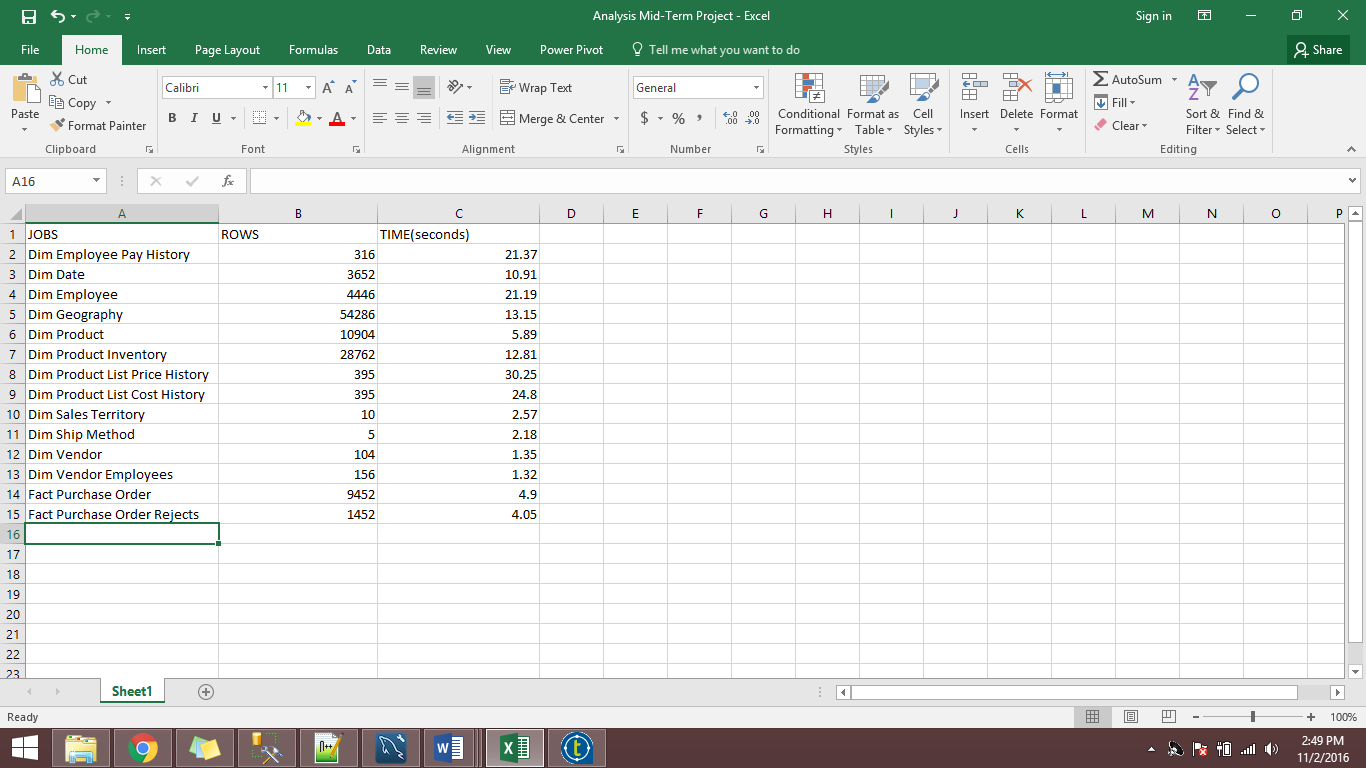
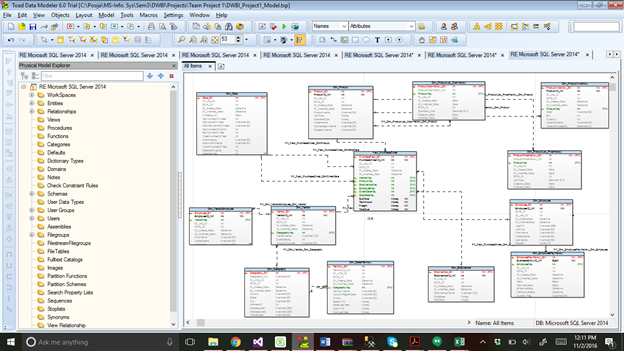
**MID-TERM PROJECT**

