero_telef...	Unicode string [DT_WSTR]	50			
estado	Copy of estado	Unicode string [DT_WSTR]	1			
codigo_pais	Copy of codigo_pais	Unicode string [DT_WSTR]	2			

 Data Conversion Transformation Editor

Configure the properties used to convert the data type of an input column to a different data type. Depending on the data type to which the column is converted, set the length, precision, scale, and code page of the column.

Available Input Columns

- ☒ Name
- ☒ idcliente
- ☒ idtipocliente
- ☒ codigo_cliente
- ☒ dui
- ☒ nit

Input Column	Output Alias	Data Type	Length	Precision	Scale	Code Page
idcliente	Copy of idcliente	Unicode string [DT_WSTR]	50			
idtipocliente	Copy of idtipocliente	Unicode string [DT_WSTR]	50			
codigo_cliente	Copy of codigo_cliente	Unicode string [DT_WSTR]	15			
dui	Copy of dui	Unicode string [DT_WSTR]	9			
nit	Copy of nit	Unicode string [DT_WSTR]	14			
apellidos	Copy of apellidos	Unicode string [DT_WSTR]	250			
nombres	Copy of nombres	Unicode string [DT_WSTR]	250			
sexo	Copy of sexo	Unicode string [DT_WSTR]	1			
numero_telefono	Copy of numero_telef...	Unicode string [DT_WSTR]	8			
estado	Copy of estado	Unicode string [DT_WSTR]	1			
codigo_pais	Copy of codigo_pais	Unicode string [DT_WSTR]	2			

- Excel Destination.

Excel Destination Editor

Configure the properties that enable the insertion of data via an Excel provider.

Connection Manager

Mappings

Error Output

Specify a connection manager, data source, or data source view for the Excel destination. Then, select the mode used to access data within the destination. After selecting the data access mode, select from among the additional data access options that appear.

Excel connection manager:

Data access mode:

Name of the Excel sheet:

Configure the properties that enable the insertion of data via an Excel provider.

Connection Manager

Mappings

Error Output

Available Input Columns

Available Destination Columns

Input Column	Destination Column
Copy of idcliente	idcliente
Copy of idtipocliente	idtipocliente
Copy of codigo_cliente	codigo_cliente
Copy of dui	dui
Copy of nit	nit
Copy of apellidos	apellidos
Copy of nombres	nombres
Copy of sexo	sexo
Copy of numero_telefono	numero_telefono
Copy of estado	estado
Copy of codigo_pais	codigo_pais