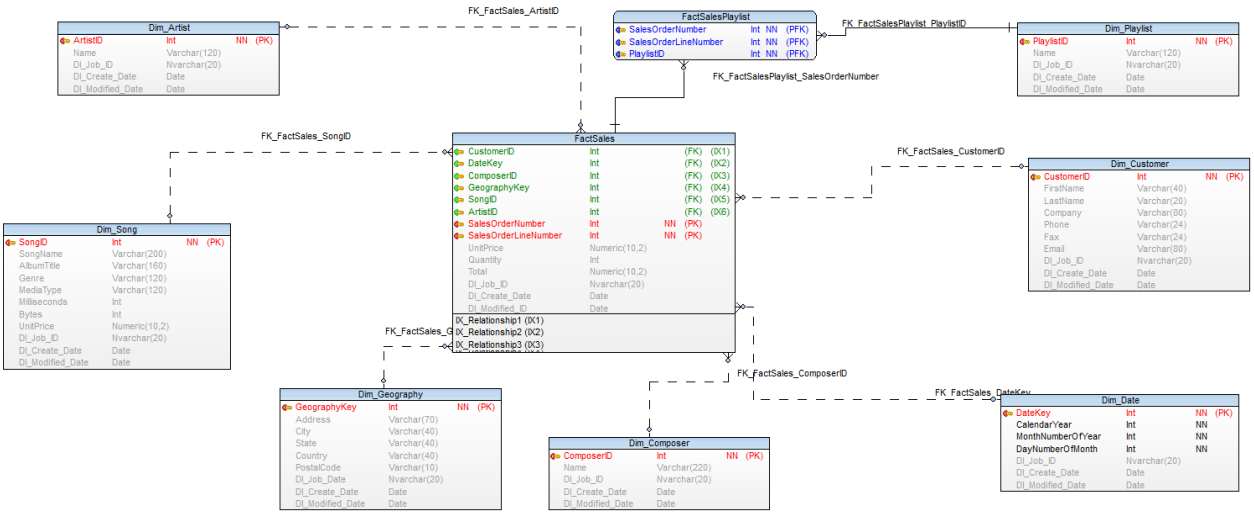
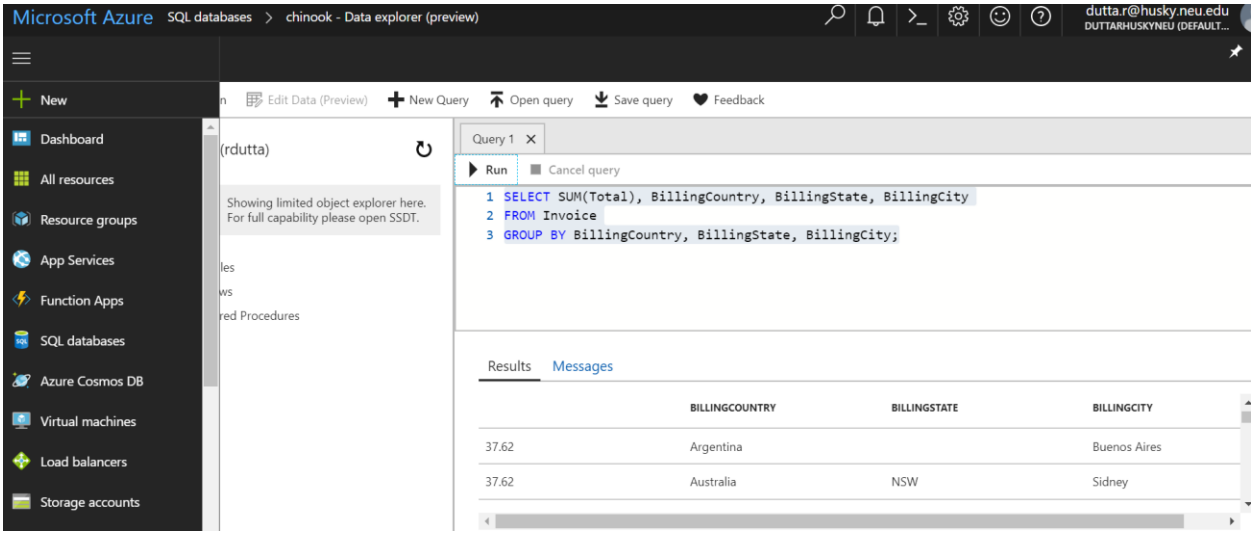
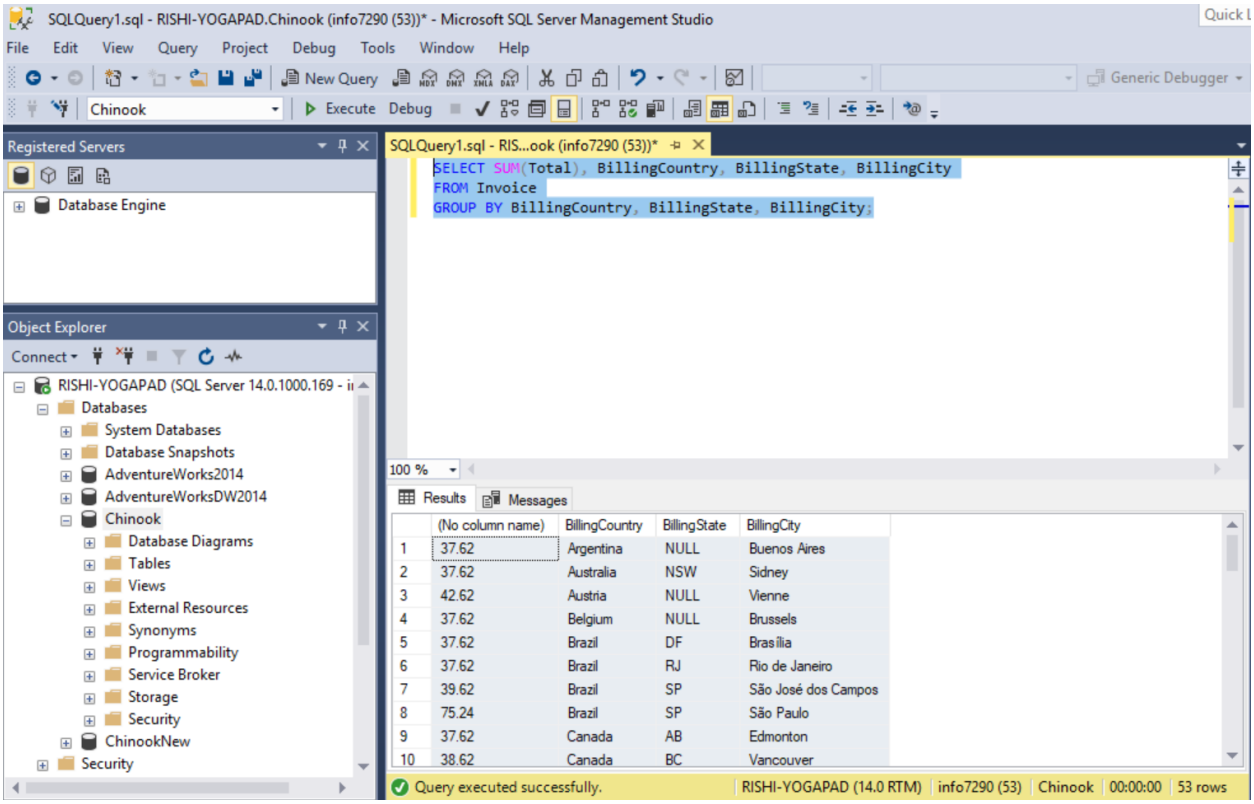
# *Dimension Model of ChinookDW*



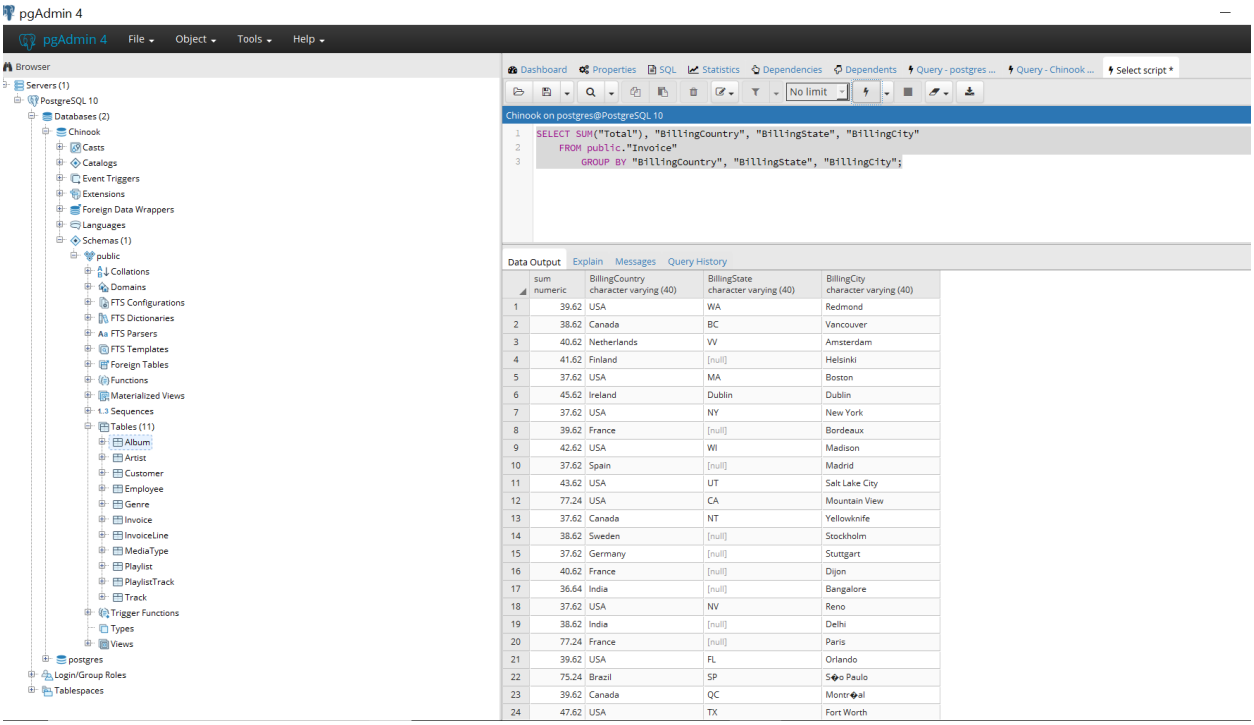

Azure



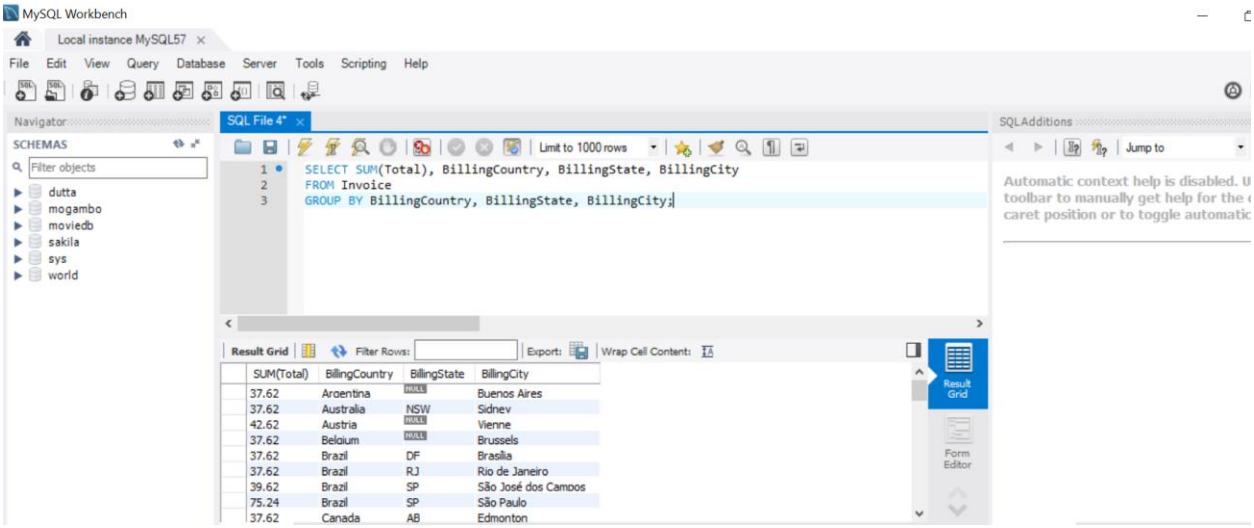

SQL Server


SQLQuery1.sql - RISHI-YOGAPAD.Chinook (info7290 (53))* - Microsoft SQL Server Management Studio
File Edit View Query Project Debug Tools Window Help
New Query
Chinook
Execute Debug
Registered Servers
Database Engine
Object Explorer
Connect
RISHI-YOGAPAD (SQL Server 14.0.1000.169 - i
Databases
System Databases
Database Snapshots
AdventureWorks2014
AdventureWorksDW2014
Chinook
Database Diagrams
Tables
Views
External Resources
Synonyms
Programmability
Service Broker
Storage
Security
ChinookNew
Security
SQLQuery1.sql - RIS...ook (info7290 (53))*
SELECT SUM(Total), BillingCountry, BillingState, BillingCity
FROM Invoice
GROUP BY BillingCountry, BillingState, BillingCity;
100 %
Results
Messages
(No column name) BillingCountry BillingState BillingCity
1 37.62 Argentina NULL Buenos Aires
2 37.62 Australia NSW Sidney
3 42.62 Austria NULL Vienne
4 37.62 Belgium NULL Brussels
5 37.62 Brazil DF Brasília
6 37.62 Brazil RJ Rio de Janeiro
7 39.62 Brazil SP São José dos Campos
8 75.24 Brazil SP São Paulo
9 37.62 Canada AB Edmonton
10 38.62 Canada BC Vancouver
Query executed successfully.
RISHI-YOGAPAD (14.0 RTM) info7290 (53) Chinook 00:00:00 53 rows