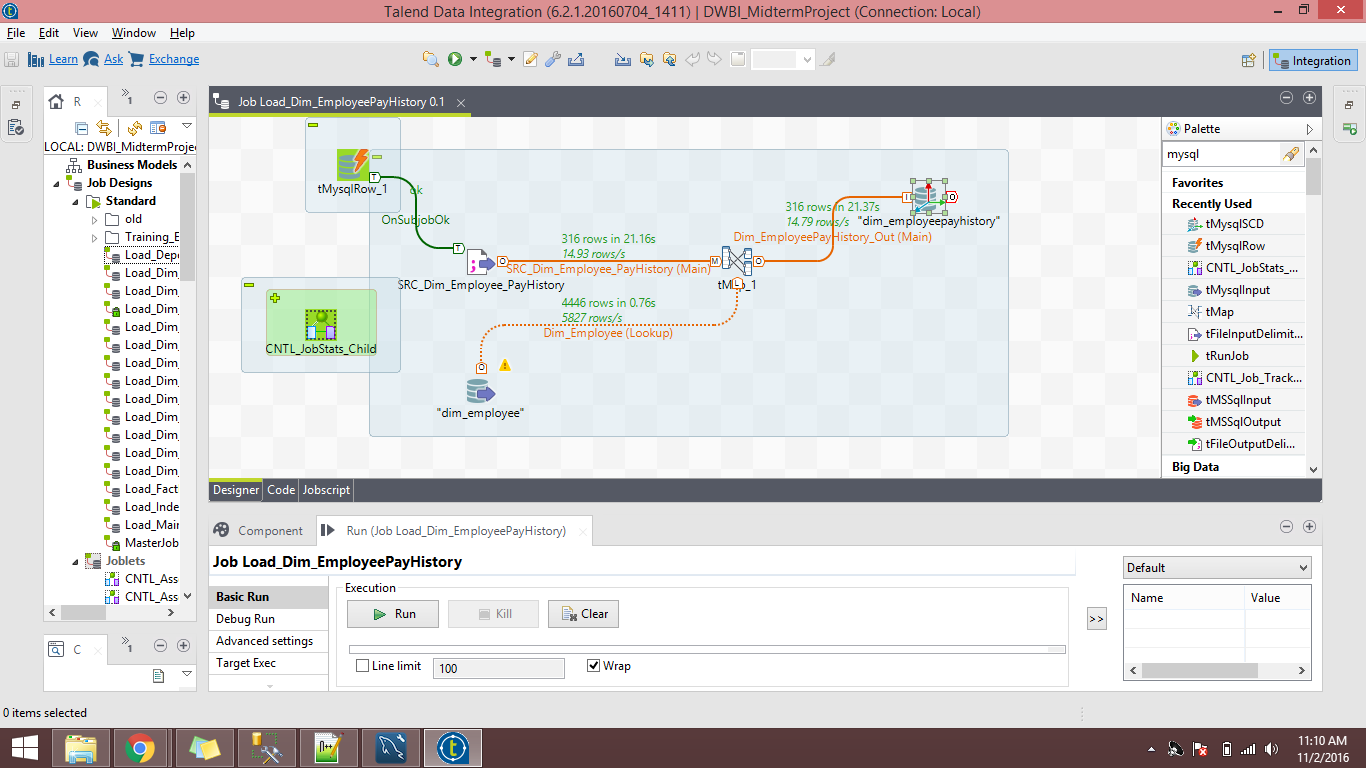
**QUESTION-1**

**QUESTION-2**

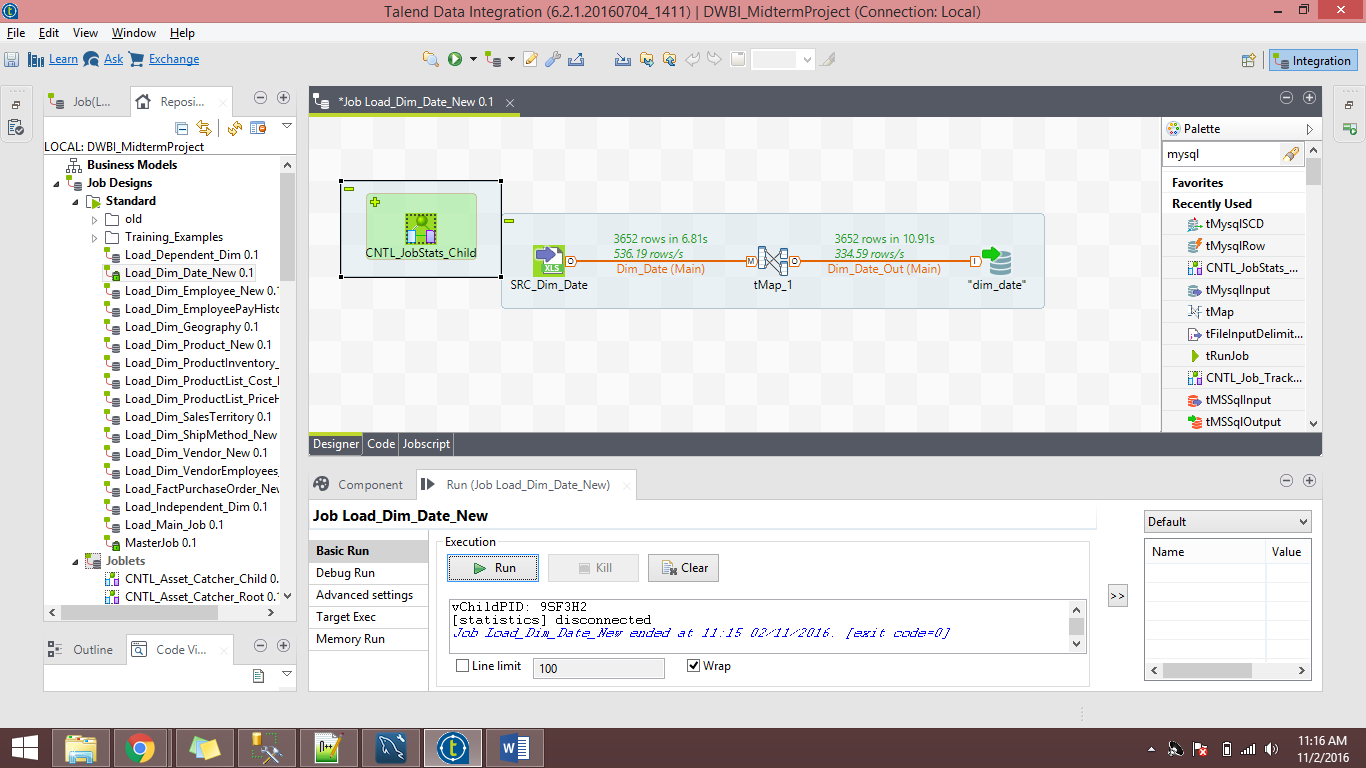
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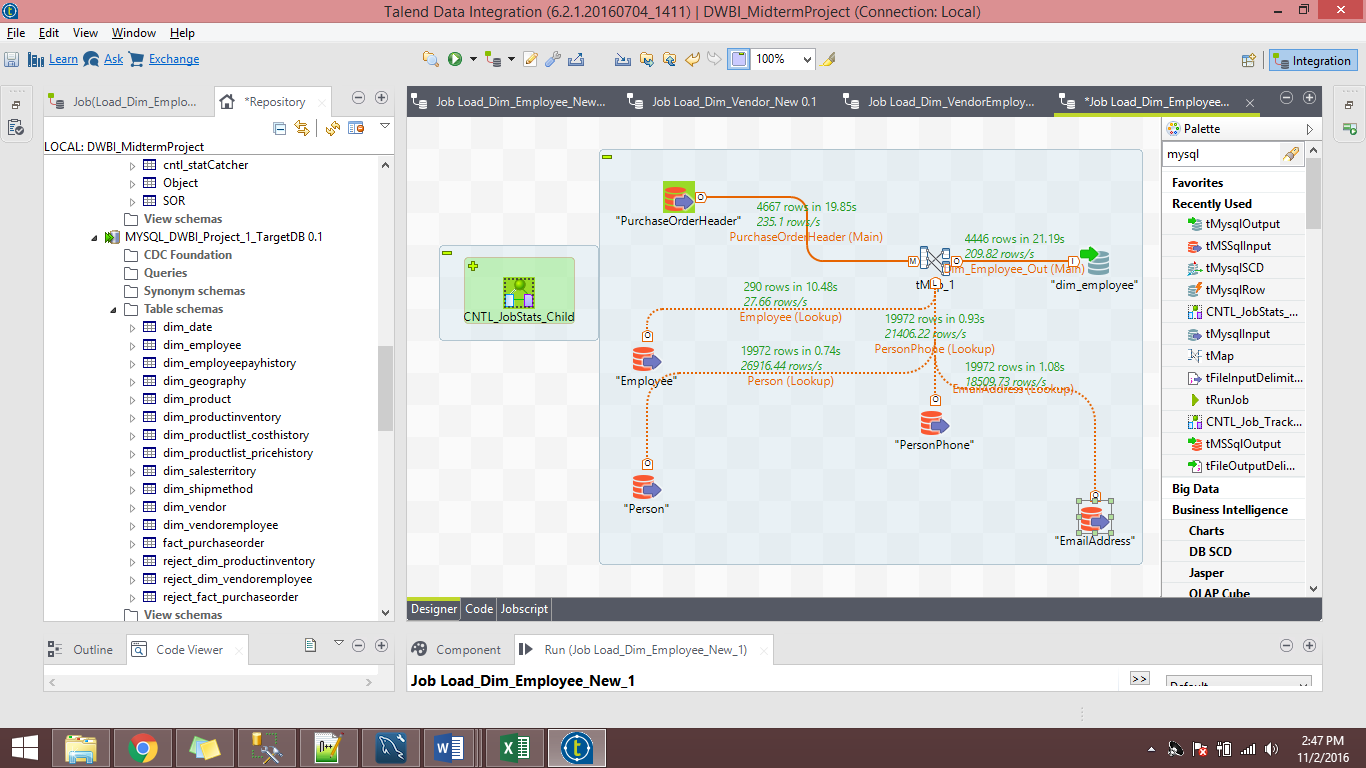
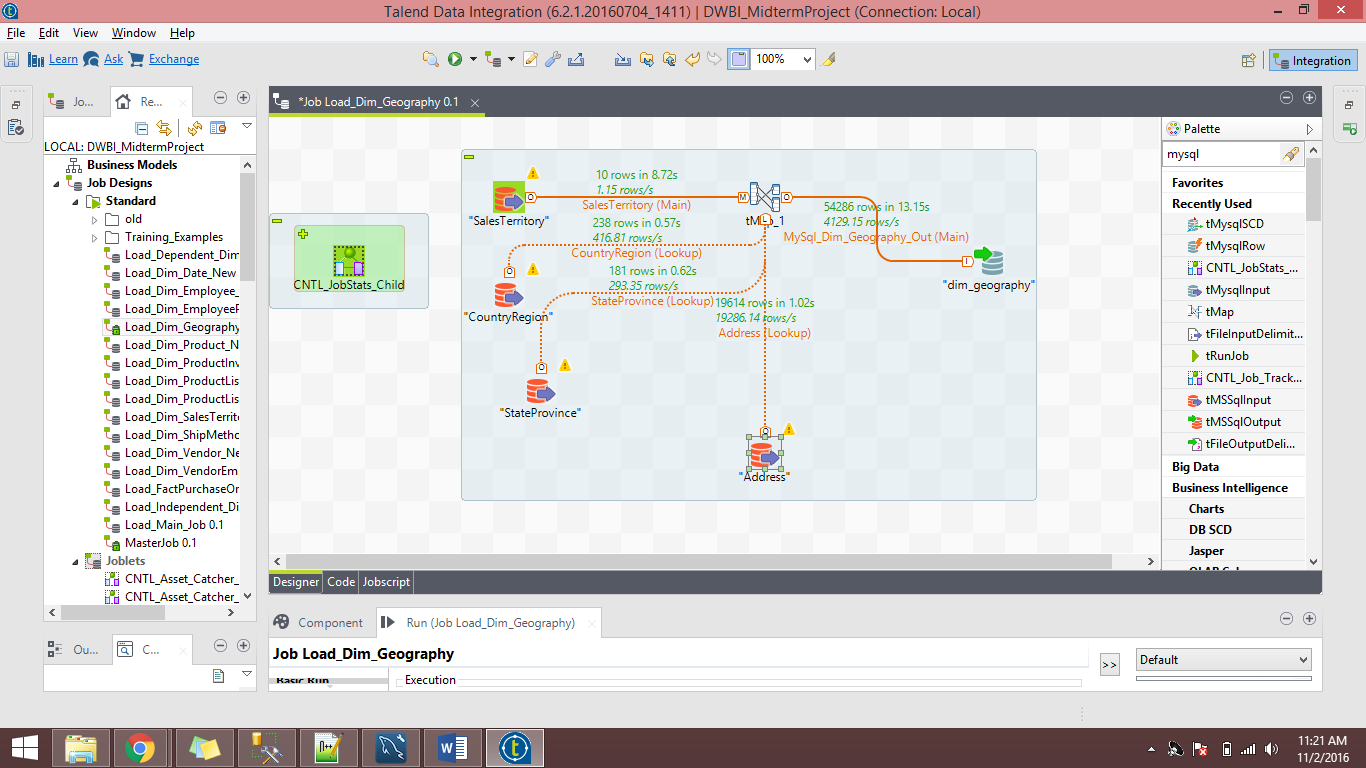
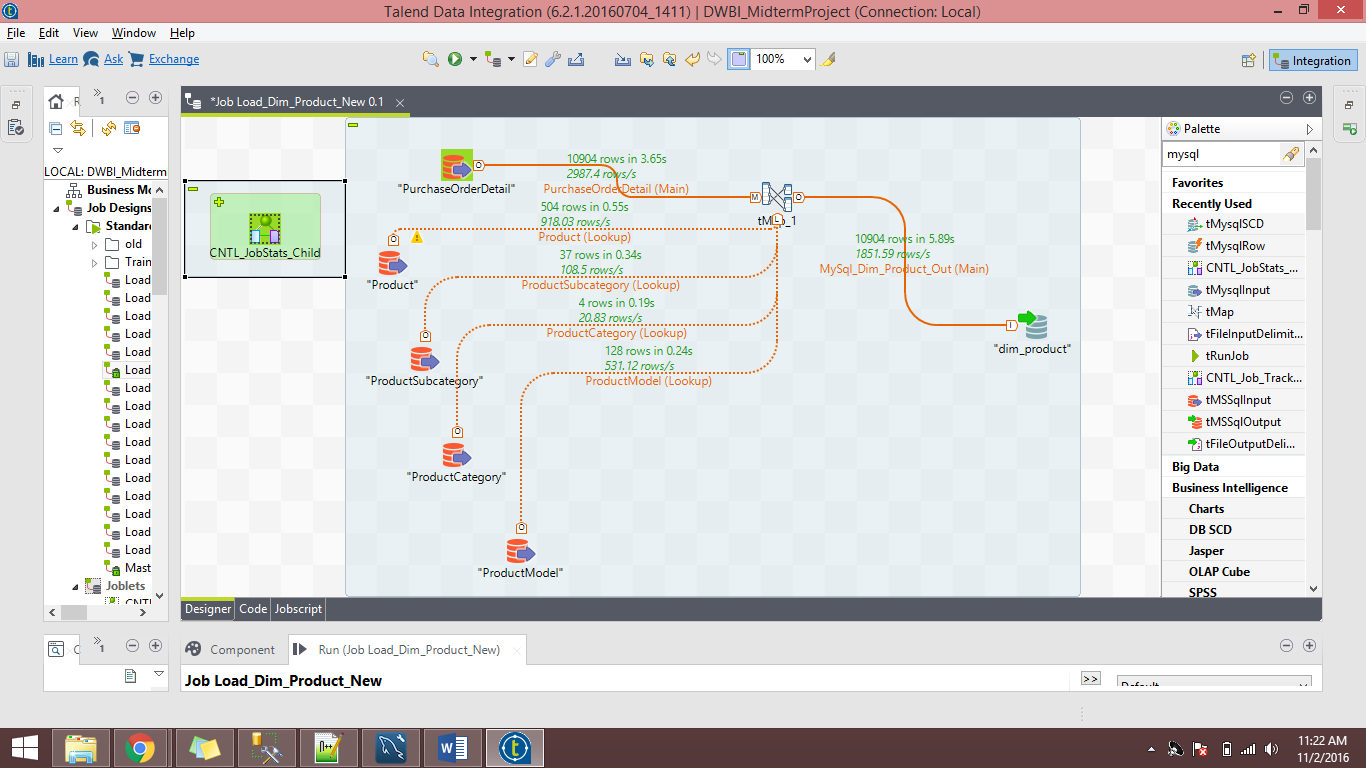
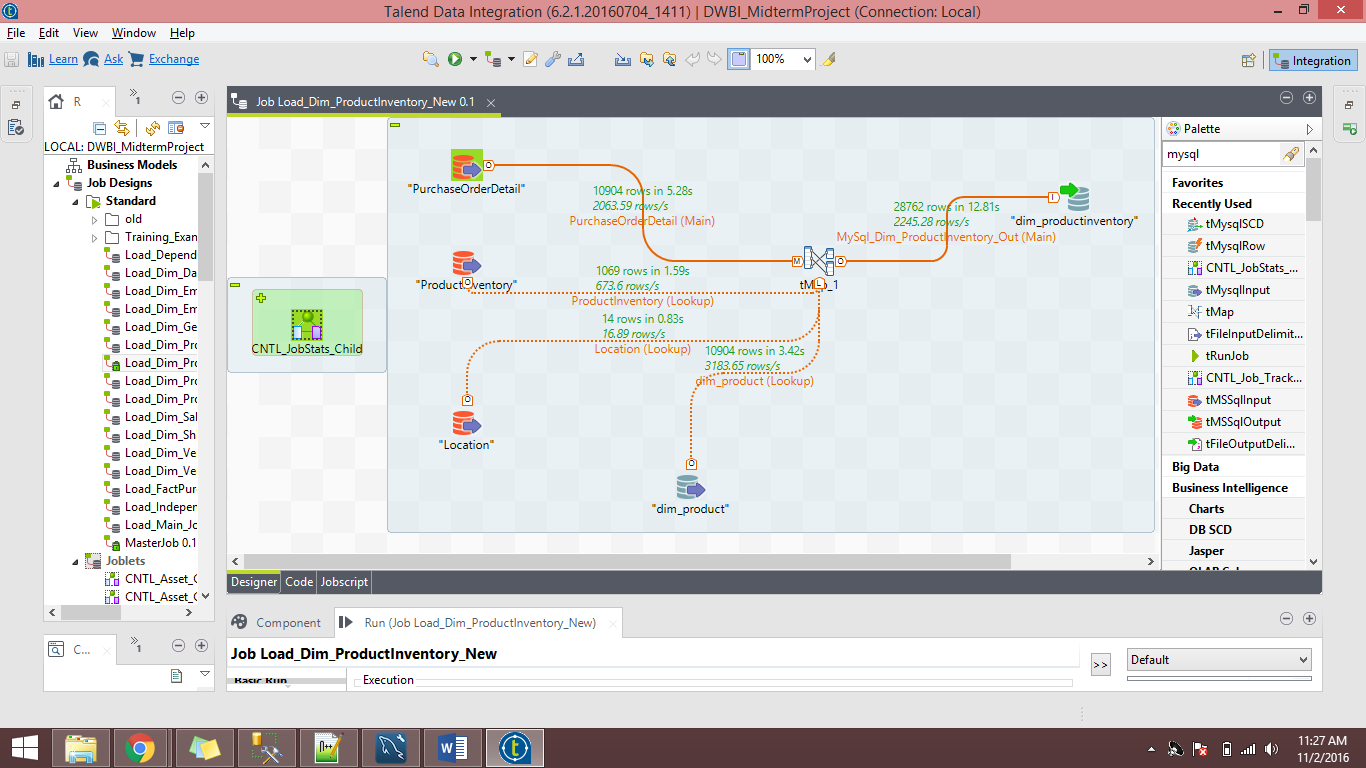
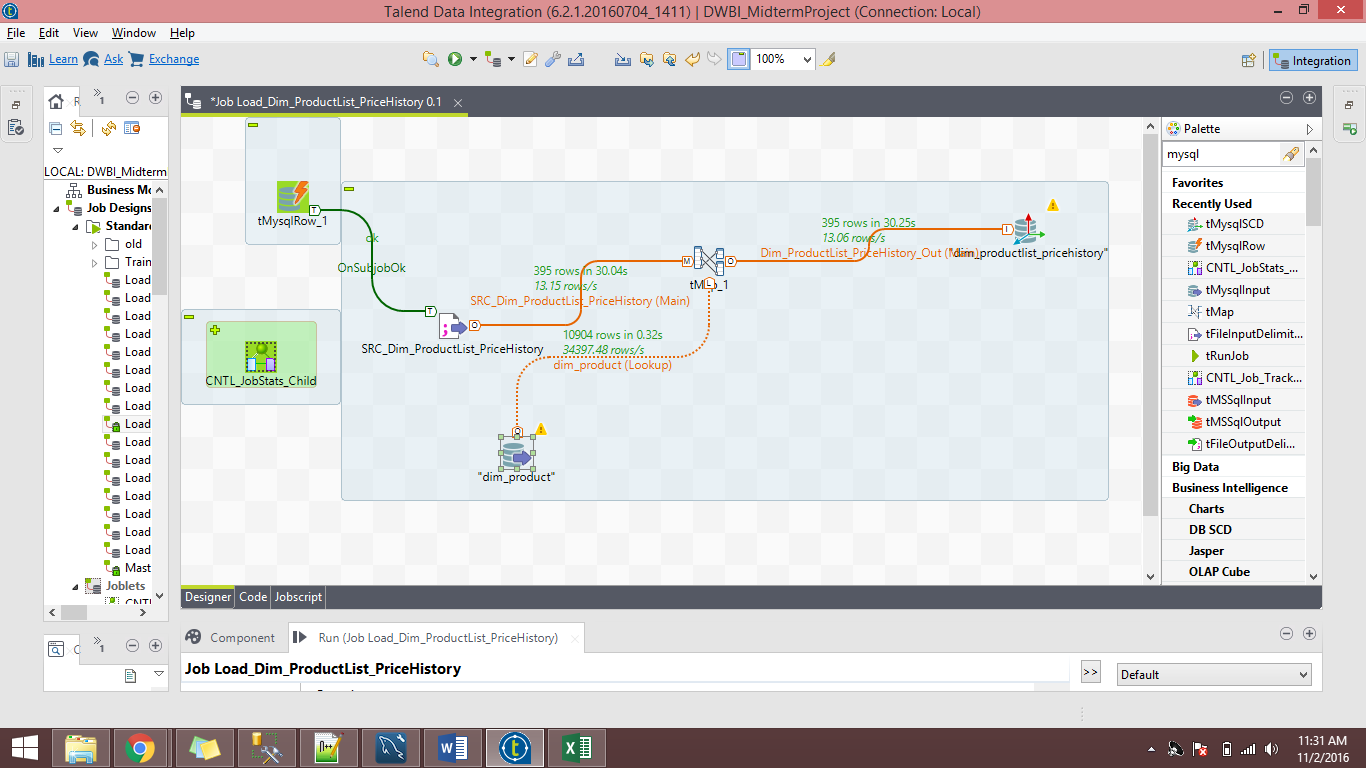