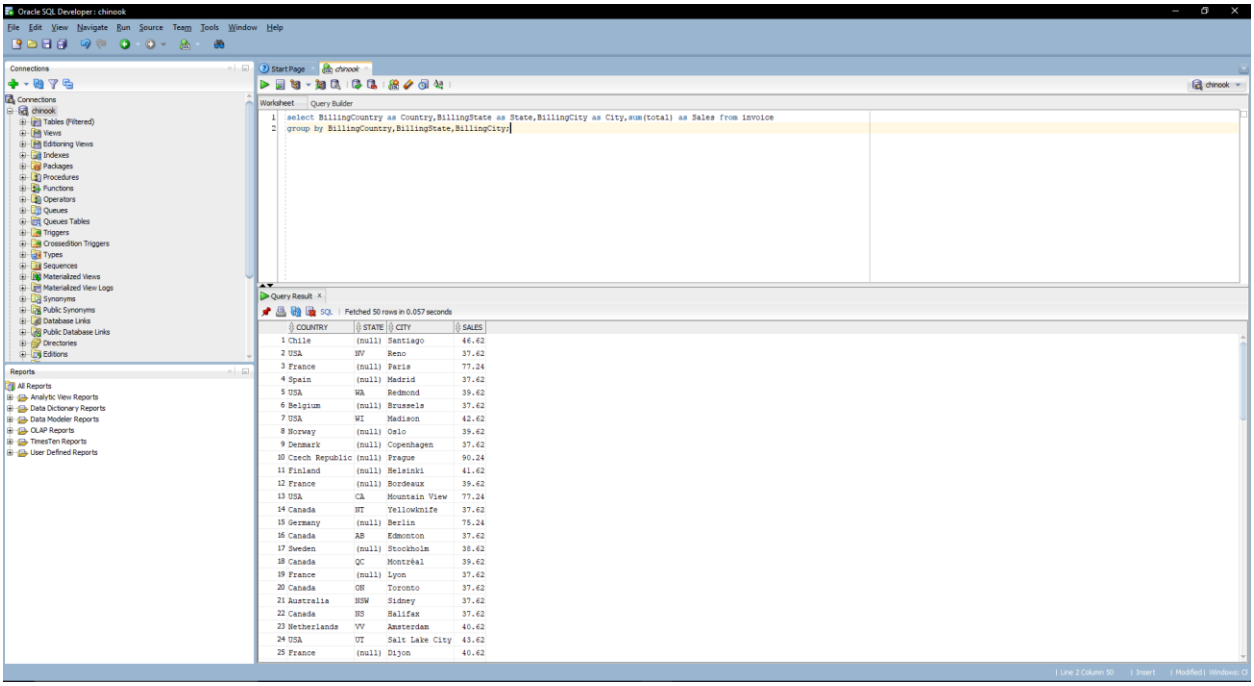
## PostGre


pgAdmin 4
File Object Tools Help
Browser
Servers (1)
PostgreSQL 10
Databases (2)
Chinook
Casts
Catalogs
Event Triggers
Extensions
Foreign Data Wrappers
Languages
Schemas (1)
public
Collations
Domains
FTS Configurations
FTS Dictionaries
FTS Parsers
FTS Templates
Foreign Tables
Functions
Materialized Views
Sequences
Tables (11)
Album
Artist
Customer
Employee
Genre
Invoice
InvoiceLine
MediaType
Playlist
PlaylistTrack
Track
Trigger Functions
Types
Views
postgres
Login/Group Roles
Tablespaces
Dashboard Properties SQL Statistics Dependencies Dependents Query - postgres ... Query - Chinook ... Select script *
No limit
Chinook on postgres@PostgreSQL 10
SELECT SUM("Total"), "BillingCountry", "BillingState", "BillingCity"
FROM public."Invoice"
GROUP BY "BillingCountry", "BillingState", "BillingCity";
Data Output Explain Messages Query History
sum numeric
BillingCountry character varying (40)
BillingState character varying (40)
BillingCity character varying (40)
1 39.62 USA WA Redmond
2 38.62 Canada BC Vancouver
3 40.62 Netherlands VV Amsterdam
4 41.62 Finland [null] Helsinki
5 37.62 USA MA Boston
6 45.62 Ireland Dublin Dublin
7 37.62 USA NY New York
8 39.62 France [null] Bordeaux
9 42.62 USA WI Madison
10 37.62 Spain [null] Madrid
11 43.62 USA UT Salt Lake City
12 77.24 USA CA Mountain View
13 37.62 Canada NT Yellowknife
14 38.62 Sweden [null] Stockholm
15 37.62 Germany [null] Stuttgart
16 40.62 France [null] Dijon
17 36.64 India [null] Bangalore
18 37.62 USA NV Reno
19 38.62 India [null] Delhi
20 77.24 France [null] Paris
21 39.62 USA FL Orlando
22 75.24 Brazil SP S&o Paulo
23 39.62 Canada QC Montr&al
24 47.62 USA TX Fort Worth