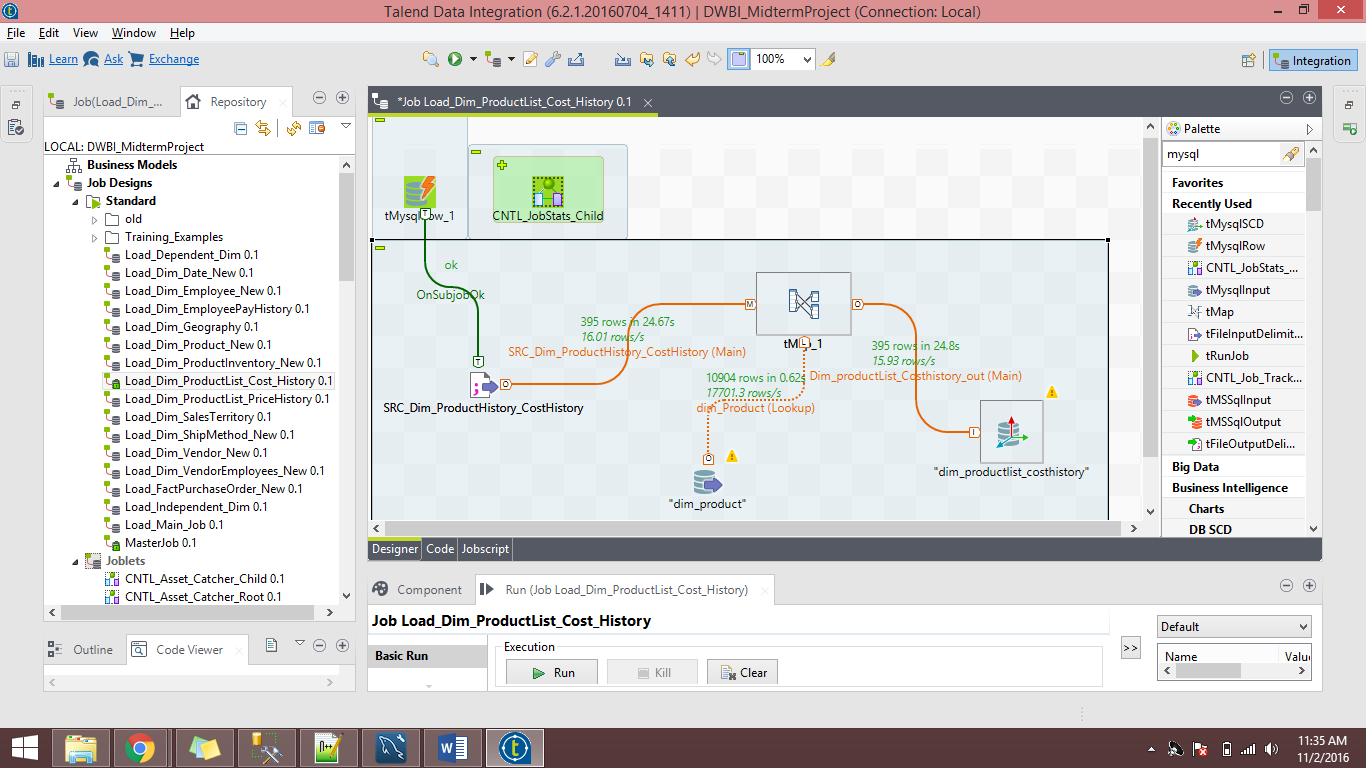
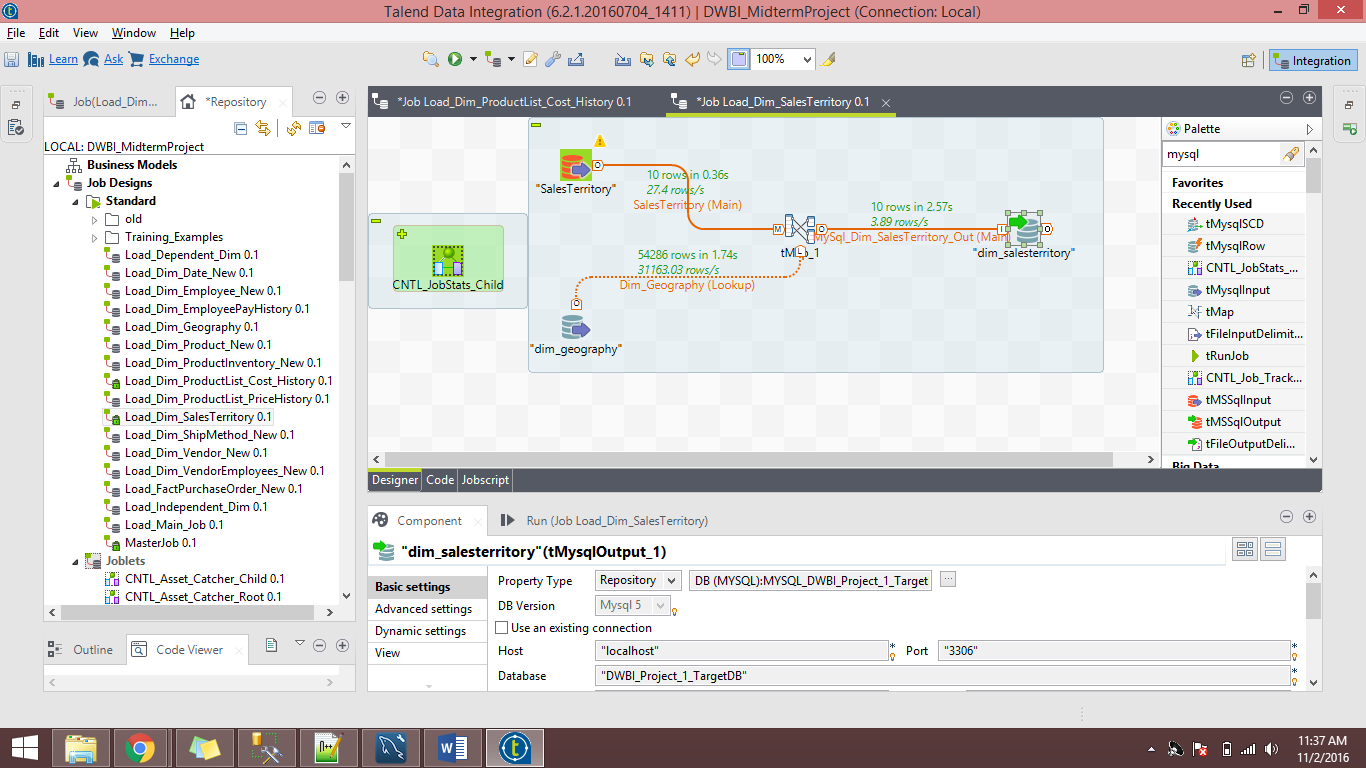
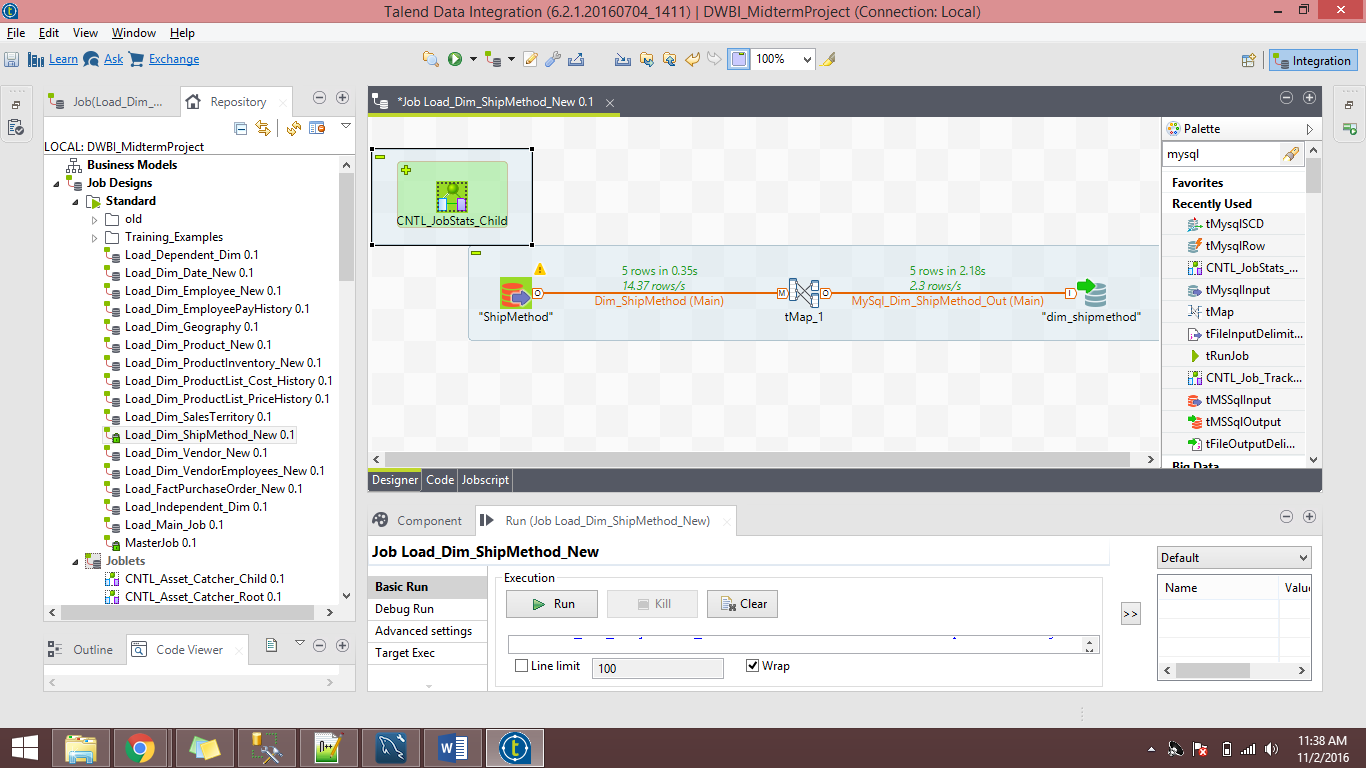
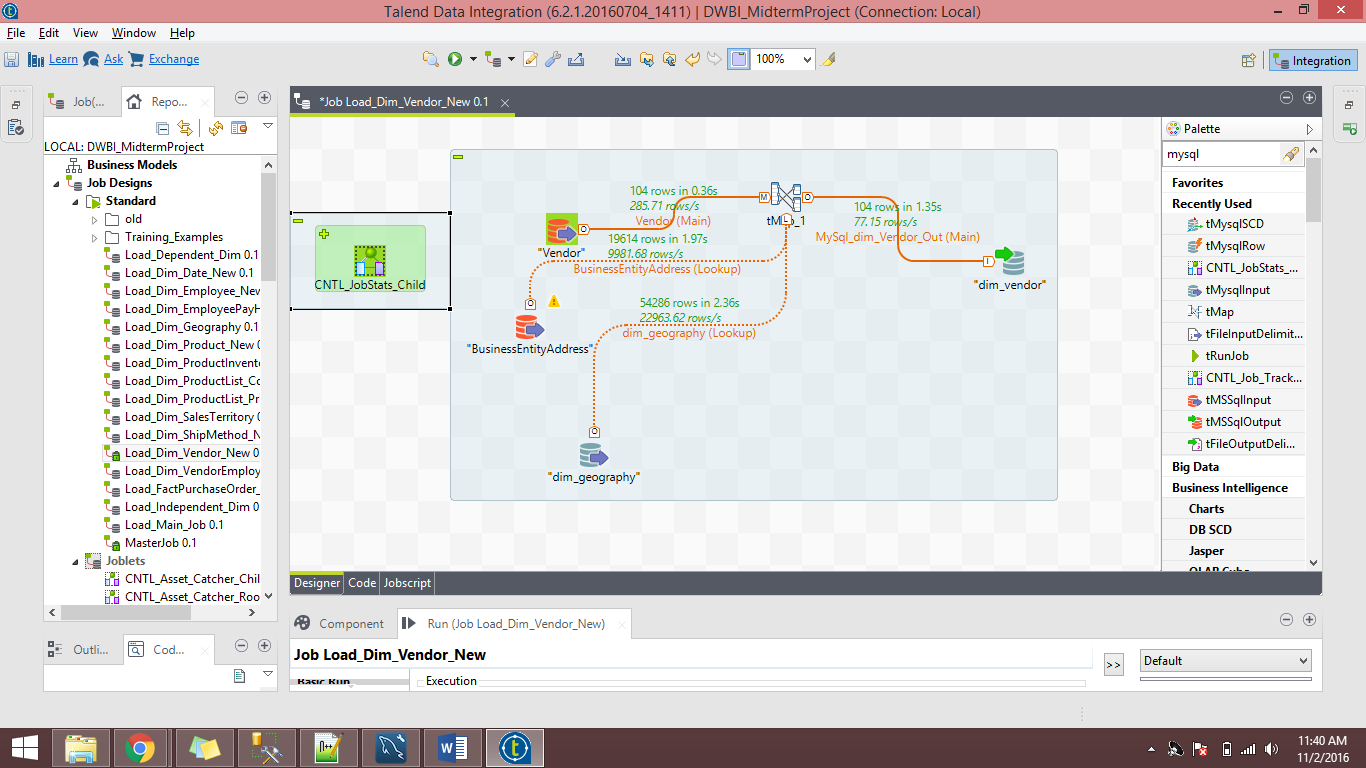
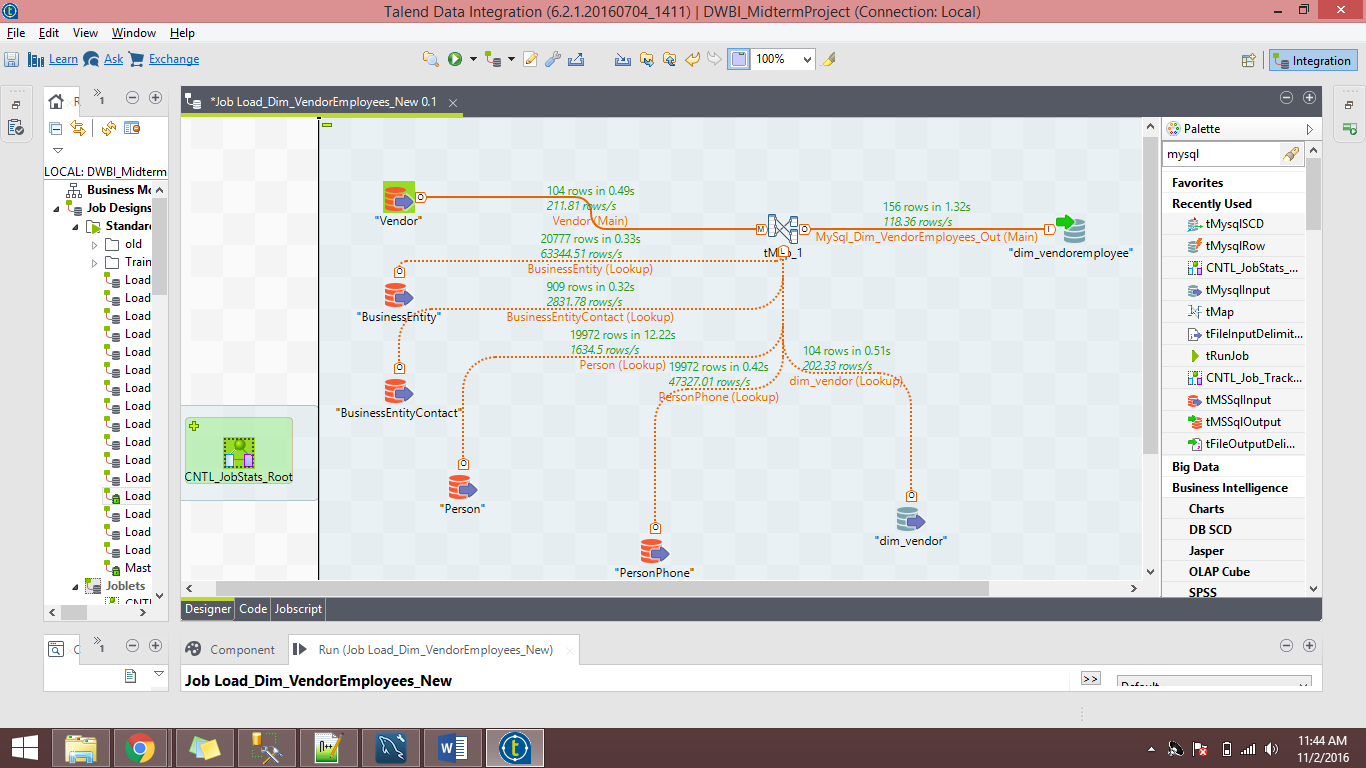
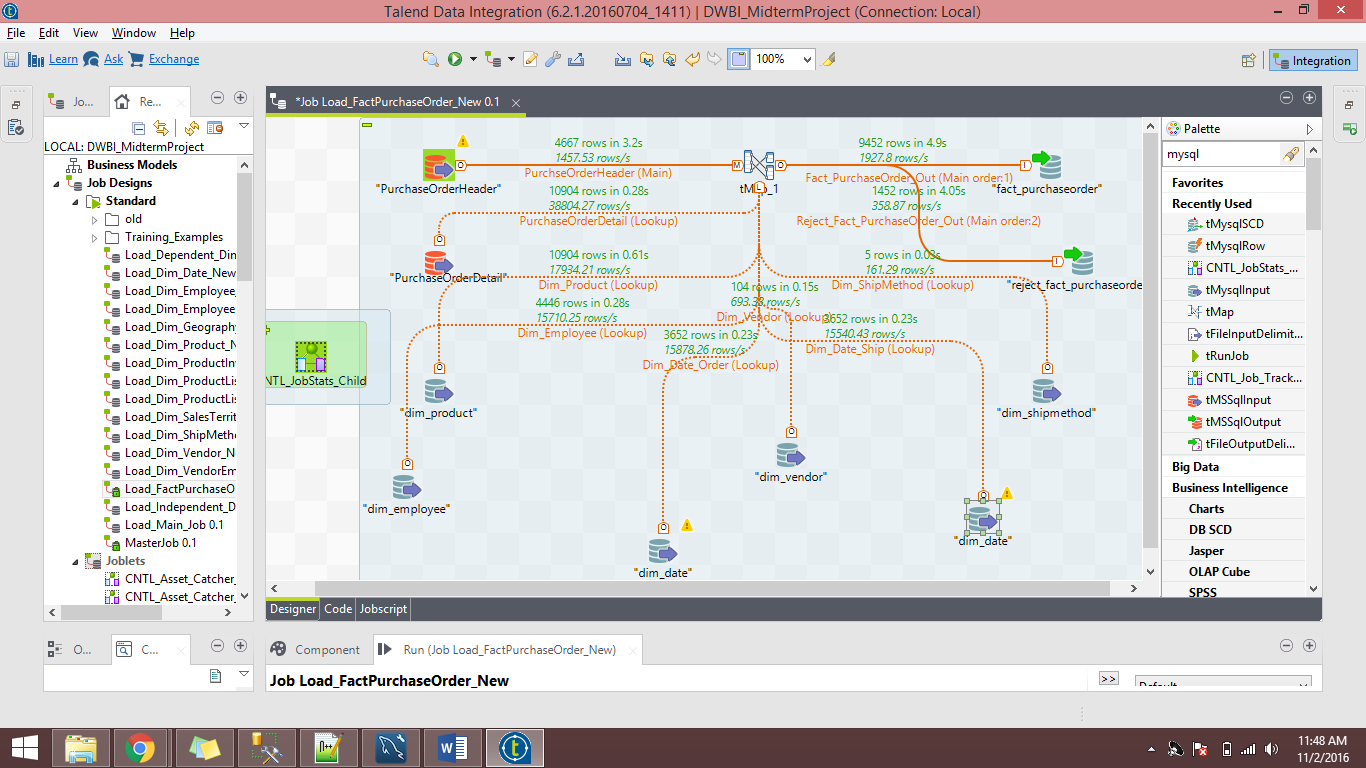
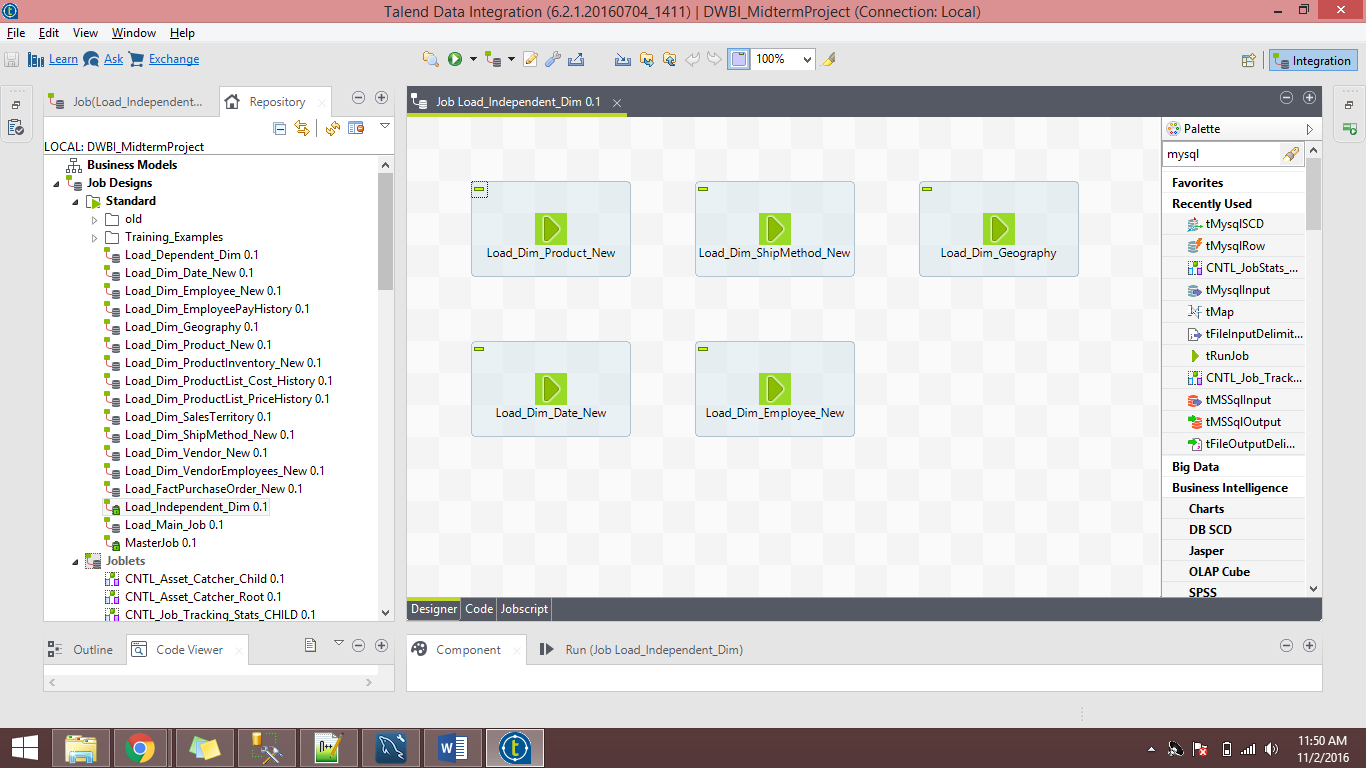
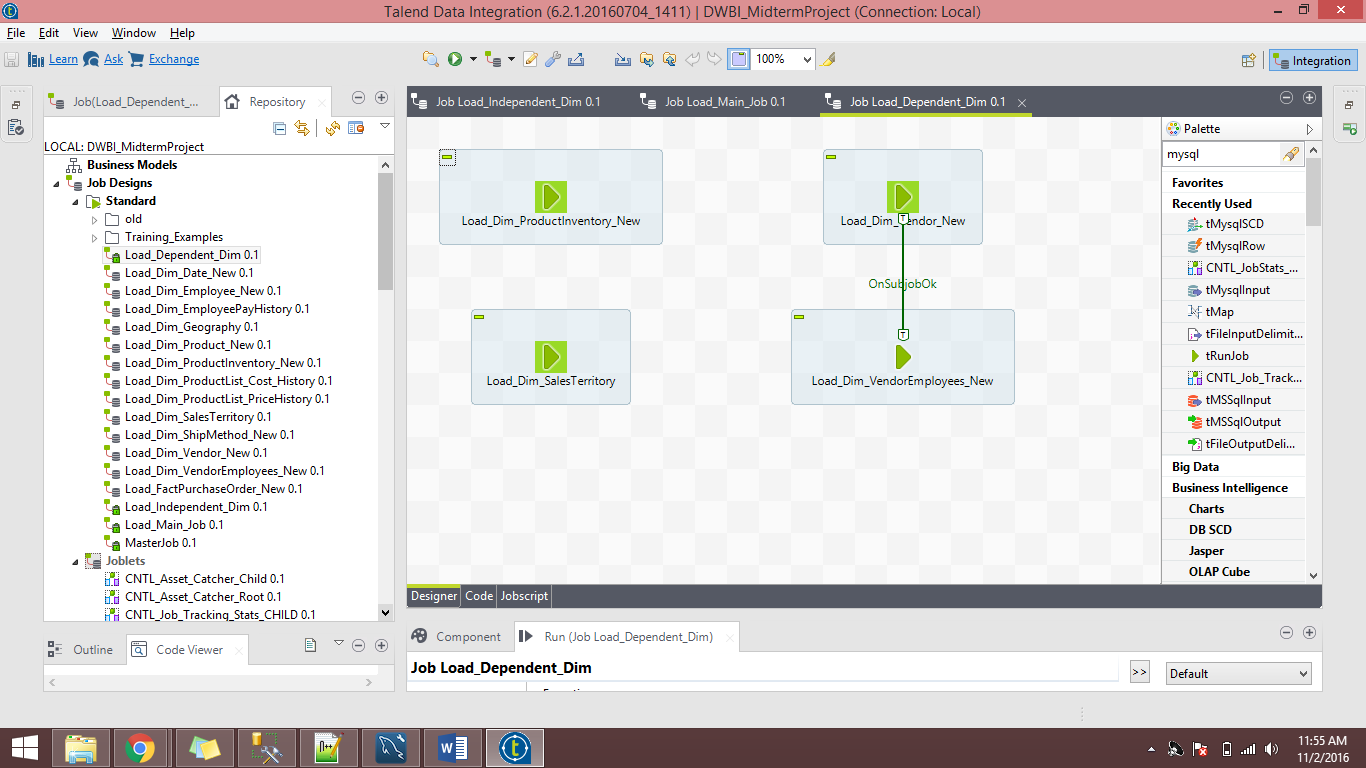
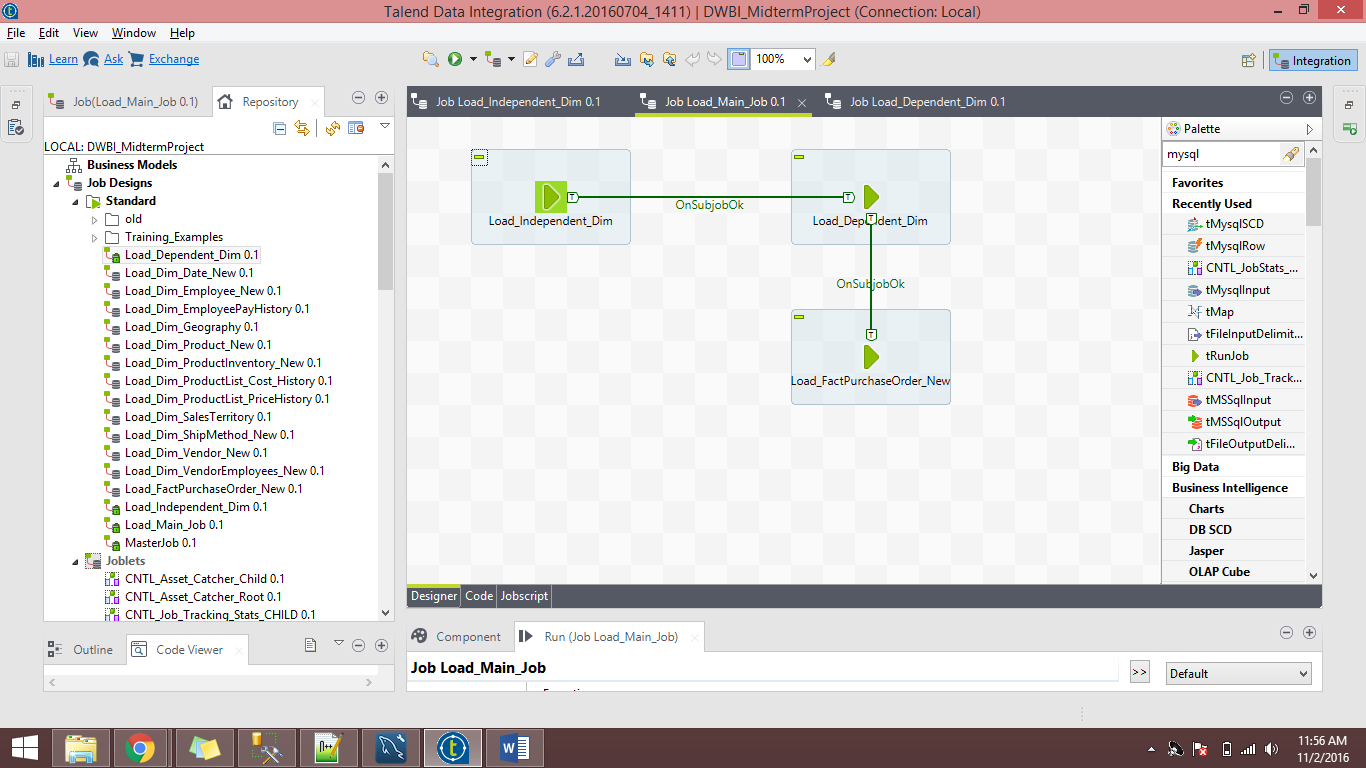
**QUESTION-3(TALEND)**