MySql

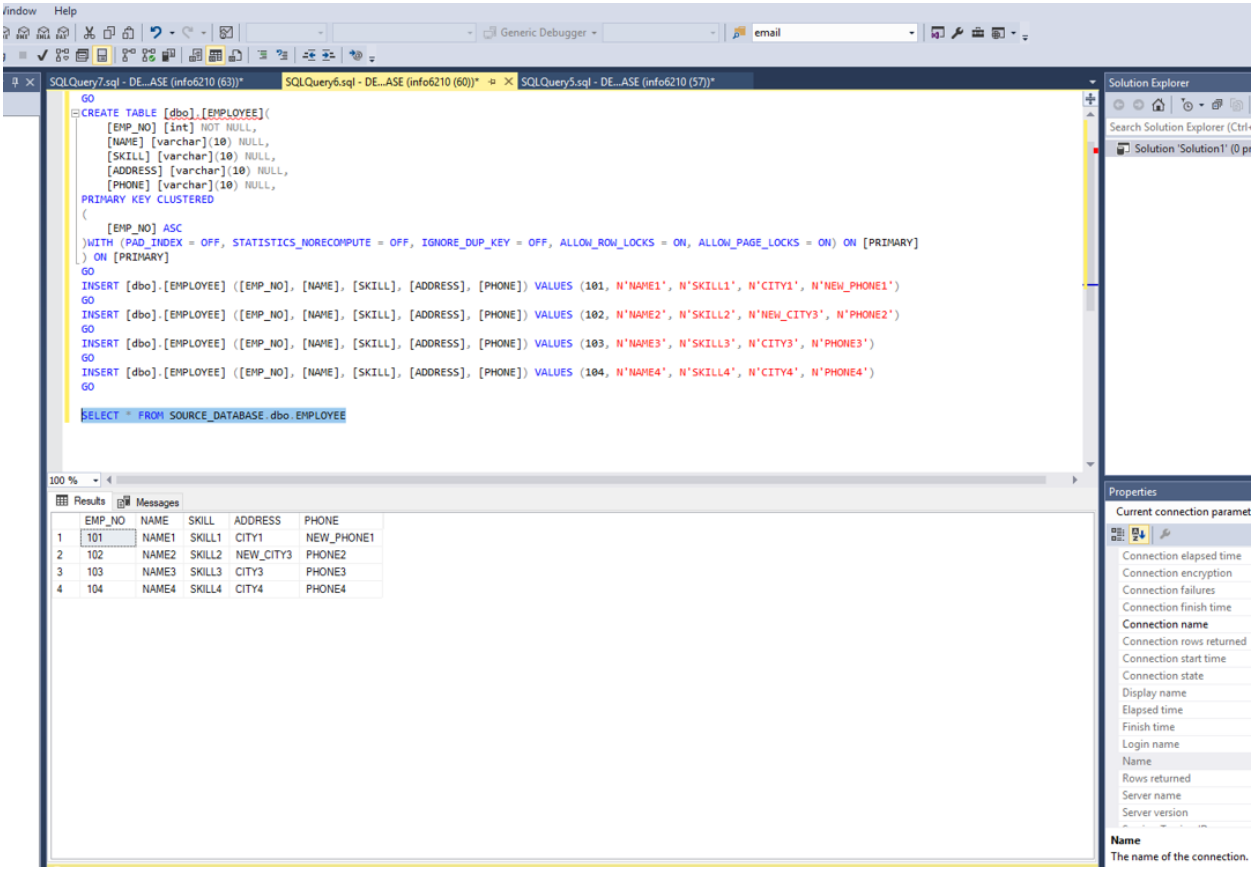



Oracle

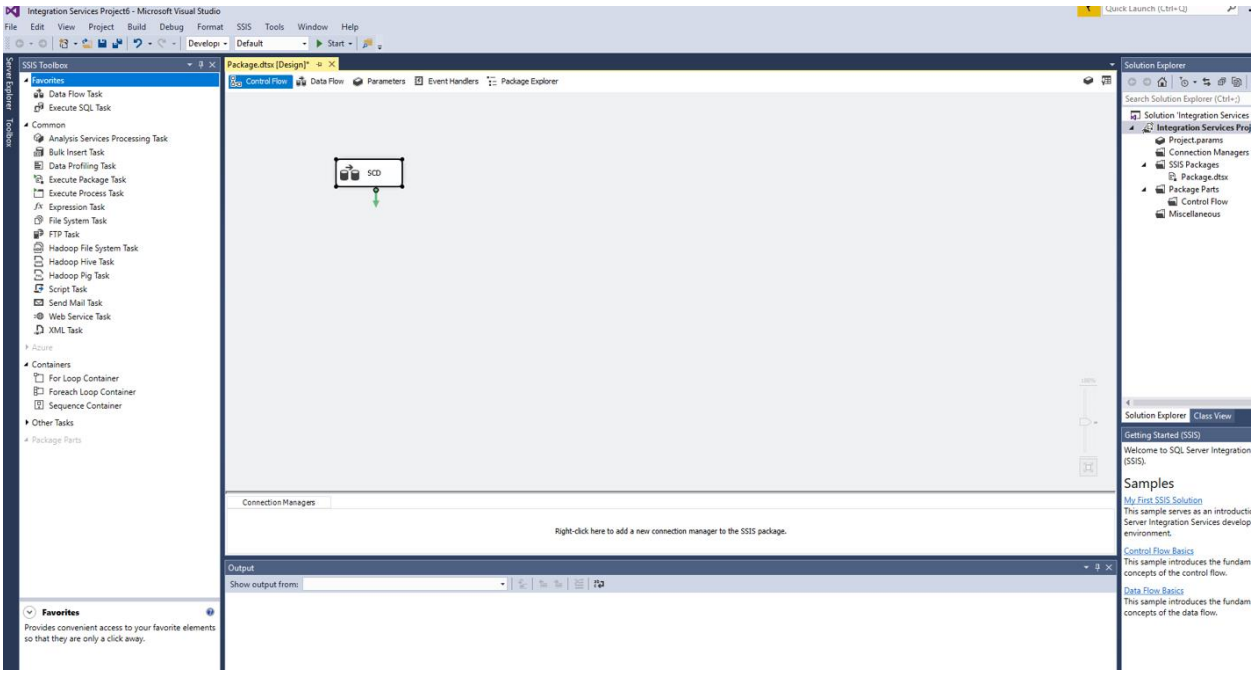


# *Slowly Changing Dimensions in Data Warehouse*

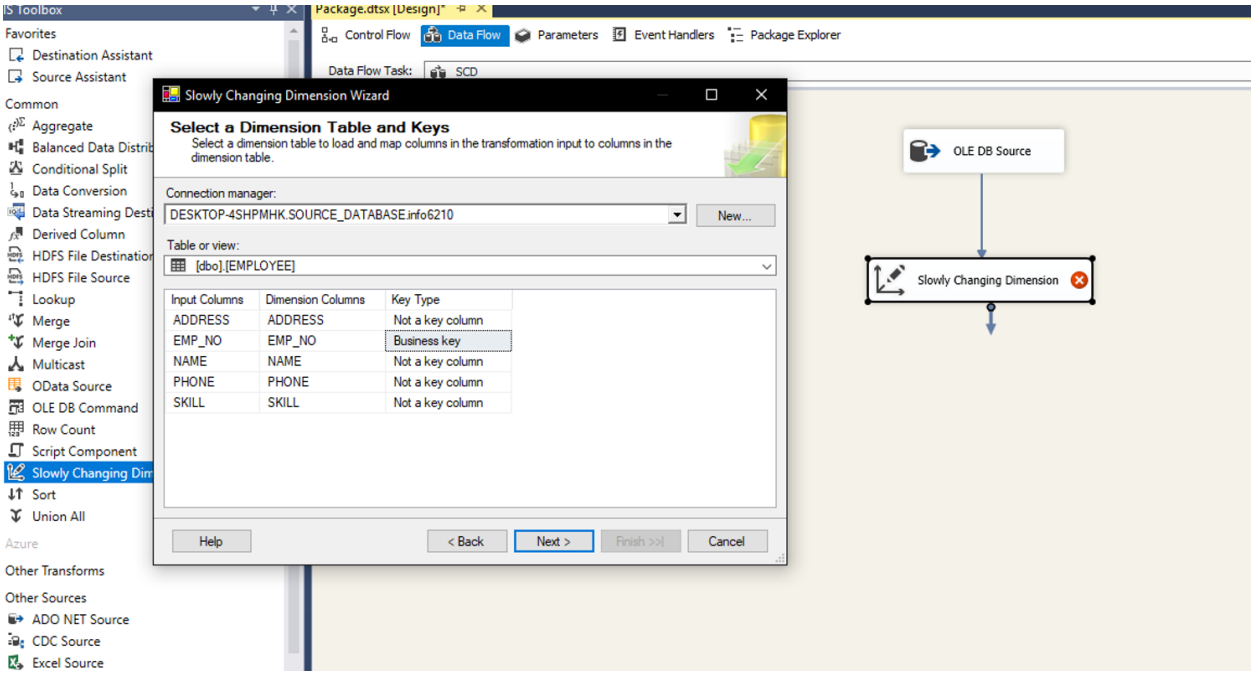
Source



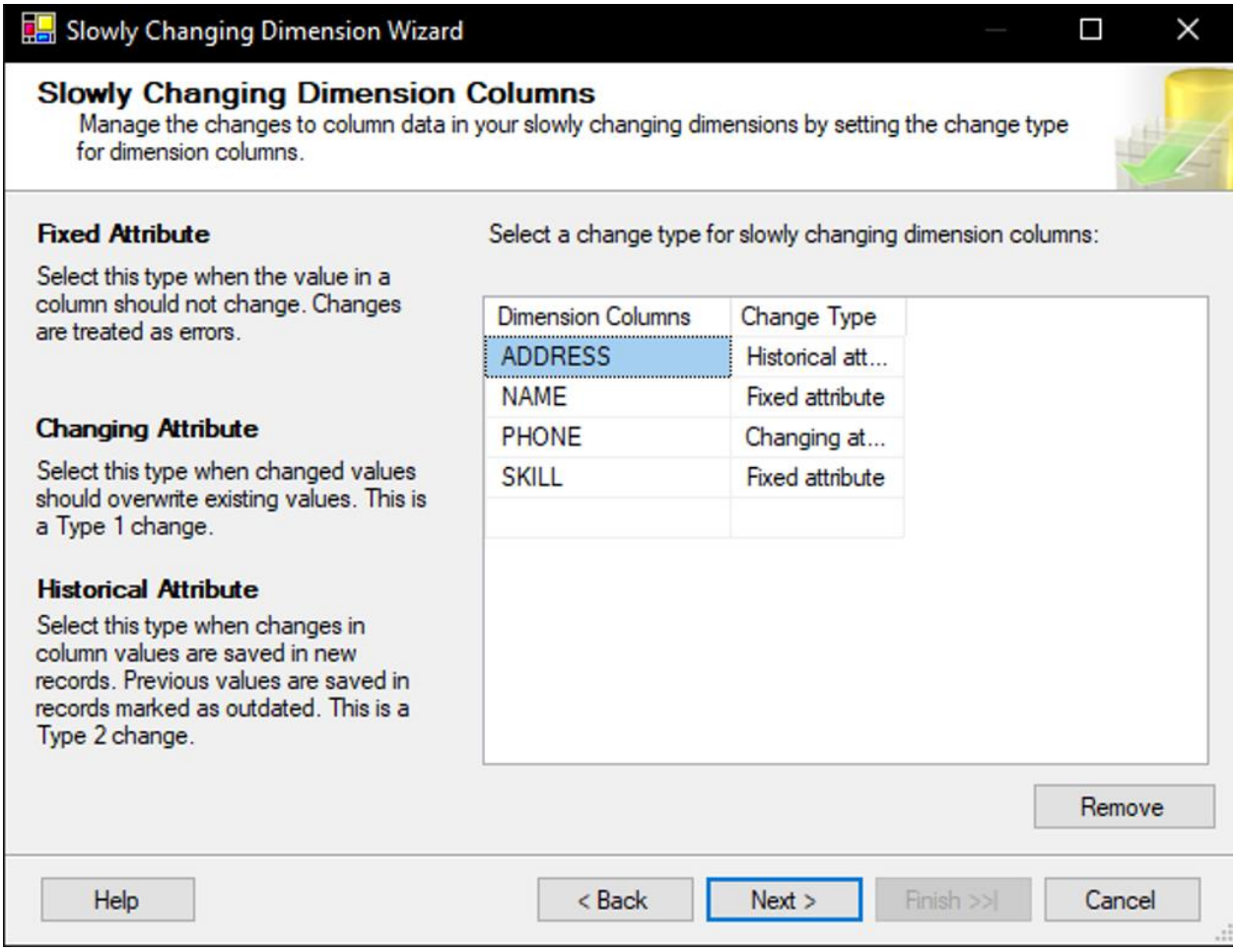

Ssis



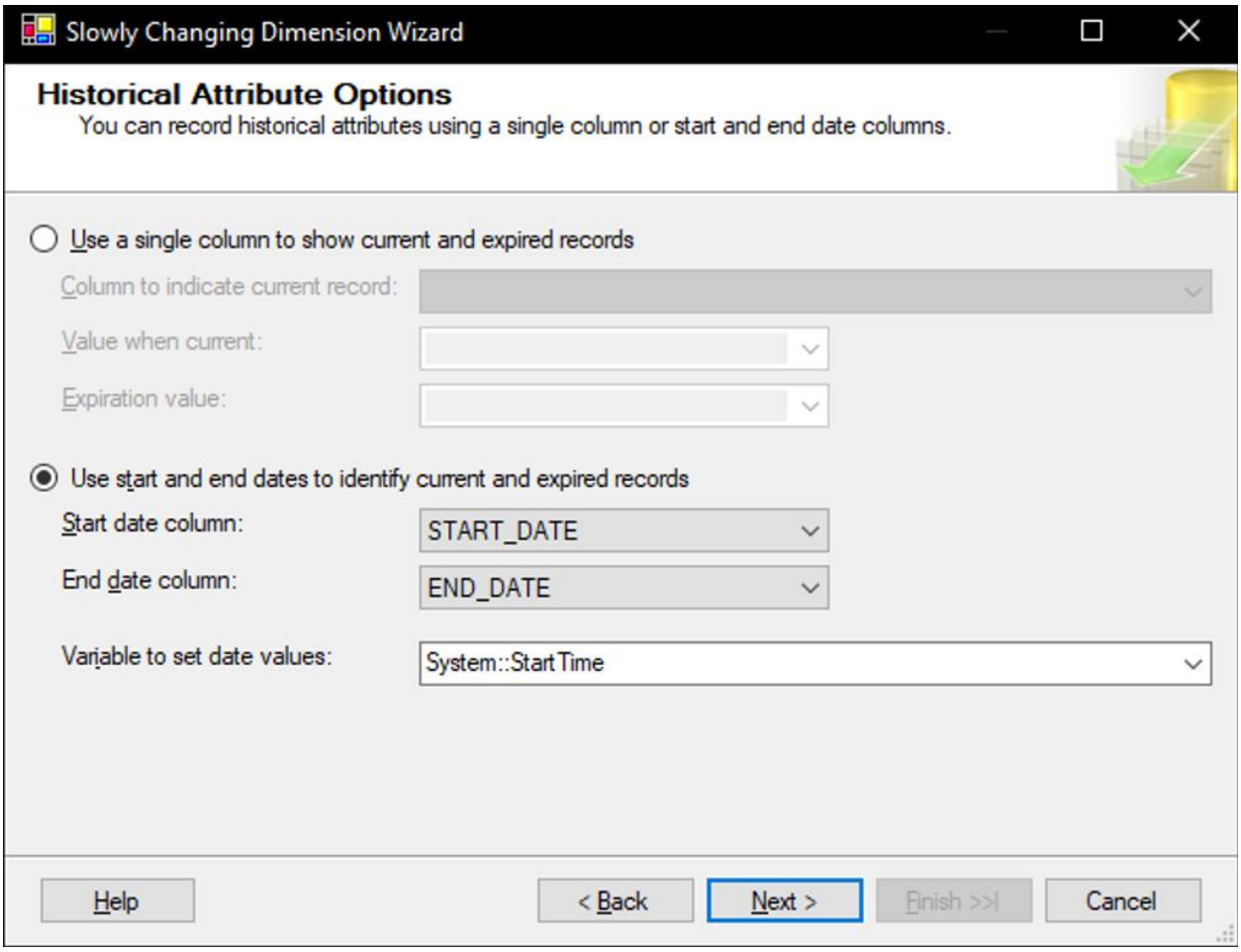

SCD



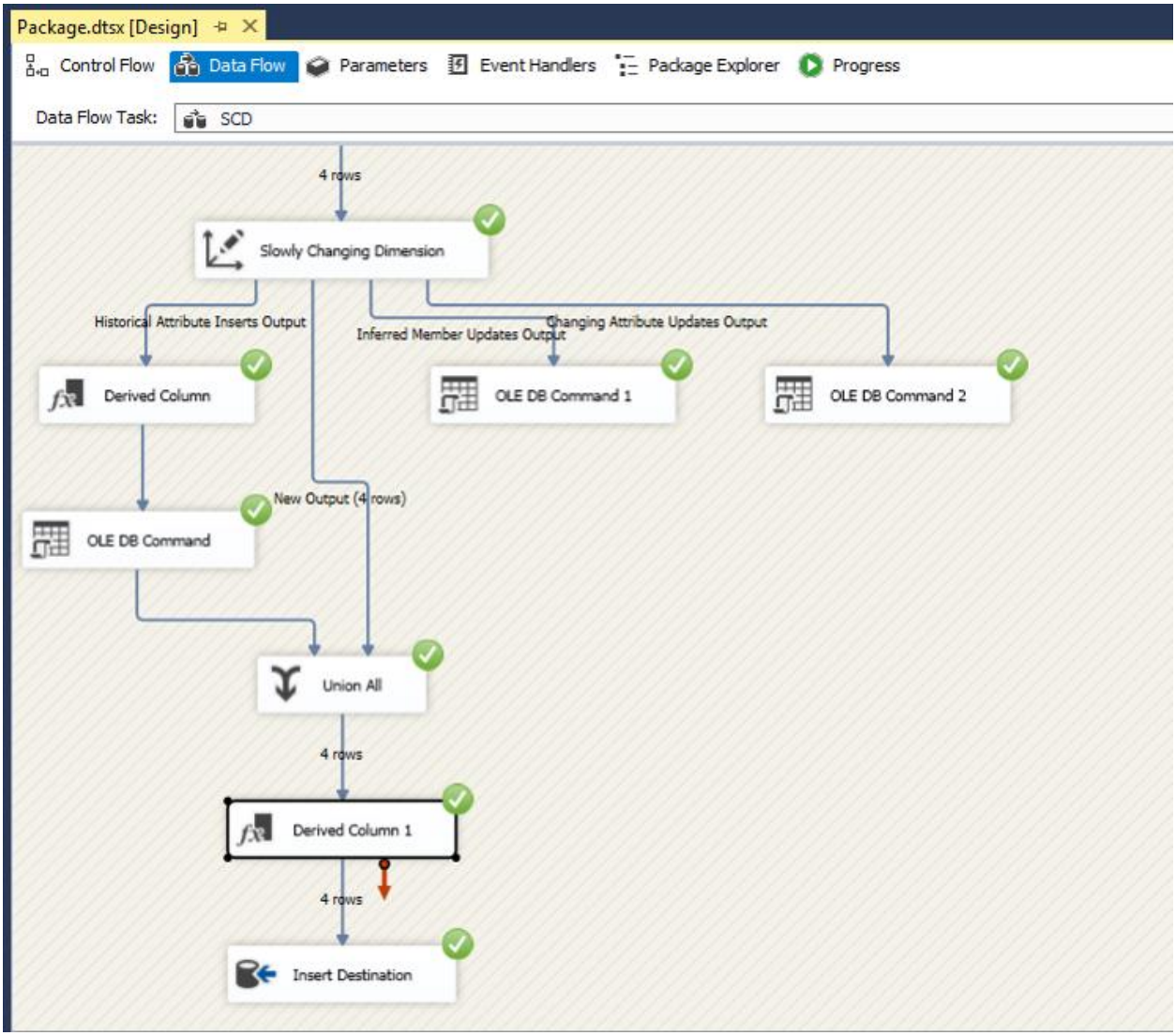

Scd attributes




Start n end date


Slowly Changing Dimension Wizard
Historical Attribute Options
You can record historical attributes using a single column or start and end date columns.
Use a single column to show current and expired records
Column to indicate current record:
Value when current:
Expiration value:
Use start and end dates to identify current and expired records
Start date column:
START_DATE
End date column:
END_DATE
Variable to set date values:
System::StartTime
Help
< Back
Next >
Finish >>|
Cancel

Scd ssis




Displaying the first insertion

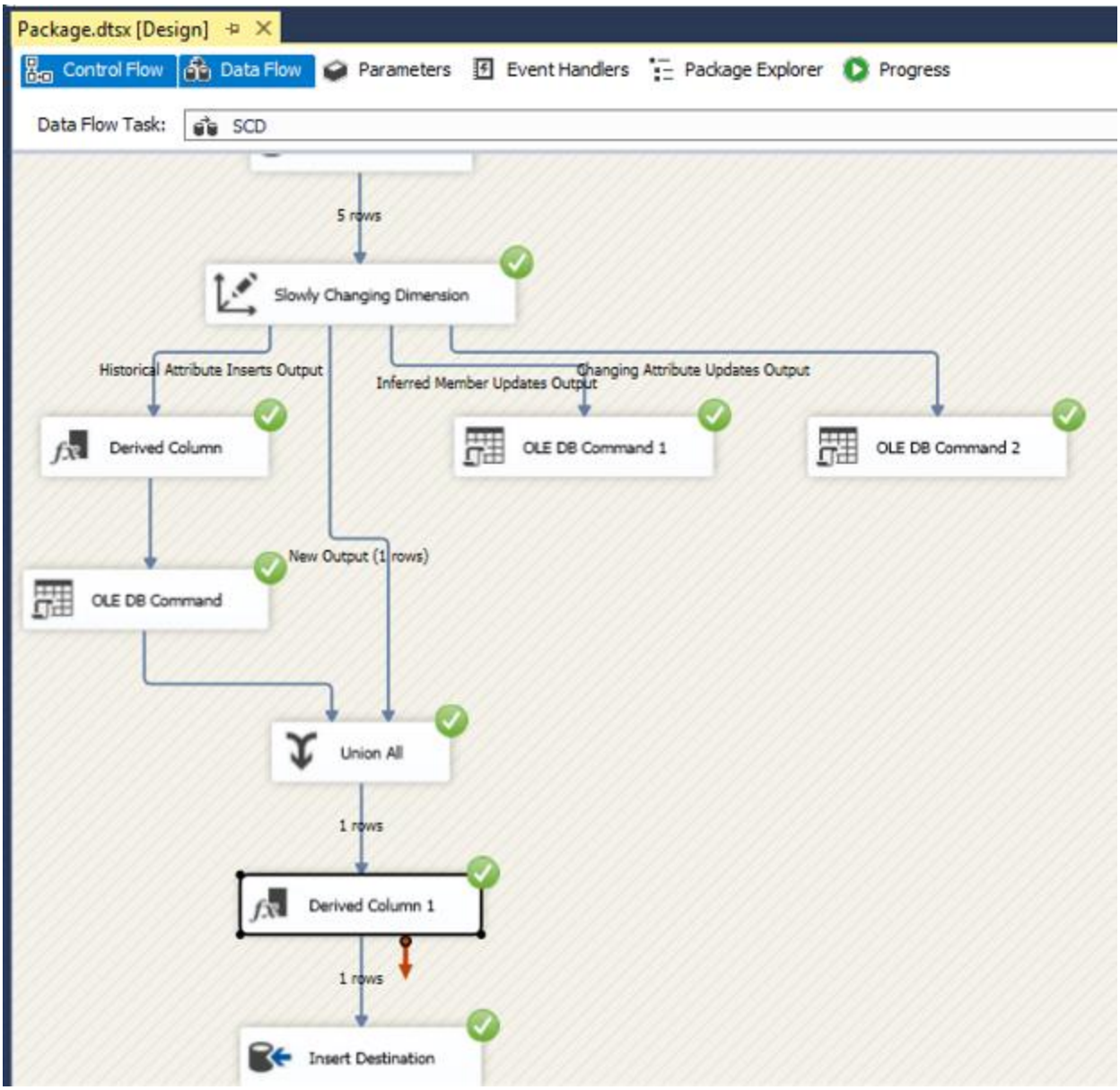
```
select * from EMPLOYEE;
--Do not execute untill directed
-------------------------------------
-- for SCD 1 and 2 with current flag destination dimEMPLOYEE_2----------------------
insert into Employee values(105,'NAME5','SKILL5','CITY5','PHONE5')

update Employee
set Address = 'NEW_CITY5'
where EMP_NO = 105


update Employee
set Phone = 'NEW_PHONE5'
where EMP_NO = 105

-- for SCD 1 and 2 with start and End date destination dimEMPLOYEE_1----------------------
insert into Employee values(106,'NAME6','SKILL6','CITY6','PHONE6')

update Employee
set Address = 'NEW_CITY6'
where EMP_NO = 106


update Employee
set Phone = 'NEW_PHONE6'
where EMP_NO = 106
```