1. **DIM EMPLOYEE PAY HISTORY**



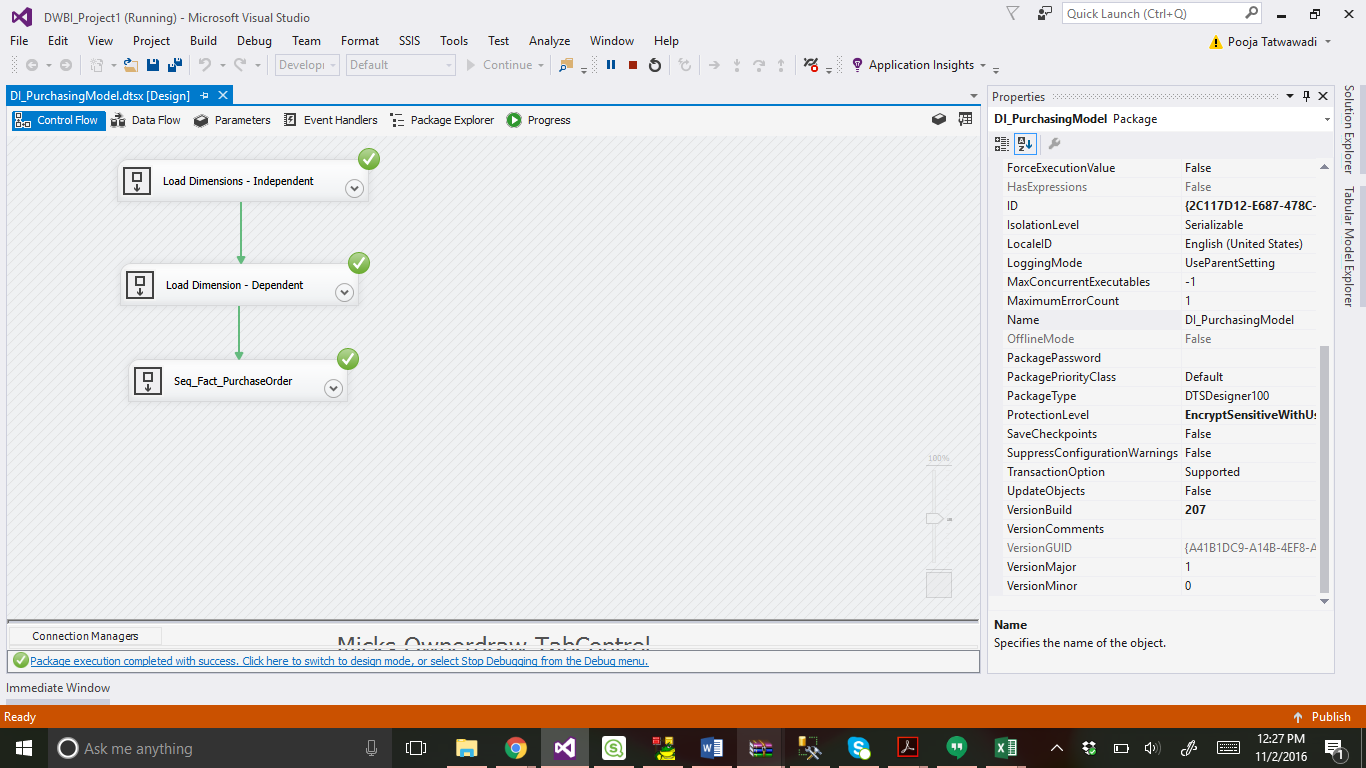
1. **DIM-DATE**



1. **DIM EMPLOYEE**
2. **DIM GEOGRAPHY**
3. **DIM PRODUCT**
4. **DIM PRODUCT INVENTORY**
5. **DIM PRODUCT-LIST PRICE HISTORY**
6. **DIM PRODUCT-LIST COST HISTORY**
7. **DIM SALES TERRITORY**
8. **DIM SHIP-METHOD**
9. **DIM VENDOR**
10. **DIM VENDOR-EMPLOYEES**
11. **FACT PURCHASE ORDER**
12. **INDEPENDENT DIMENSIONS**
13. **DEPENDENT DIMENSIONS**
14. **MAIN JOB**