00 %

Results | Messages

| | EMP_NO | NAME | SKILL | ADDRESS | PHONE |
|---|---|---|---|---|---|
| 1 | 101 | NAME1 | SKILL1 | CITY1 | NEW_PHONE1 |
| 2 | 102 | NAME2 | SKILL2 | NEW_CITY3 | PHONE2 |
| 3 | 103 | NAME3 | SKILL3 | CITY3 | PHONE3 |
| 4 | 104 | NAME4 | SKILL4 | CITY4 | PHONE4 |
| 5 | 105 | NAME5 | SKILL5 | CITY5 | PHONE5 |

Running the ssis scd again after first insertion




Performing the first update on a historical attribute

SQLQuery7.sql - DE...ASE (info6210 (63))* | SQLQuery6.sql - DE...ASE (info6210 (60))*

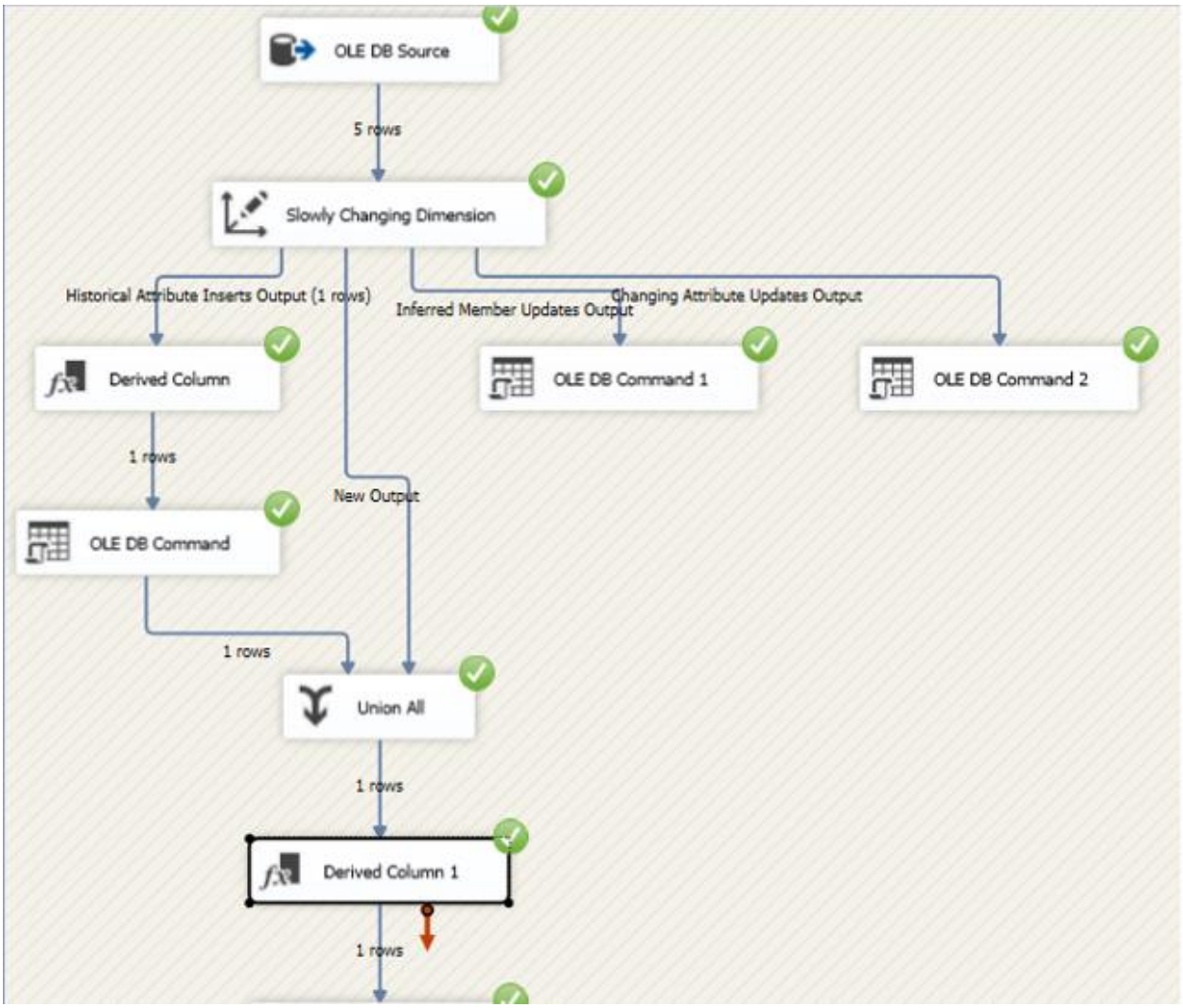
```
select * from EMPLOYEE;
--Do not execute untill directed
-------------------------------------
-- for SCD 1 and 2 with current flag destination dimEMPLOYEE_2------
insert into Employee values(105,'NAME5','SKILL5','CITY5','PHONE5')

update Employee
set Address = 'NEW_CITY5'
where EMP_NO = 105


update Employee
set Phone = 'NEW_PHONE5'
where EMP_NO = 105

-- for SCD 1 and 2 with start and End date destination dimEMPLOYEE_1
insert into Employee values(106,'NAME6','SKILL6','CITY6','PHONE6')

update Employee
set Address = 'NEW_CITY6'
where EMP_NO = 106


update Employee
set Phone = 'NEW_PHONE6'
where EMP_NO = 106
```

100 %

Results | Messages

| | EMP_NO | NAME | SKILL | ADDRESS | PHONE |
|---|---|---|---|---|---|
| 1 | 101 | NAME1 | SKILL1 | CITY1 | NEW_PHONE1 |
| 2 | 102 | NAME2 | SKILL2 | NEW_CITY3 | PHONE2 |
| 3 | 103 | NAME3 | SKILL3 | CITY3 | PHONE3 |
| 4 | 104 | NAME4 | SKILL4 | CITY4 | PHONE4 |
| 5 | 105 | NAME5 | SKILL5 | NEW_CITY5 | PHONE5 |

Running the ssis scd again after the first update




Performing the second update on a changing attribute

SQLQuery7.sql - DE...ASE (info6210 (63))* | SQLQuery6.sql - DE...ASE (info6210 (60))*

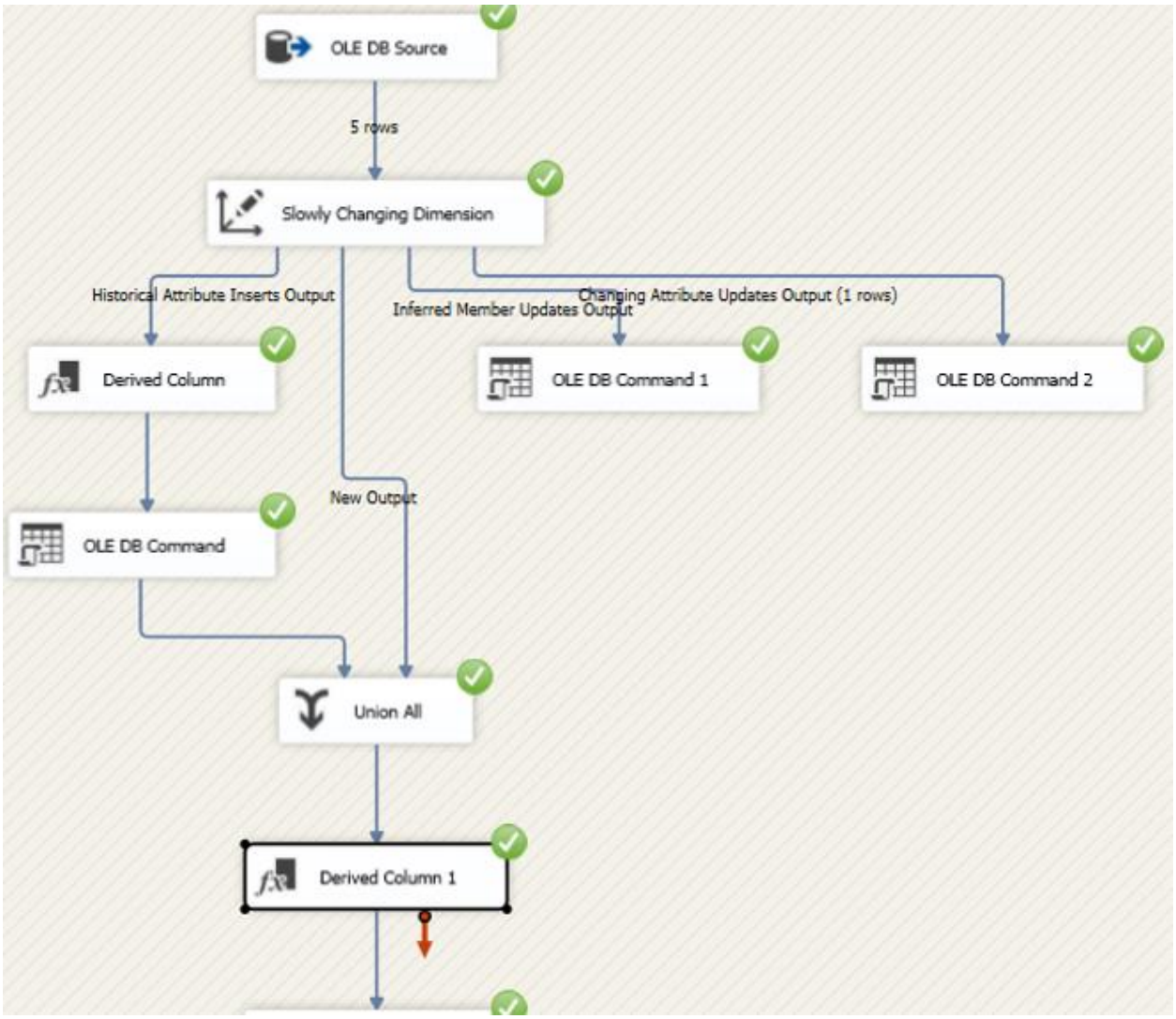
```
select * from EMPLOYEE;
--Do not execute untill directed
--------------------------------------
-- for SCD 1 and 2 with current flag destination dimEMPLOYEE_2--------
insert into Employee values(105,'NAME5','SKILL5','CITY5','PHONE5')

update Employee
set Address = 'NEW_CITY5'
where EMP_NO = 105


update Employee
set Phone = 'NEW_PHONE5'
where EMP_NO = 105

-- for SCD 1 and 2 with start and End date destination dimEMPLOYEE_1--
insert into Employee values(106,'NAME6','SKILL6','CITY6','PHONE6')

update Employee
set Address = 'NEW_CITY6'
where EMP_NO = 106


update Employee
set Phone = 'NEW_PHONE6'
where EMP_NO = 106
```

100 %

Results | Messages

| | EMP_NO | NAME | SKILL | ADDRESS | PHONE |
|---|---|---|---|---|---|
| 1 | 101 | NAME1 | SKILL1 | CITY1 | NEW_PHONE1 |
| 2 | 102 | NAME2 | SKILL2 | NEW_CITY3 | PHONE2 |
| 3 | 103 | NAME3 | SKILL3 | CITY3 | PHONE3 |
| 4 | 104 | NAME4 | SKILL4 | CITY4 | PHONE4 |
| 5 | 105 | NAME5 | SKILL5 | NEW_CITY5 | NEW_PHONE5 |

Running the ssis scd again to reflect the start n end date changes




Displaying the start n end date changes in ssms

```
SELECT * FROM SOURCE_DATABASE.dbo.EMPLOYEE
SELECT * FROM DESTINATION_DATABASE.dbo.dimEMPLOYEE_1
```

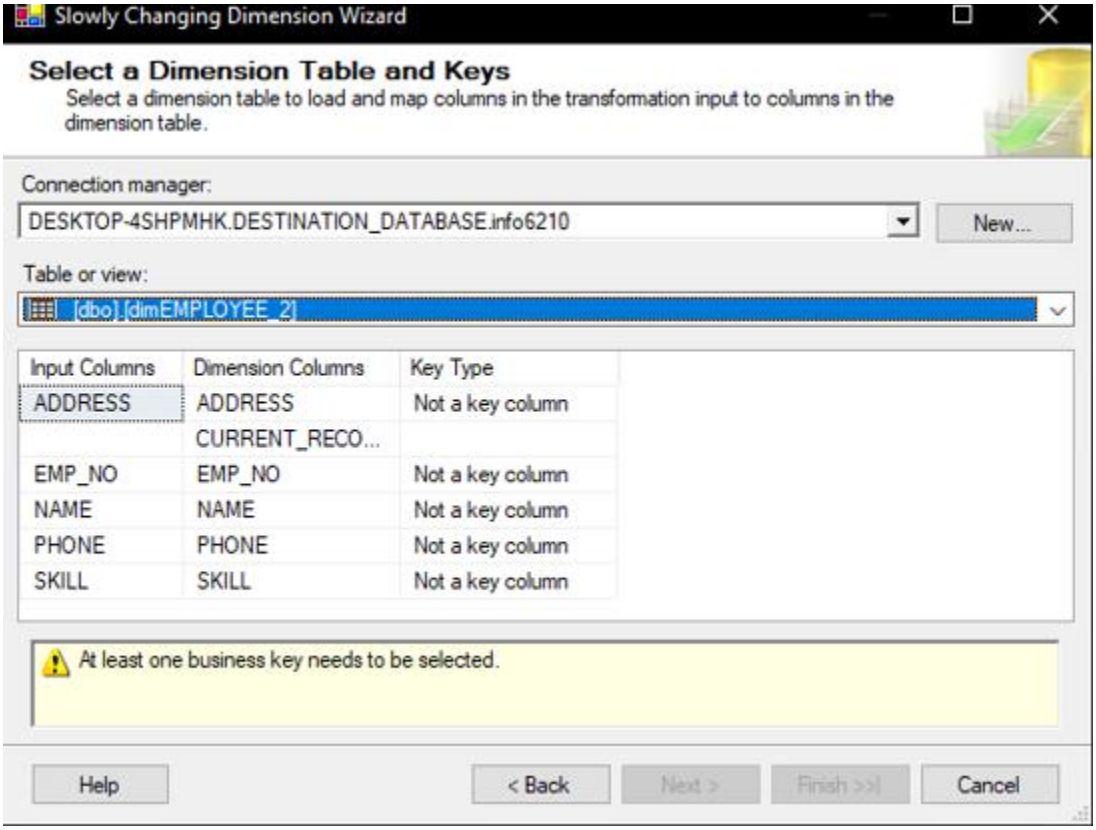
100 %

Results | Messages

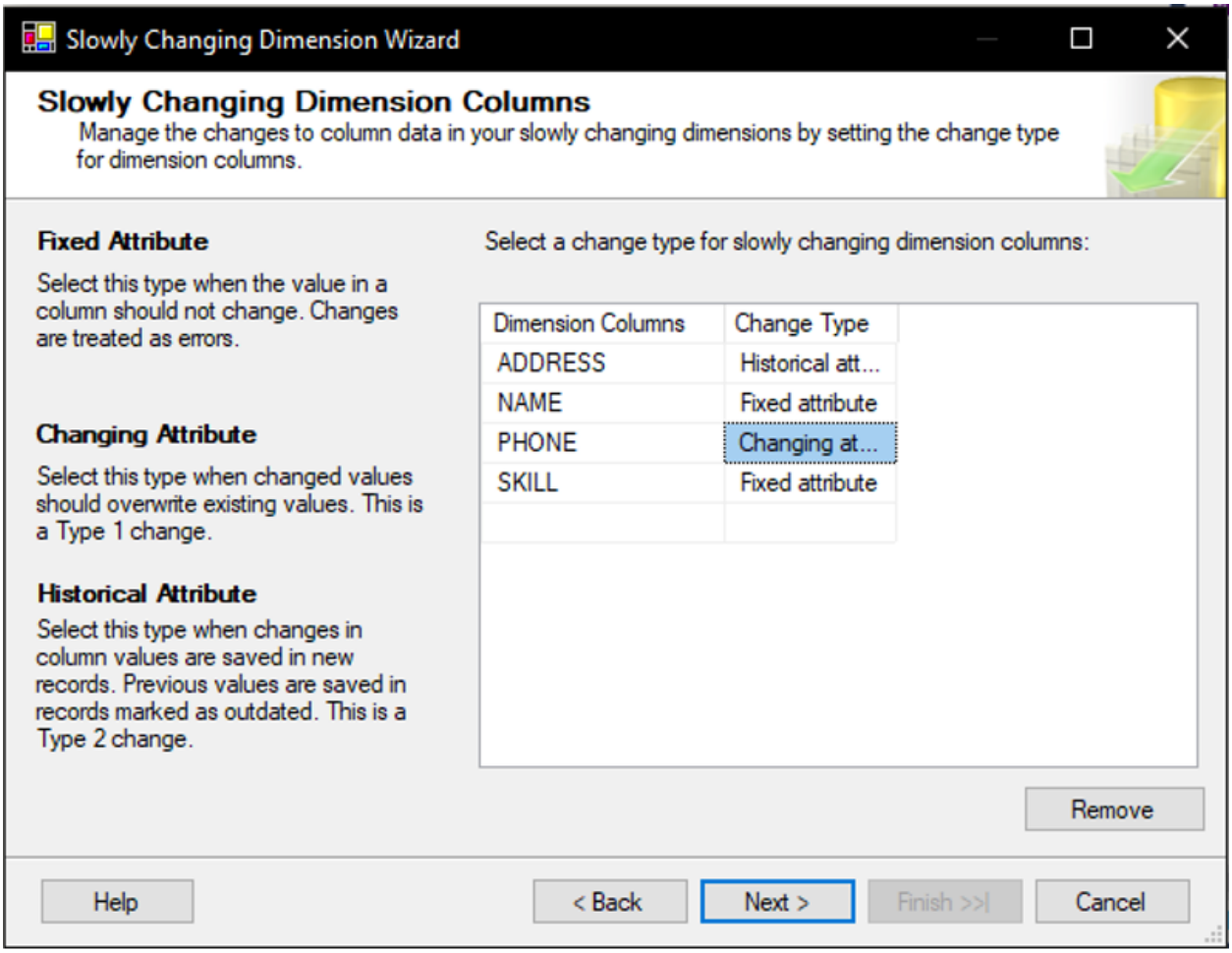
| | EMP_KEY | EMP_NO | NAME | SKILL | ADDRESS | PHONE | START_DATE | END_DATE |
|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 101 | NAME1 | SKILL1 | CITY1 | NEW_PHONE1 | 2018-02-15 22:30:14.000 | NULL |
| 2 | 2 | 102 | NAME2 | SKILL2 | NEW_CITY3 | PHONE2 | 2018-02-15 22:30:14.000 | NULL |
| 3 | 3 | 103 | NAME3 | SKILL3 | CITY3 | PHONE3 | 2018-02-15 22:30:14.000 | NULL |
| 4 | 4 | 104 | NAME4 | SKILL4 | CITY4 | PHONE4 | 2018-02-15 22:30:14.000 | NULL |
| 5 | 5 | 105 | NAME5 | SKILL5 | CITY5 | PHONE5 | 2018-02-15 22:32:07.000 | 2018-02-15 22:33:40.000 |
| 6 | 6 | 105 | NAME5 | SKILL5 | NEW_CITY5 | NEW_PHONE5 | 2018-02-15 22:33:40.000 | NULL |

Part 2

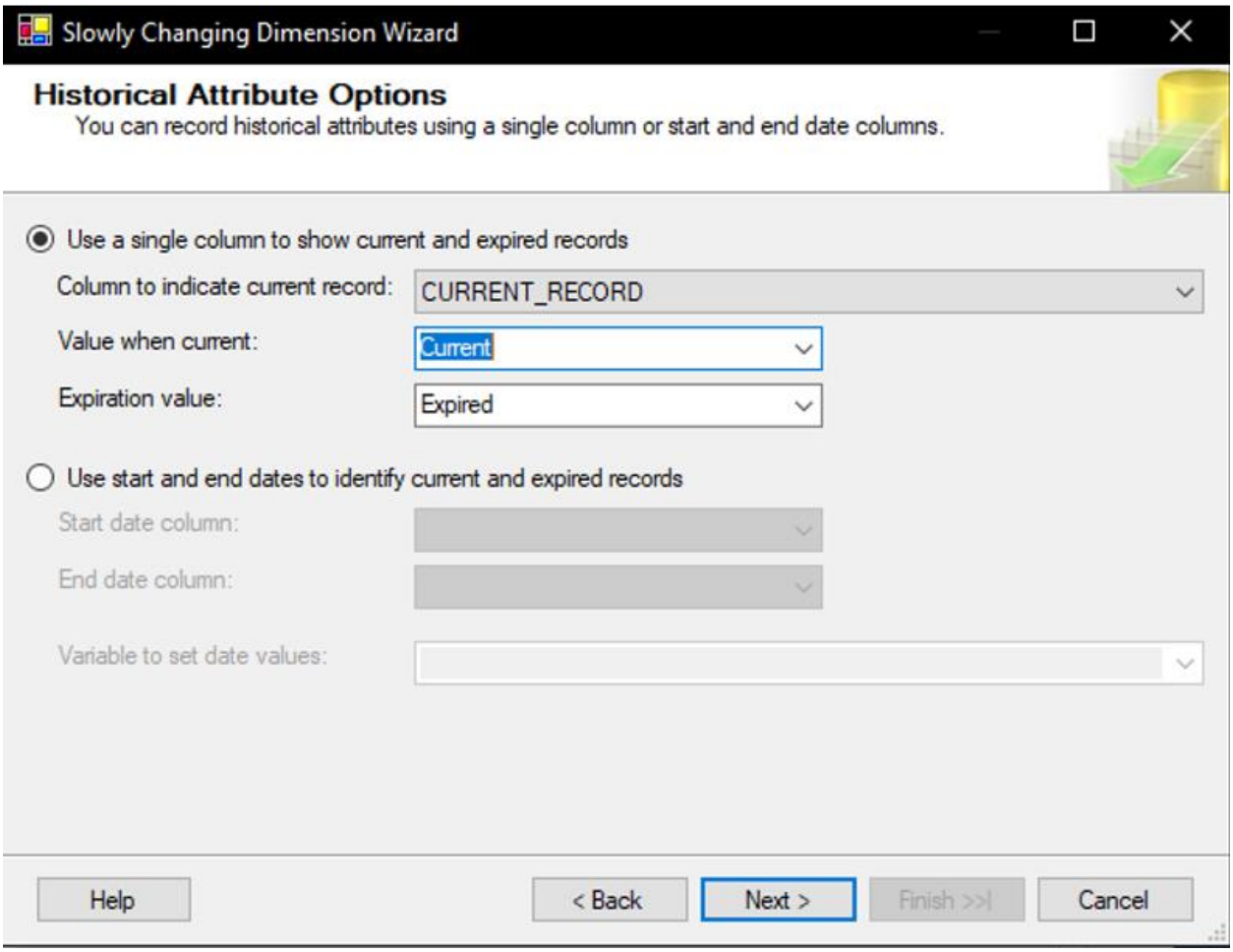
DimEmployee_2



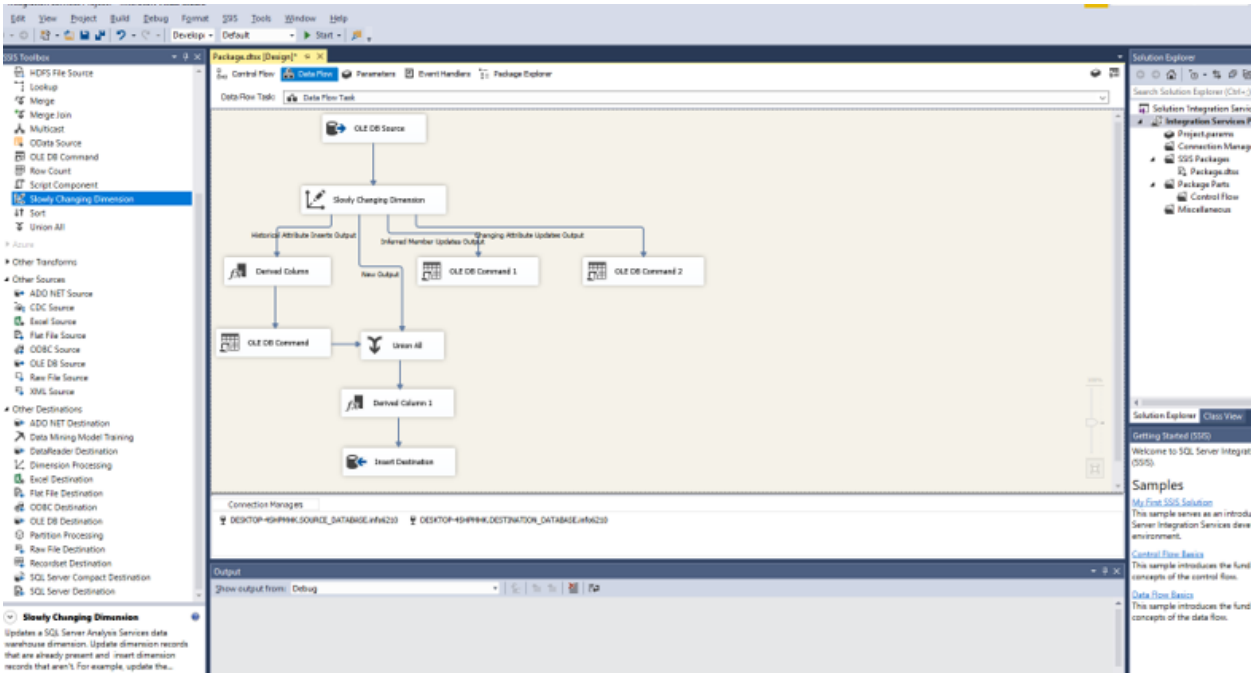

Setting attributes properties




Setting historical attributes properties


Slowly Changing Dimension Wizard
Historical Attribute Options
You can record historical attributes using a single column or start and end date columns.
Use a single column to show current and expired records
Column to indicate current record:
CURRENT_RECORD
Value when current:
Current
Expiration value:
Expired
Use start and end dates to identify current and expired records
Start date column:
End date column:
Variable to set date values:
Help
< Back
Next >
Finish >>|
Cancel

Scd_ssis


OLE DB Source
Slowly Changing Dimension
Derived Column
OLE DB Command 1
OLE DB Command 2
OLE DB Command
Union All
Derived Column 1
Insert Destination
Samples

Inserting values into dimEmployee

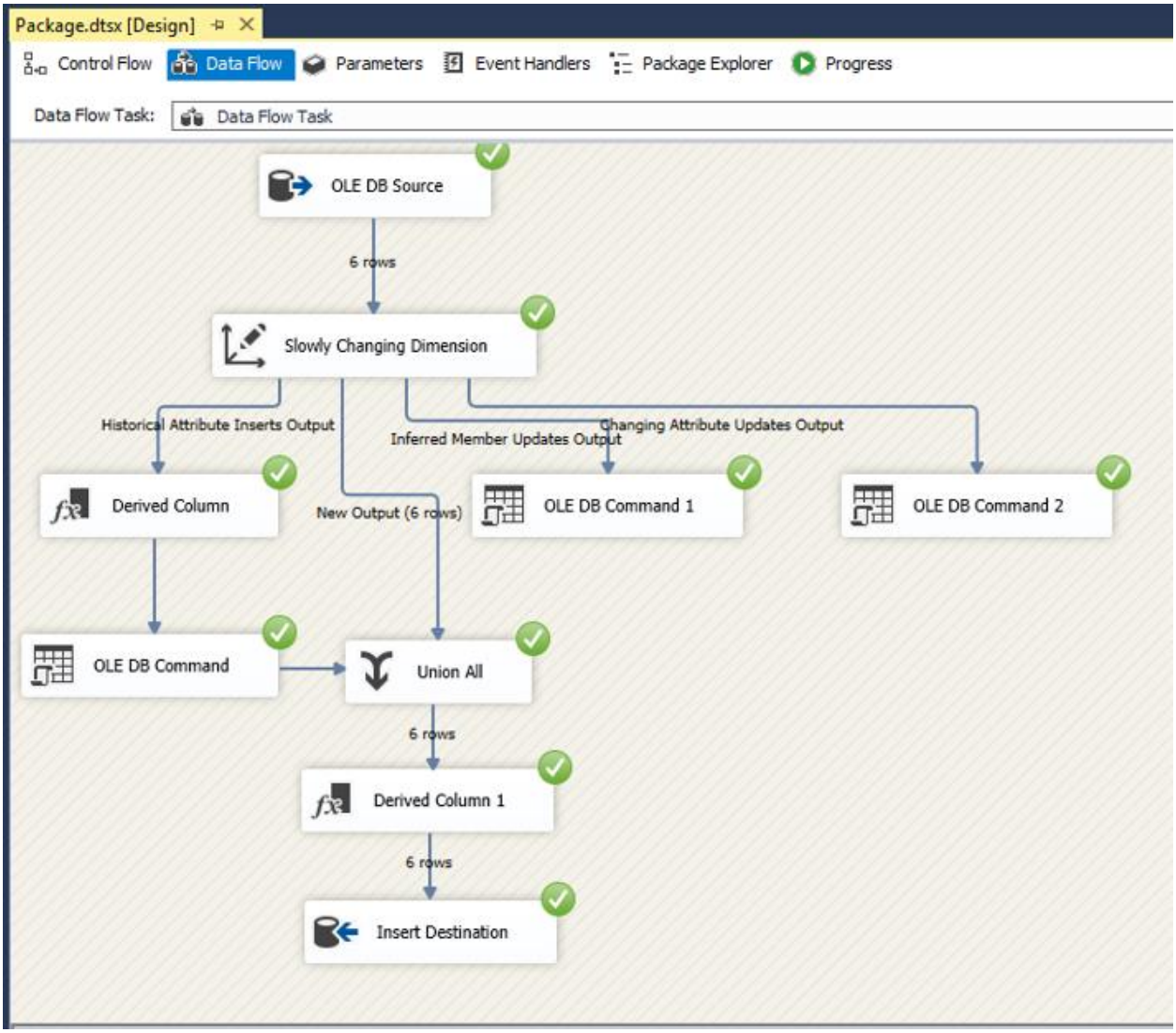
```
-- for SCD 1 and 2 with start and End date destination dimEMPLOYEE_1----------------------
insert into Employee values(106,'NAME6','SKILL6','CITY6','PHONE6')

update Employee
set Address = 'NEW_CITY6'
where EMP_NO = 106


update Employee
set Phone = 'NEW_PHONE6'
where EMP_NO = 106
```