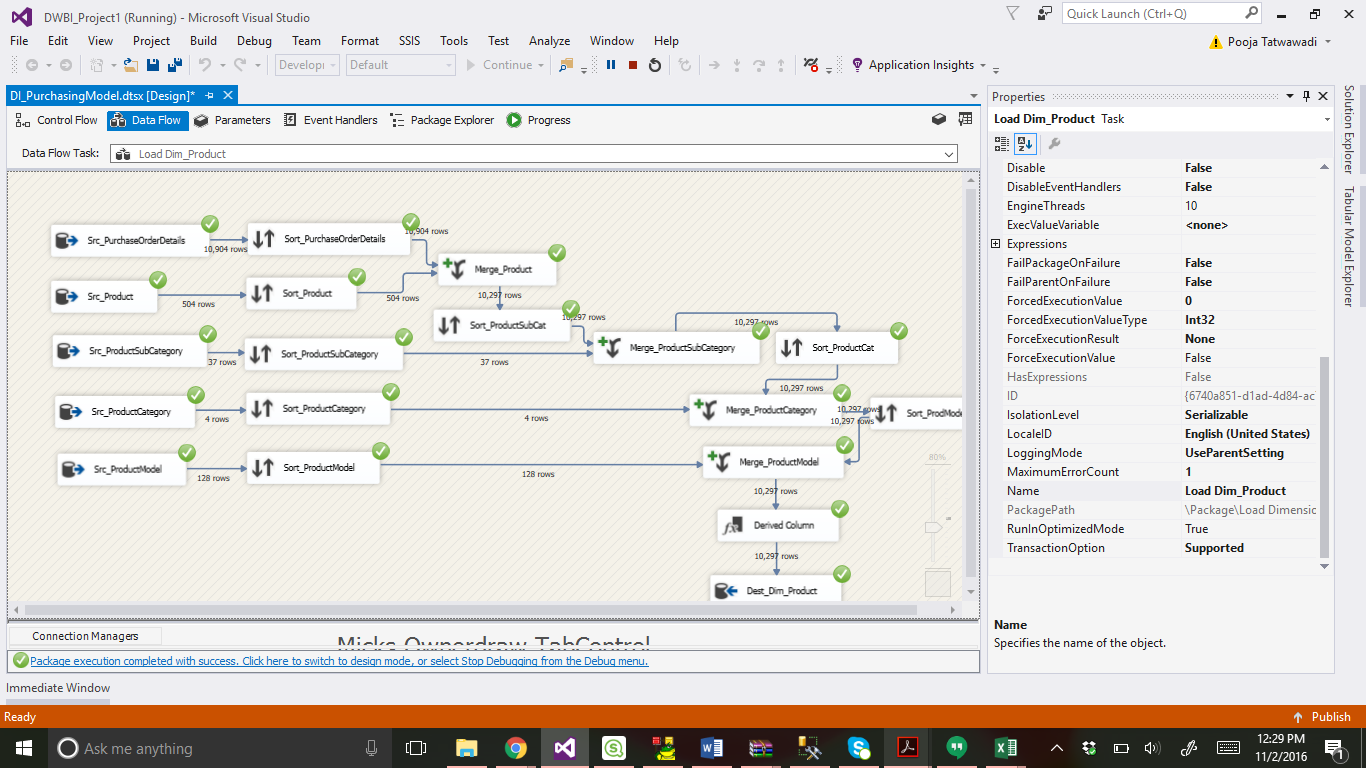
**QUESTION-3(SSIS)**

**1) Main Job:**

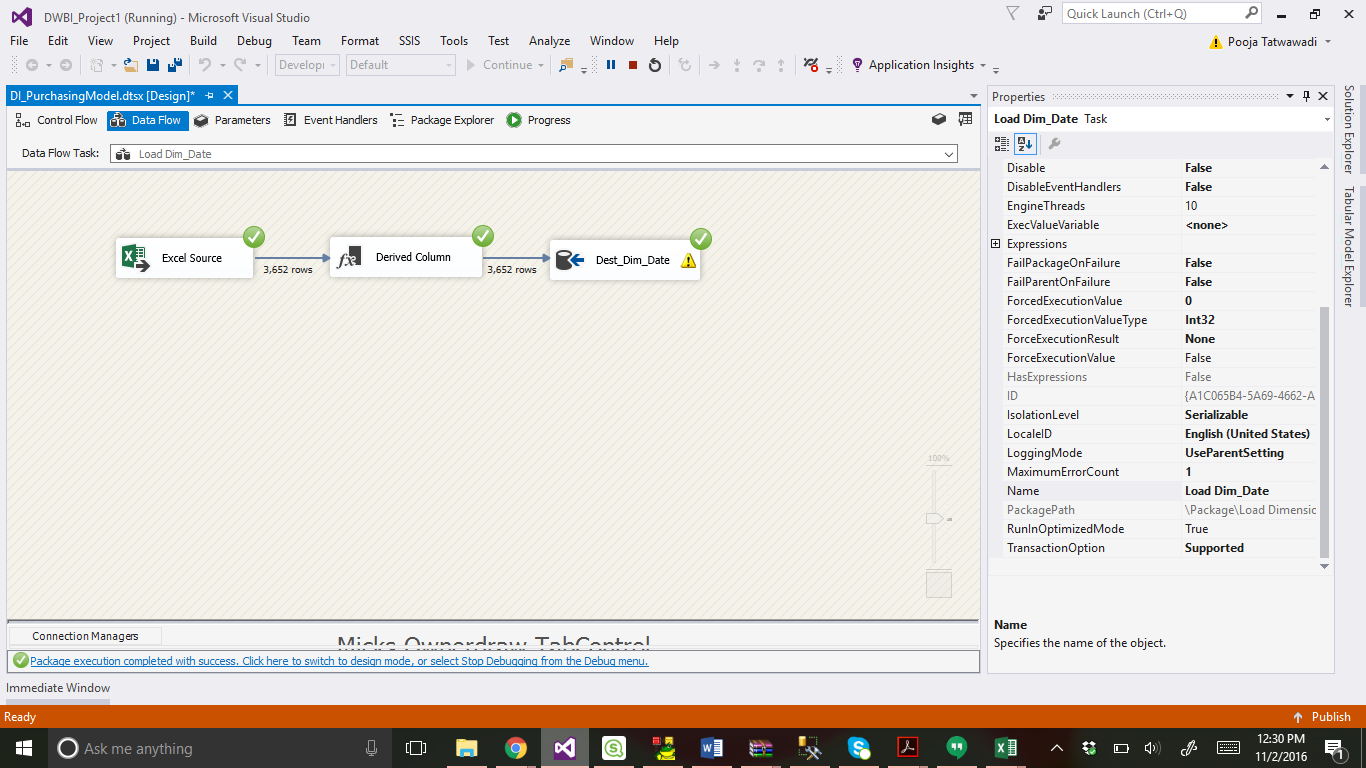


**Independent Dimensions:**

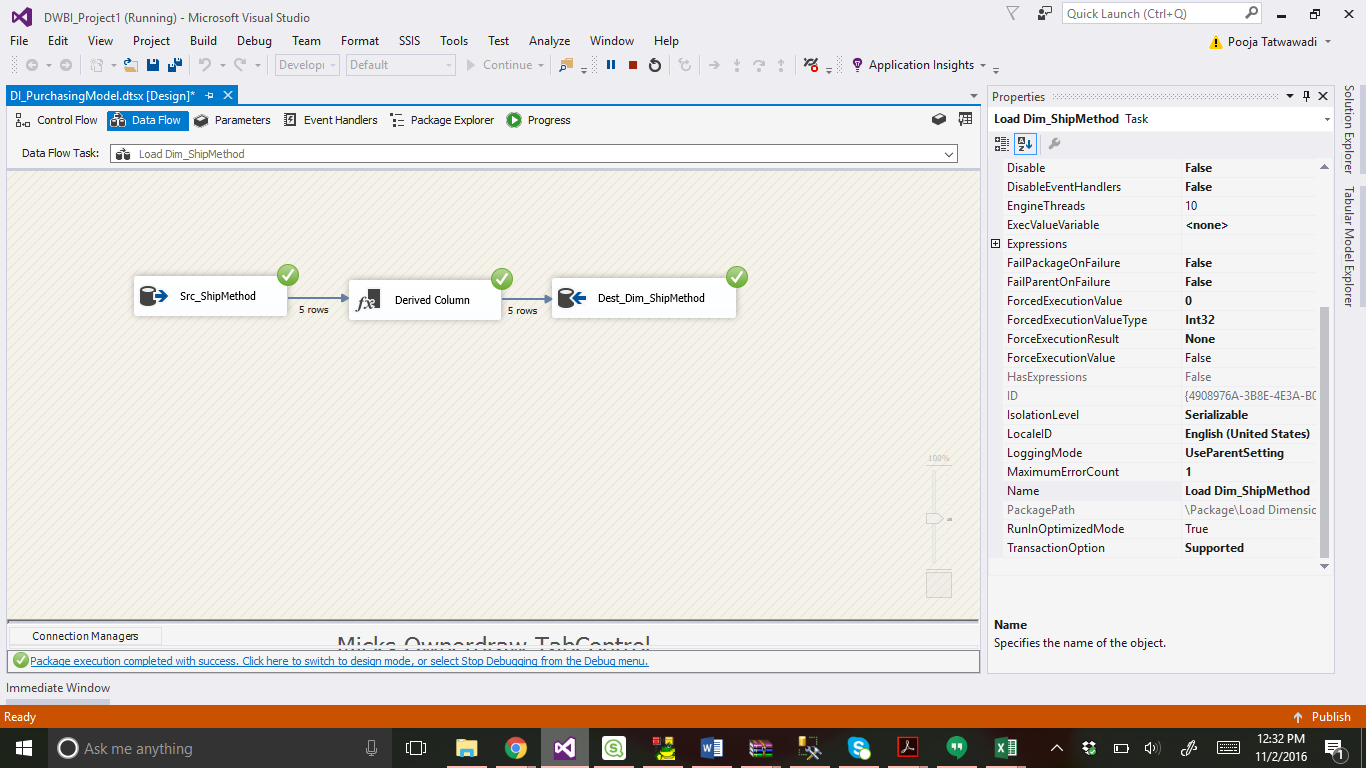
**1) Dim\_Product**



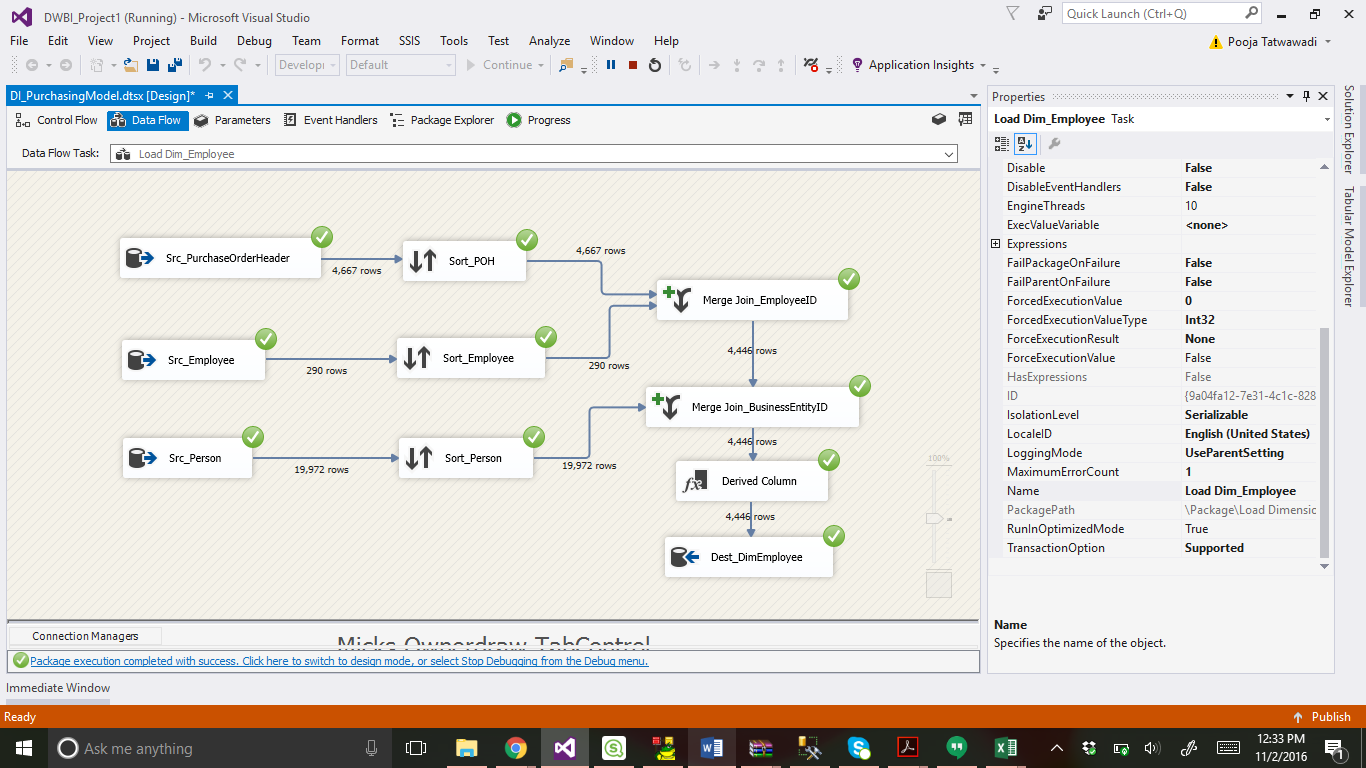