00 %

Results | Messages

| | EMP_NO | NAME | SKILL | ADDRESS | PHONE |
|---|---|---|---|---|---|
| 1 | 101 | NAME1 | SKILL1 | CITY1 | NEW_PHONE1 |
| 2 | 102 | NAME2 | SKILL2 | NEW_CITY3 | PHONE2 |
| 3 | 103 | NAME3 | SKILL3 | CITY3 | PHONE3 |
| 4 | 104 | NAME4 | SKILL4 | CITY4 | PHONE4 |
| 5 | 105 | NAME5 | SKILL5 | NEW_CITY5 | NEW_PHONE5 |
| 6 | 106 | NAME6 | SKILL6 | CITY6 | PHONE6 |

Running scd ssis after insertion




Displaying the scd properties in ssms

```
SELECT * FROM DESTINATION_DATABASE.dbo.dimEMPLOYEE_2
```

100 %

Results | Messages

| | EMP_KEY | EMP_NO | NAME | SKILL | ADDRESS | PHONE | CURRENT_RECORD |
|---|---|---|---|---|---|---|---|
| 1 | 1 | 101 | NAME1 | SKILL1 | CITY1 | NEW_PHONE1 | Current |
| 2 | 2 | 102 | NAME2 | SKILL2 | NEW_CITY3 | PHONE2 | Current |
| 3 | 3 | 103 | NAME3 | SKILL3 | CITY3 | PHONE3 | Current |
| 4 | 4 | 104 | NAME4 | SKILL4 | CITY4 | PHONE4 | Current |
| 5 | 5 | 105 | NAME5 | SKILL5 | NEW_CITY5 | NEW_PHONE5 | Current |
| 6 | 6 | 106 | NAME6 | SKILL6 | CITY6 | PHONE6 | Current |

Updating a historical attribute in ssms

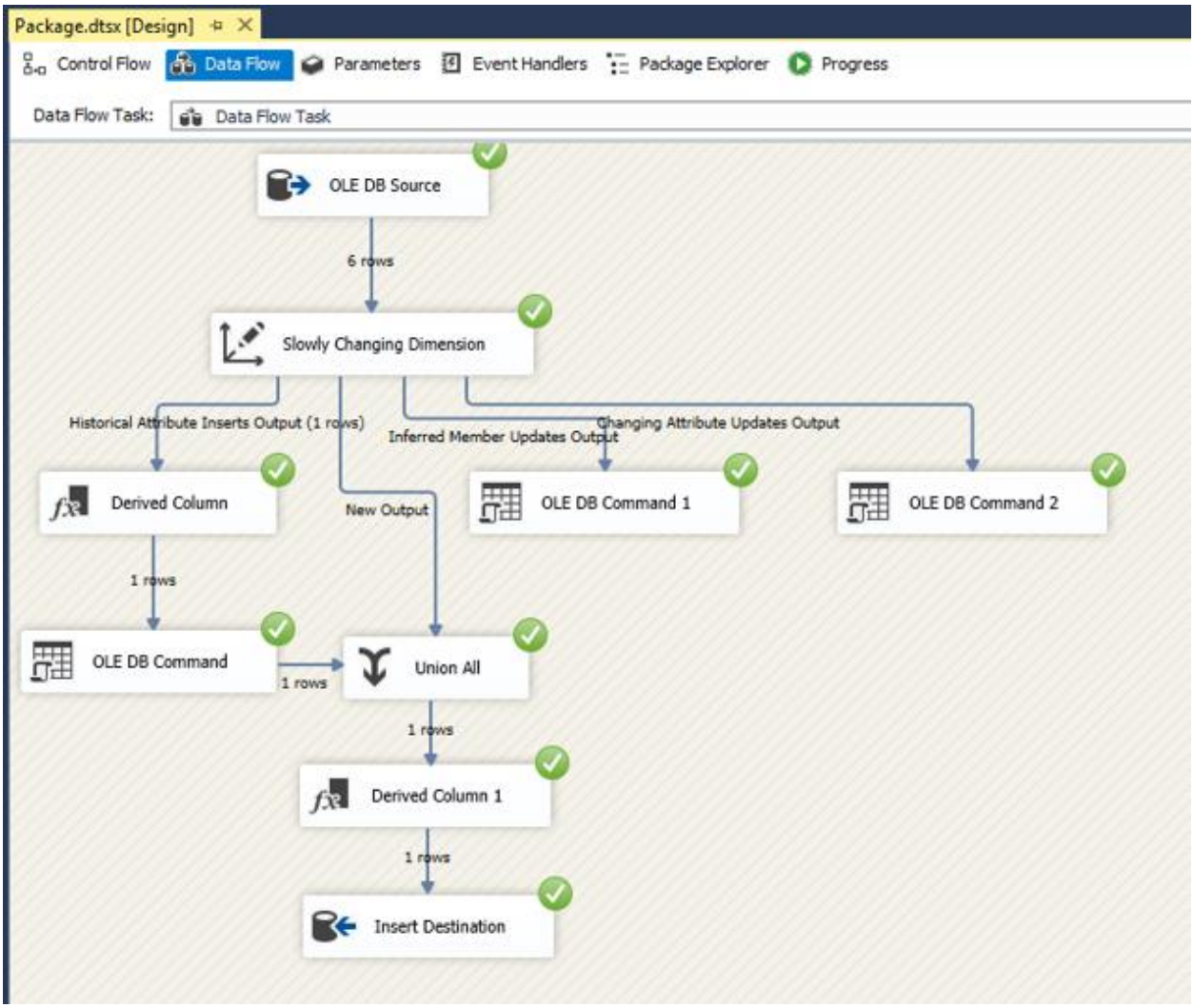
```
update Employee
set Address = 'NEW_CITY6'
where EMP_NO = 106


update Employee
set Phone = 'NEW_PHONE6'
where EMP_NO = 106
```

100 %

Results | Messages

| | EMP_NO | NAME | SKILL | ADDRESS | PHONE |
|---|---|---|---|---|---|
| 1 | 101 | NAME1 | SKILL1 | CITY1 | NEW_PHONE1 |
| 2 | 102 | NAME2 | SKILL2 | NEW_CITY3 | PHONE2 |
| 3 | 103 | NAME3 | SKILL3 | CITY3 | PHONE3 |
| 4 | 104 | NAME4 | SKILL4 | CITY4 | PHONE4 |
| 5 | 105 | NAME5 | SKILL5 | NEW_CITY5 | NEW_PHONE5 |
| 6 | 106 | NAME6 | SKILL6 | NEW_CITY6 | PHONE6 |

Running the scd ssis again after the update




Displaying the scd attribute changes in current and expired

```
SELECT * FROM DESTINATION_DATABASE.dbo.dimEMPLOYEE_2
```

100 %

Results | Messages

| | EMP_KEY | EMP_NO | NAME | SKILL | ADDRESS | PHONE | CURRENT_RECORD |
|---|---|---|---|---|---|---|---|
| 1 | 1 | 101 | NAME1 | SKILL1 | CITY1 | NEW_PHONE1 | Current |
| 2 | 2 | 102 | NAME2 | SKILL2 | NEW_CITY3 | PHONE2 | Current |
| 3 | 3 | 103 | NAME3 | SKILL3 | CITY3 | PHONE3 | Current |
| 4 | 4 | 104 | NAME4 | SKILL4 | CITY4 | PHONE4 | Current |
| 5 | 5 | 105 | NAME5 | SKILL5 | NEW_CITY5 | NEW_PHONE5 | Current |
| 6 | 6 | 106 | NAME6 | SKILL6 | CITY6 | PHONE6 | Expired |
| 7 | 7 | 106 | NAME6 | SKILL6 | NEW_CITY6 | PHONE6 | Current |

Performing the last update on the changing attribute

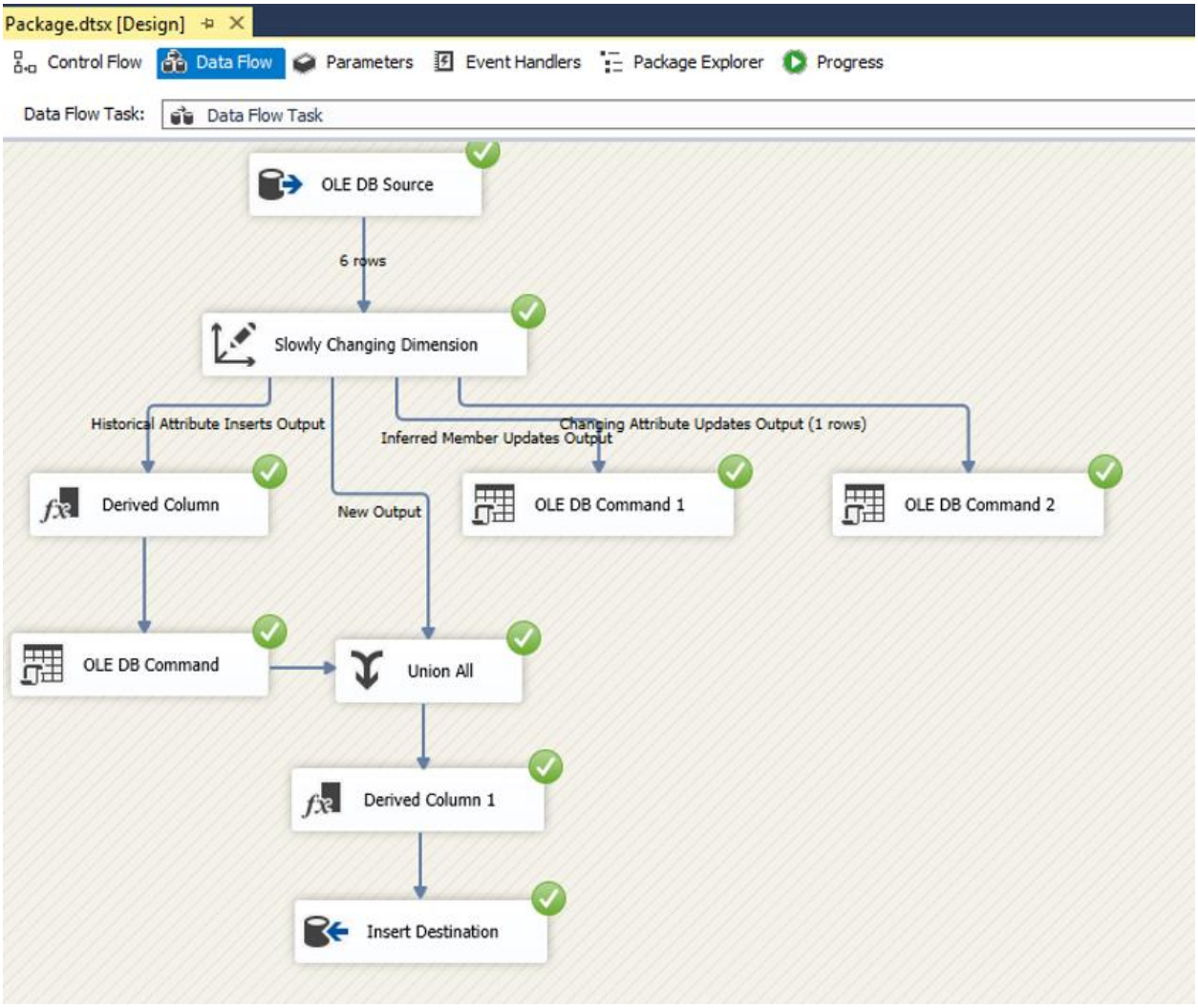
```
update Employee
set Phone = 'NEW_PHONE6'
where EMP_NO = 106
```

100 %

Results | Messages

| | EMP_NO | NAME | SKILL | ADDRESS | PHONE |
|---|---|---|---|---|---|
| 1 | 101 | NAME1 | SKILL1 | CITY1 | NEW_PHONE1 |
| 2 | 102 | NAME2 | SKILL2 | NEW_CITY3 | PHONE2 |
| 3 | 103 | NAME3 | SKILL3 | CITY3 | PHONE3 |
| 4 | 104 | NAME4 | SKILL4 | CITY4 | PHONE4 |
| 5 | 105 | NAME5 | SKILL5 | NEW_CITY5 | NEW_PHONE5 |
| 6 | 106 | NAME6 | SKILL6 | NEW_CITY6 | NEW_PHONE6 |

Running the scd ssis again after the update for reflecting the changes




Displaying the SCD transformation on historical and Changing attributes in SSMS

```
SELECT * FROM DESTINATION_DATABASE.dbo.dimEMPLOYEE_2
```

100 %

Results | Messages

| | EMP_KEY | EMP_NO | NAME | SKILL | ADDRESS | PHONE | CURRENT_RECORD |
|---|---|---|---|---|---|---|---|
| 1 | 1 | 101 | NAME1 | SKILL1 | CITY1 | NEW_PHONE1 | Current |
| 2 | 2 | 102 | NAME2 | SKILL2 | NEW_CITY3 | PHONE2 | Current |
| 3 | 3 | 103 | NAME3 | SKILL3 | CITY3 | PHONE3 | Current |
| 4 | 4 | 104 | NAME4 | SKILL4 | CITY4 | PHONE4 | Current |
| 5 | 5 | 105 | NAME5 | SKILL5 | NEW_CITY5 | NEW_PHONE5 | Current |
| 6 | 6 | 106 | NAME6 | SKILL6 | CITY6 | PHONE6 | Expired |
| 7 | 7 | 106 | NAME6 | SKILL6 | NEW_CITY6 | NEW_PHONE6 | Current |

**********

****

# SQL Queries

```
--Q1>o Ranked order of Vendors by purchase amount $
SELECT pv.Name AS "Vendor Name",
SUM(pro.ListPrice) AS "Purchase Amount",
RANK() OVER (ORDER BY sum(pro.ListPrice) DESC) AS "Rank"
FROM Production.Product AS pro
JOIN Purchasing.ProductVendor AS prov
ON pro.ProductID=prov.ProductID
JOIN Purchasing.Vendor AS pv
ON prov.BusinessEntityID=pv.BusinessEntityID
GROUP BY pv.Name
ORDER BY "Rank";
```

```
--Q2>o Ranked order of products purchased by amount $
SELECT pro.Name AS "Product Name",
pro.ListPrice AS "Purchased Amount",
```

```
RANK() OVER (ORDER BY pro.ListPrice DESC) AS "Rank"
FROM Production.Product AS pro;



--Q2.2> □     By category
SELECT pro.Name AS "Product Name",
SUM(pro.ListPrice) AS "Purchased Amount",
 pc.Name AS "Category",
RANK() OVER (ORDER BY SUM(pro.ListPrice) DESC) AS "Rank"
FROM Production.Product AS pro
JOIN Production.ProductSubcategory AS ps
ON pro.ProductSubcategoryID=ps.ProductSubcategoryID
JOIN Production.ProductCategory AS pc
ON ps.ProductCategoryID=pc.ProductCategoryID
GROUP BY pro.Name, pc.Name
ORDER BY "Rank";



--Q2.3> □     By subcategory
SELECT pro.Name AS "Product Name",
SUM(pro.ListPrice) AS "Purchased Amount",ps.Name AS "SubCategory",
RANK() OVER (ORDER BY SUM(pro.ListPrice) DESC) AS "Rank"
FROM Production.Product AS pro
JOIN Production.ProductSubcategory AS ps
ON pro.ProductSubcategoryID=ps.ProductSubcategoryID
GROUP BY pro.Name, ps.Name
ORDER BY "Rank";



--Q2.4> □     By product model (top 20)
select TOP 20 pm.Name,sum(po.TotalDue) as 'Amount',
rank() over (order by sum(po.TotalDue)) Rank
from Production.ProductModel pm
join Production.Product p on p.ProductModelID=pm.ProductModelID
join Purchasing.PurchaseOrderDetail pd on pd.ProductID=p.ProductID
join Purchasing.PurchaseOrderHeader po on po.PurchaseOrderID=pd.PurchaseOrderID
group by pm.Name
order by rank;




--Q2.5> □     By product (top 20)
select top 20 p.Name,sum(po.TotalDue) as 'Amount',
 rank() over (order by sum(po.TotalDue)) Rank
from Production.Product p
join Purchasing.PurchaseOrderDetail pd on pd.ProductID=p.ProductID
join Purchasing.PurchaseOrderHeader po on po.PurchaseOrderID=pd.PurchaseOrderID
group by p.Name
order by rank;



--Q3> o       List of employees who purchased products with phone, email & address
```

```sql
select p.firstname,p.LastName,ph.PhoneNumber,em.EmailAddress,
concat(ad.AddressLine1,ad.AddressLine2,ad.City,ad.PostalCode) as Address,
 rank() over (order by p.firstname) Rank
from Person.person p
join HumanResources.Employee e on e.BusinessEntityID=p.BusinessEntityID
join Person.PersonPhone ph on ph.BusinessEntityID=p.BusinessEntityID
join Person.EmailAddress em on em.BusinessEntityID=p.BusinessEntityID
join Person.BusinessEntityAddress bd on bd.BusinessEntityID=p.BusinessEntityID
join person.Address ad on ad.AddressID=bd.AddressID
order by Rank
```

```sql
--Q4> o       List of employees who purchased products with pay rate & raises (SCD)
select (pps.FirstName +space(1)+pps.MiddleName+space(1)+pps.LastName)as 'employeename',
 eph.Rate as 'rate',(eph.PayFrequency)
from Purchasing.PurchaseOrderHeader ph
join Purchasing.PurchaseOrderDetail po
on ph.PurchaseOrderID=po.PurchaseOrderID
join HumanResources.Employee he
on ph.EmployeeID=he.BusinessEntityID
join Person.Person pps
on pps.BusinessEntityID=he.BusinessEntityID
join HumanResources.EmployeePayHistory eph
on eph.BusinessEntityID=he.BusinessEntityID
join HumanResources.EmployeePayHistory efg
on eph.BusinessEntityID=efg.BusinessEntityID
join HumanResources.EmployeePayHistory esg
on efg.BusinessEntityID=esg.BusinessEntityID
where efg.Rate<eph.Rate and efg.Rate>esg.rate
group by pps.FirstName,pps.LastName,pps.MiddleName,eph.PayFrequency,eph.rate;
```

```sql
--Q5> o       List of purchasing vendor contacts with
--            vendor name, phone, email & address
SELECT
       distinct
       pv.Name as 'Vendor Name',
       ad.AddressLine1 as Address,
       ad.City,
       ad.PostalCode,
       sp.Name as State,
       ead.EmailAddress,
       pp.PhoneNumber

FROM
       Purchasing.Vendor pv,
       Person.Address ad,
       Person.BusinessEntity BE,
       Person.BusinessEntityContact bec,
       Person.BusinessEntityAddress bea,
       Person.EmailAddress ead,
```

```
        Person.StateProvince sp,
        Person.PersonPhone pp,
        Person.Person p
Where
        pv.BusinessEntityID=be.BusinessEntityID
AND
        be.BusinessEntityID=bea.BusinessEntityID
AND
        bea.AddressID=ad.AddressID
AND
        ad.StateProvinceID=sp.StateProvinceID
AND
        BE.BusinessEntityID=BEC.BusinessEntityID
AND
        BEC.PersonID = p.BusinessEntityID
AND
        p.BusinessEntityID=ead.BusinessEntityID
AND
        p.BusinessEntityID=pp.BusinessEntityID
And p.PersonType='VC'
Order By
        'Vendor Name';




        --Q6> o       List of product prices by product order by product
--              and SCD effective ascending
SELECT
        pro.Name as 'Product Name',
        pro.ListPrice as Price
FROM
        Production.Product pro
WHERE
        pro.FinishedGoodsFlag=1
GROUP BY
        Pro.Name,
        Pro.ListPrice
ORDER BY
        pro.Name;




--Q7> o       List of standard costs by product order by product
--              and SCD effective ascending
SELECT
        pro.Name as 'Product Name',
        pro.StandardCost
FROM
        Production.Product pro
WHERE
        pro.FinishedGoodsFlag=1
GROUP BY
        Pro.Name,
        Pro.StandardCost
ORDER BY
```

```
pro.Name;
```

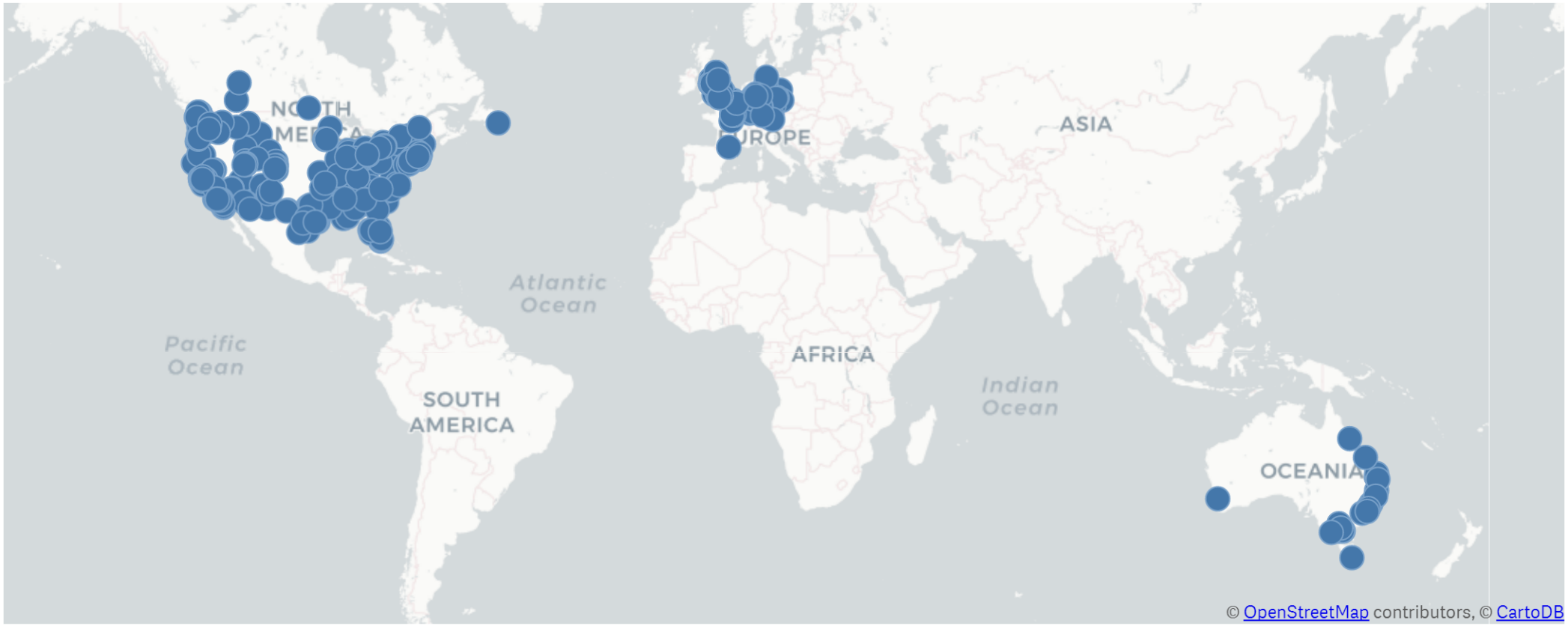
---

# *Data Visualizations*

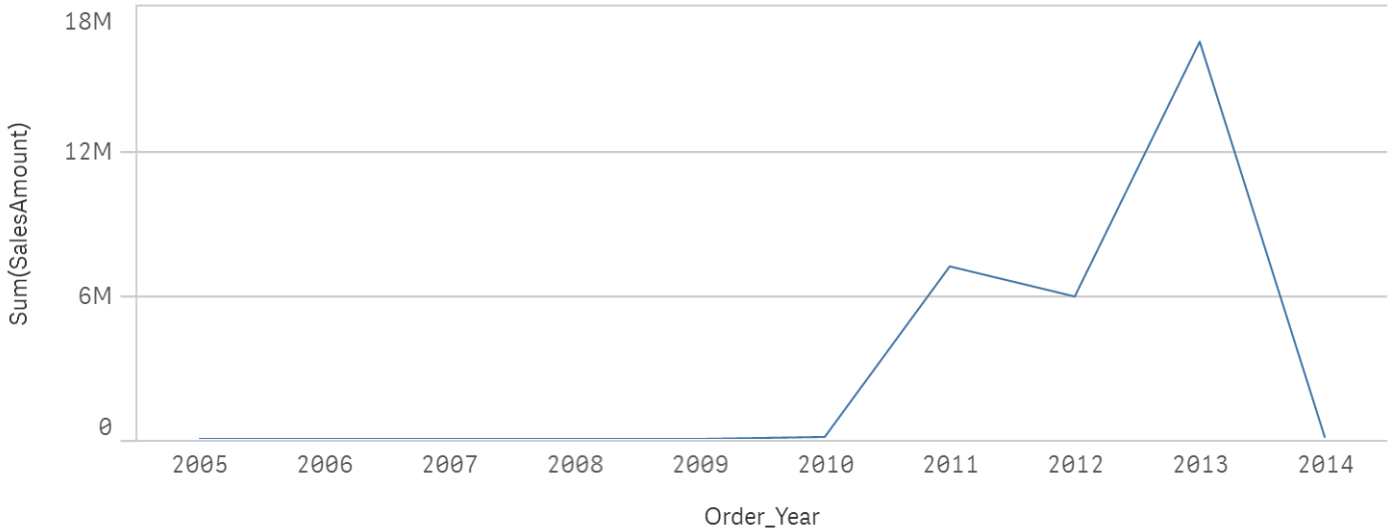

Total Sales

29.36M

** The data set contains negative or zero values that cannot be shown in this chart.*



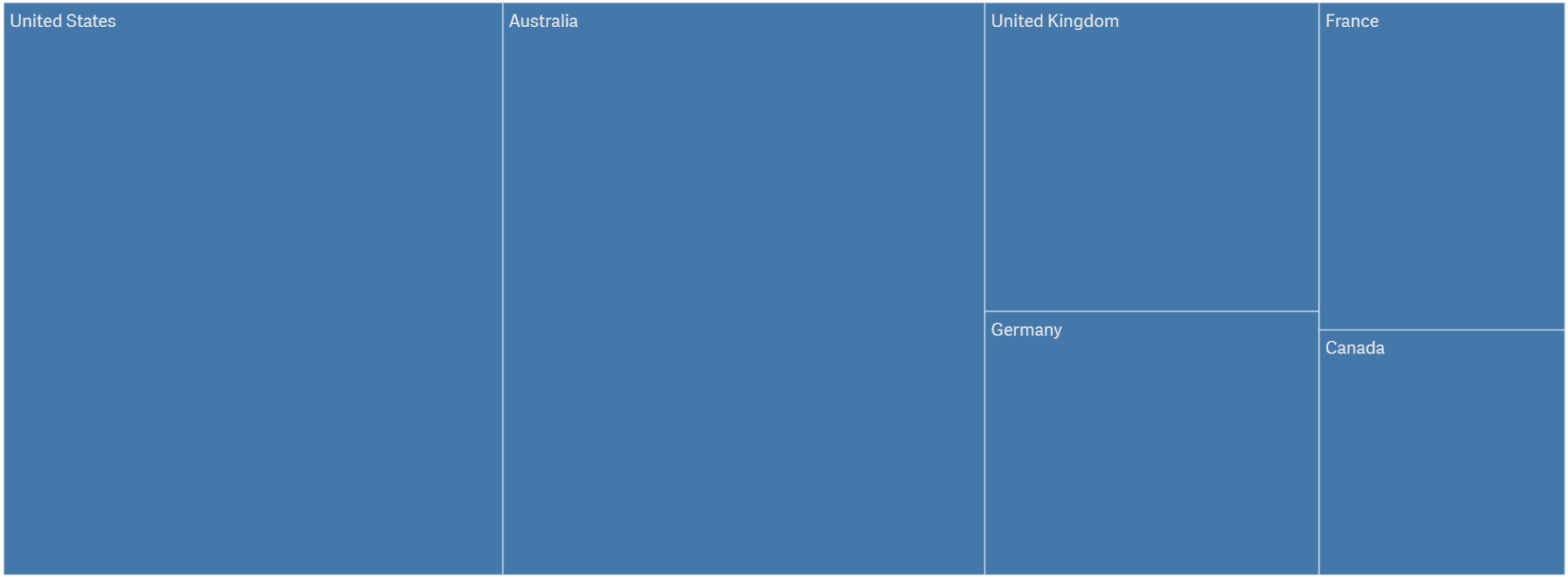
## Trend by Year-Month Drilldown

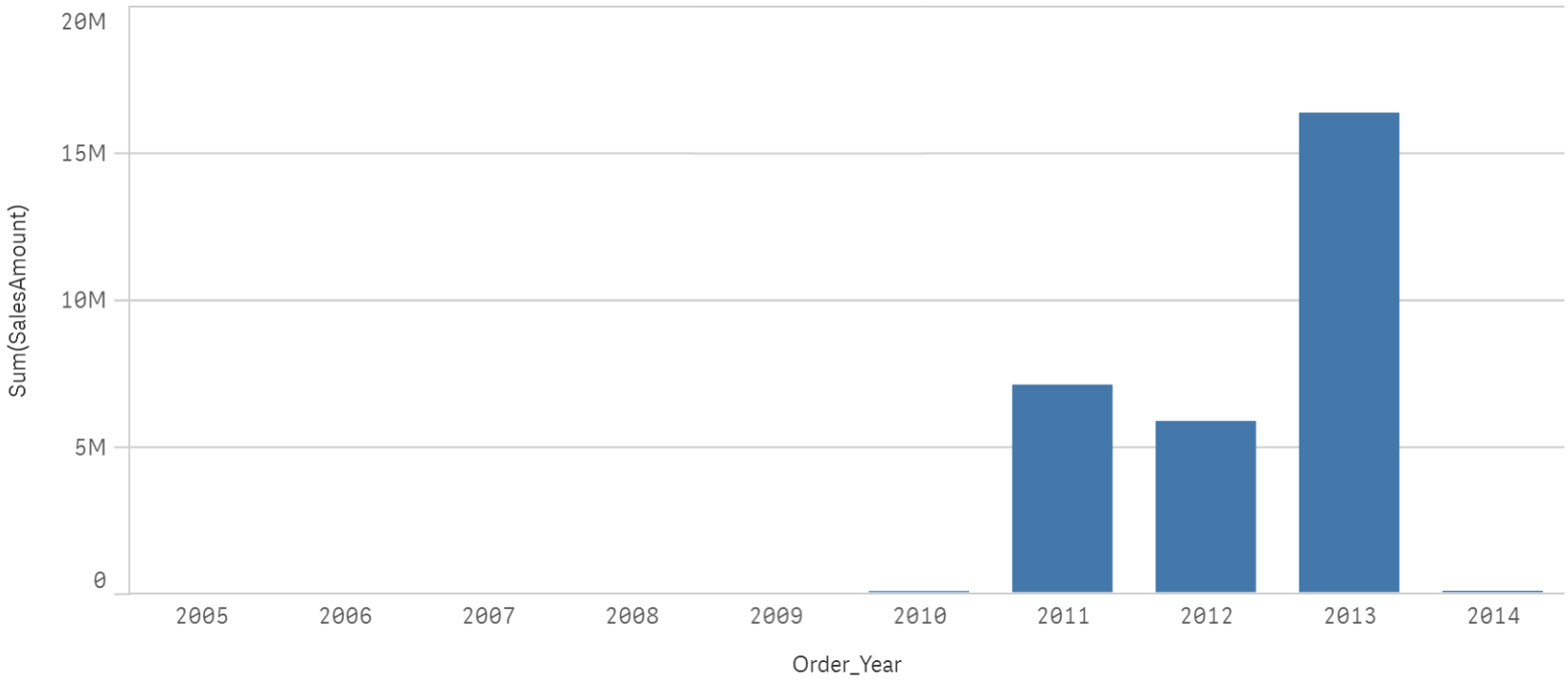



Total Sales

29.36M

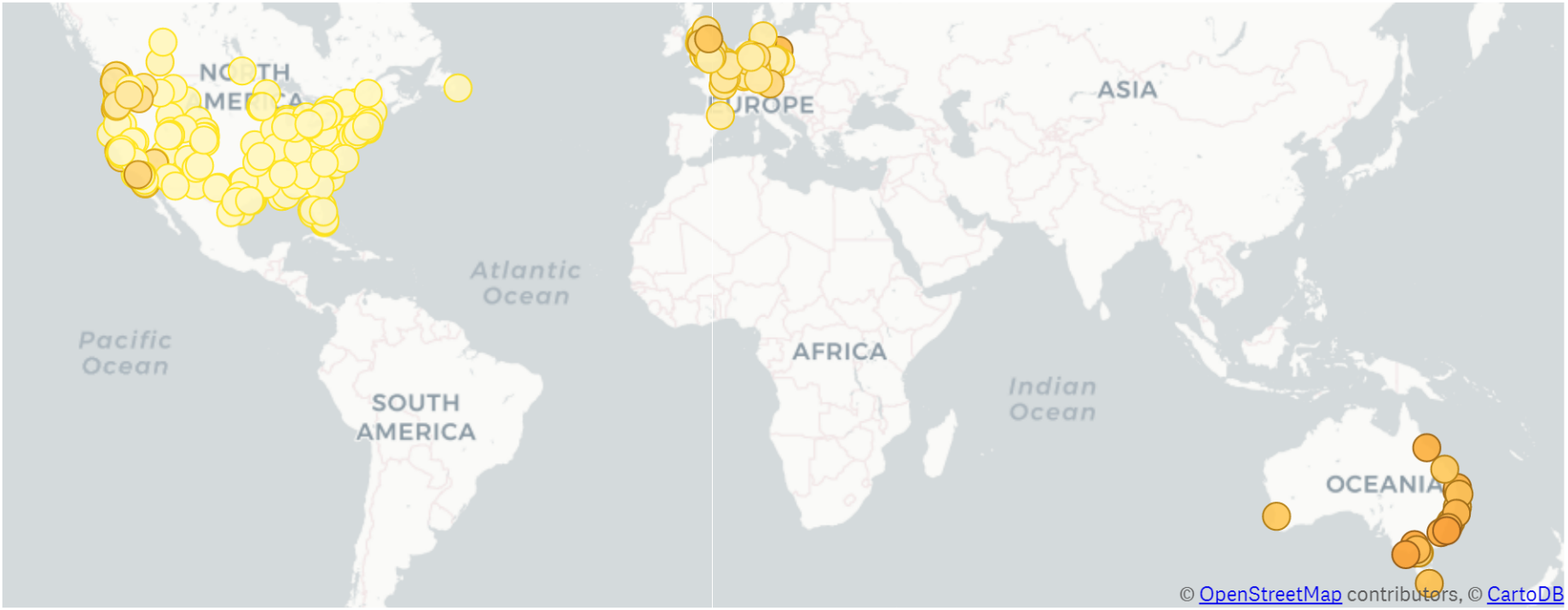
## Geo Contribution to Sales

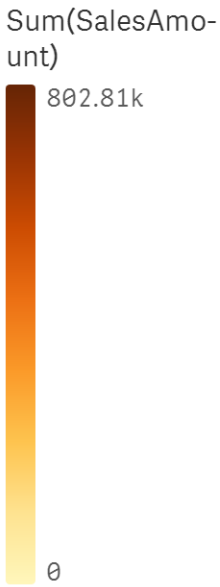





Total Sales

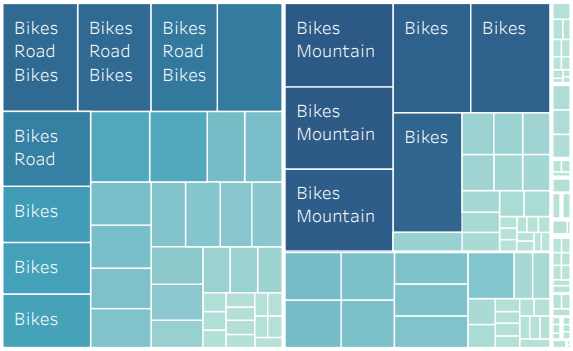
29.36M



## Geo Sales


## Product Sales




Sales Amount

5
200,000
400,000
600,000
802,810

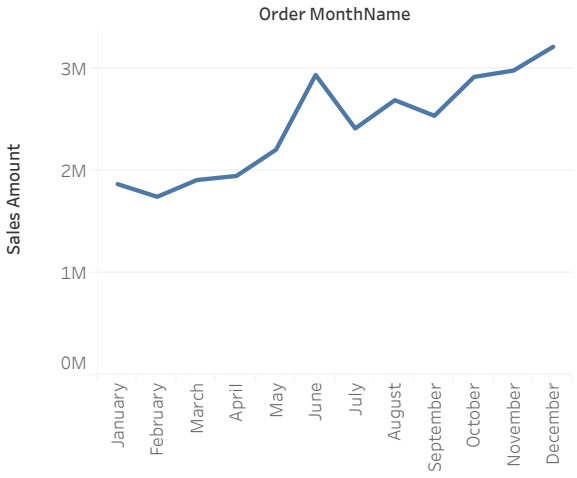
Sales Amount

2,427 1,373,470

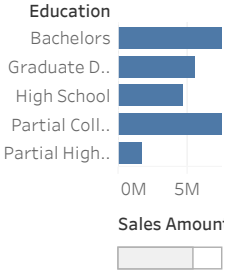
## Profit By Education

| Occupation | |
|---|---|
| Clerical | 1,910,436 |
| Manageme.. | 2,260,335 |
| Manual | 1,170,020 |
| Professional | 4,099,568 |
| Skilled Man.. | 2,640,524 |

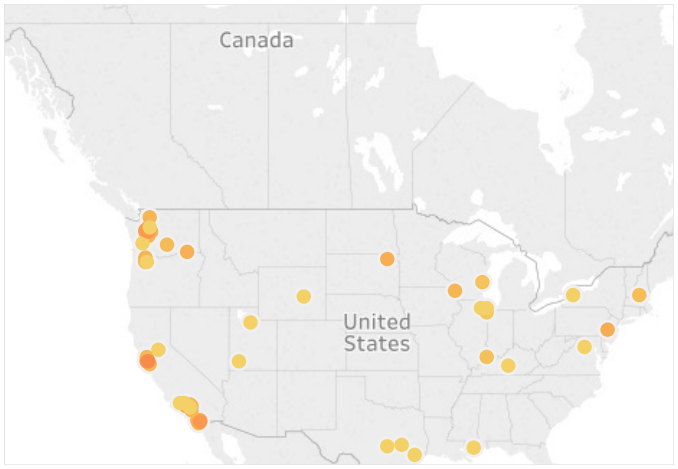
## Sales Order




## Sales by Education & Occupation



## Product Sales by Geo

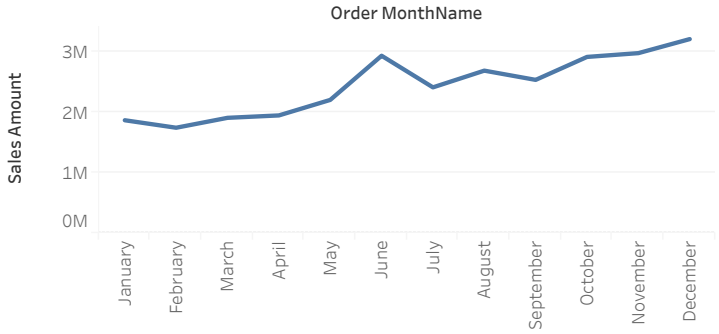



Sales Amount
5 802,810

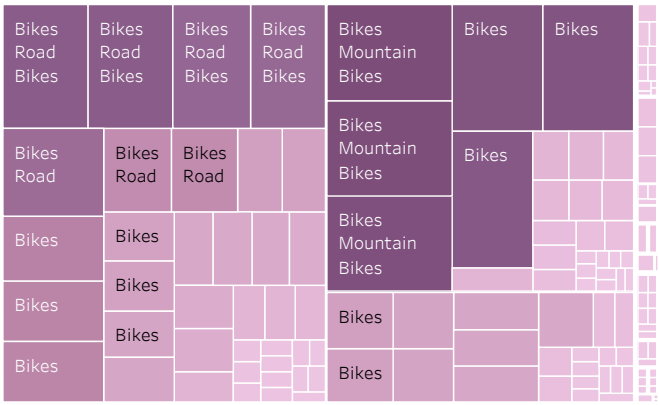
## Profit By Education

| Occupation | |
|---|---|
| Professional | 4,099,568 |
| Skilled Manual | 2,640,524 |

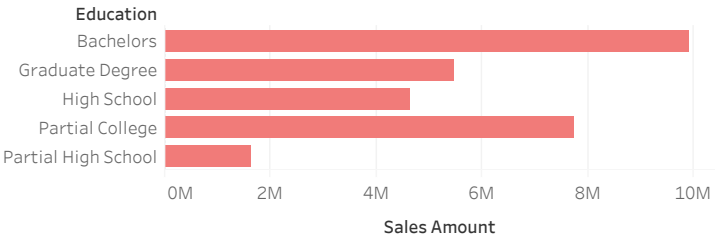
## Sales Trends & Forecast by Month



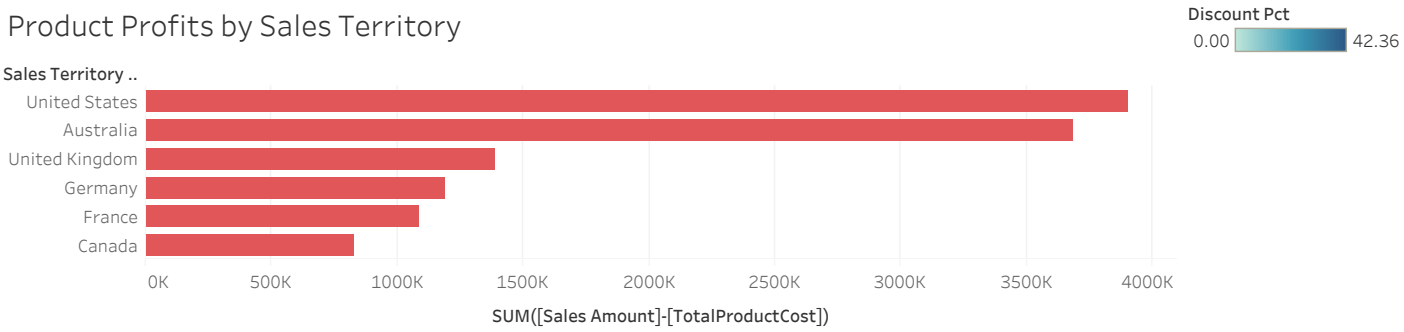

## Product Contribution of Sales




## Sales by Education



## Product Profits by Sales Territory




## Sales Promotions & Discounts

| Promotion .. | |
|---|---|
| 1 | 0.00 |
| 2 | 42.36 |
| 13 | 3.00 |
| 14 | 2.60 |

## Comparison of Yearly Sales