**2) Dim\_Date**



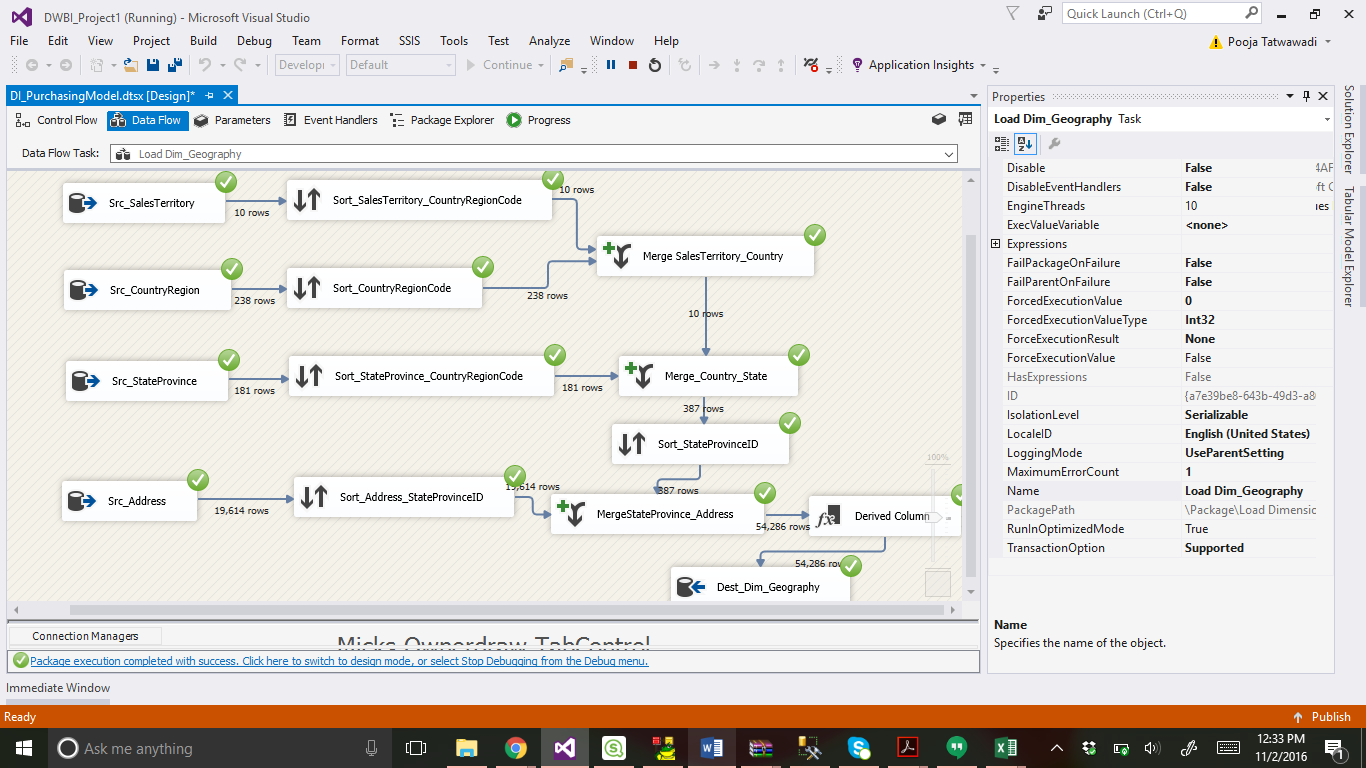
**3) Dim\_ShipMethod**



**4) Dim\_Employee**

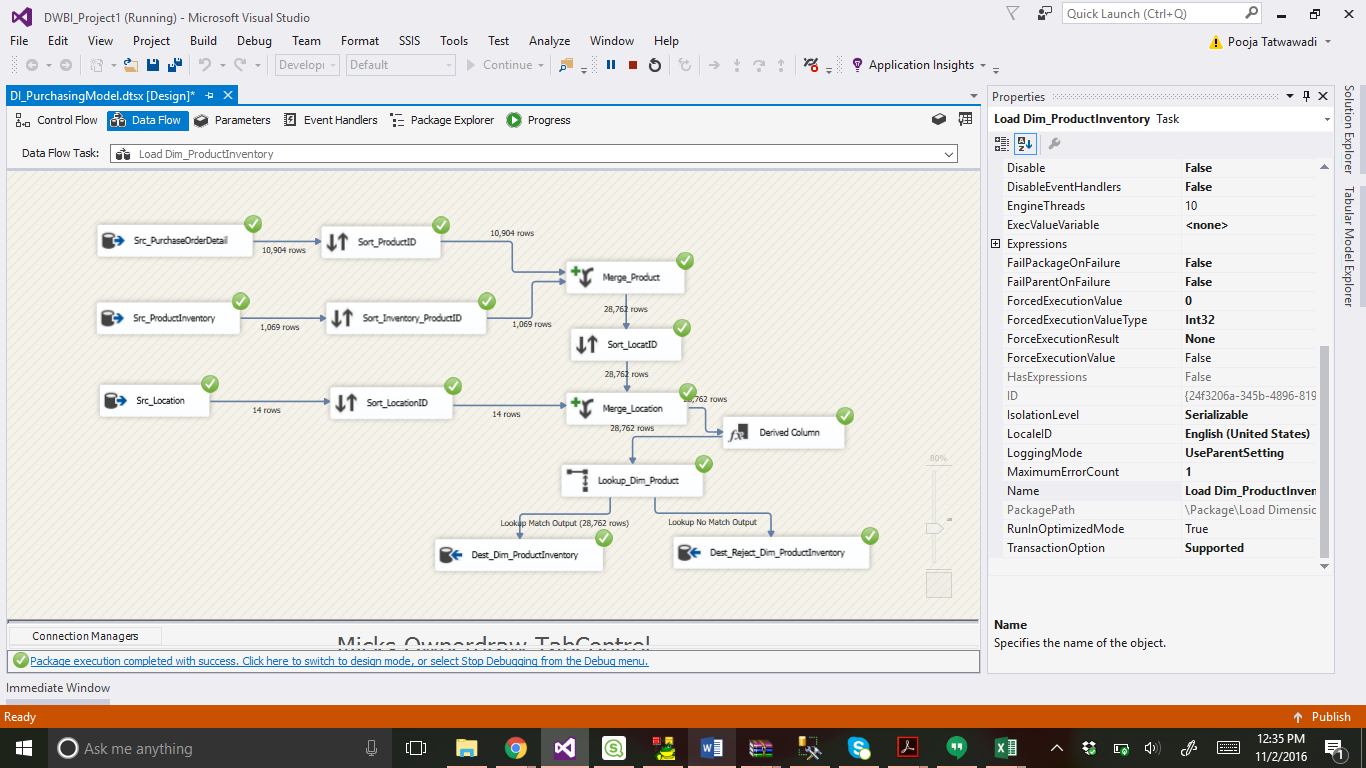


**5) Dim\_Geography**



**Dependent Dimensions:**

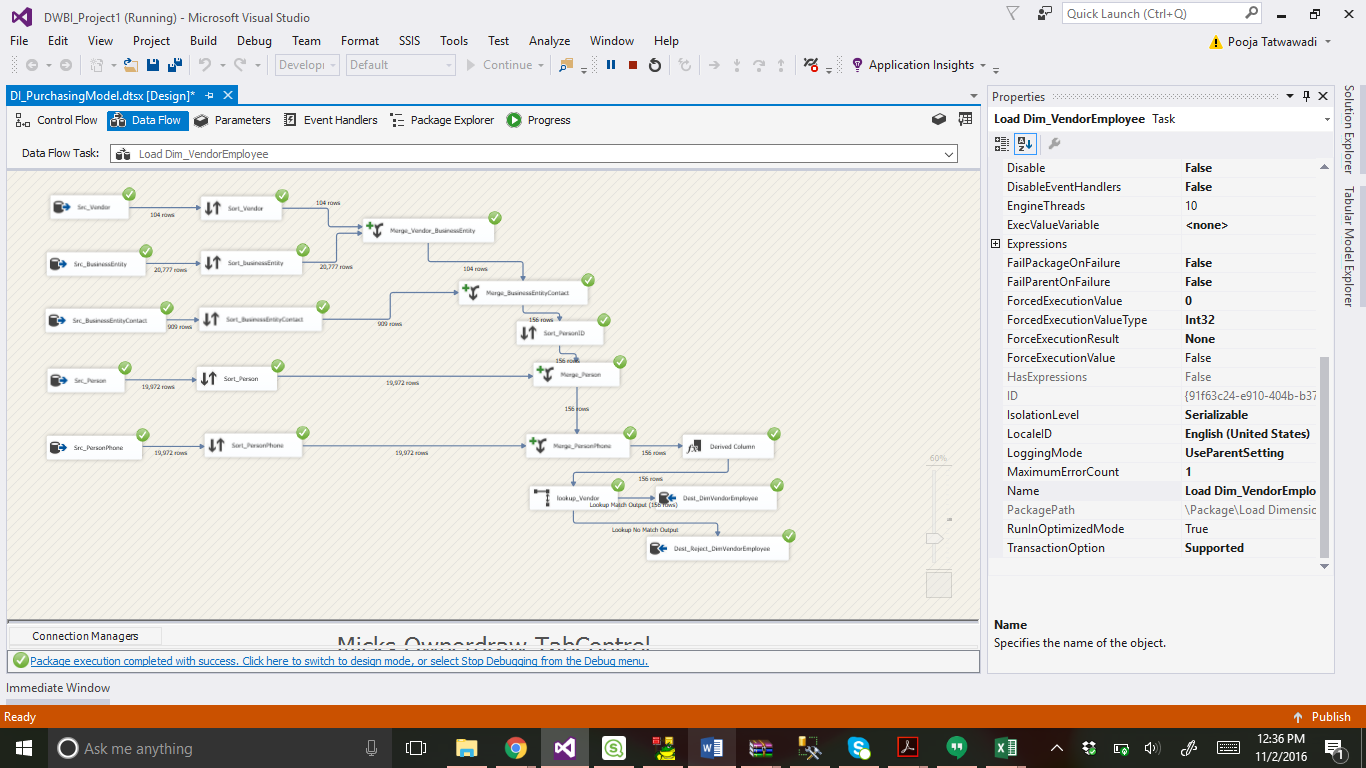
**1) Dim\_ProductInventory**



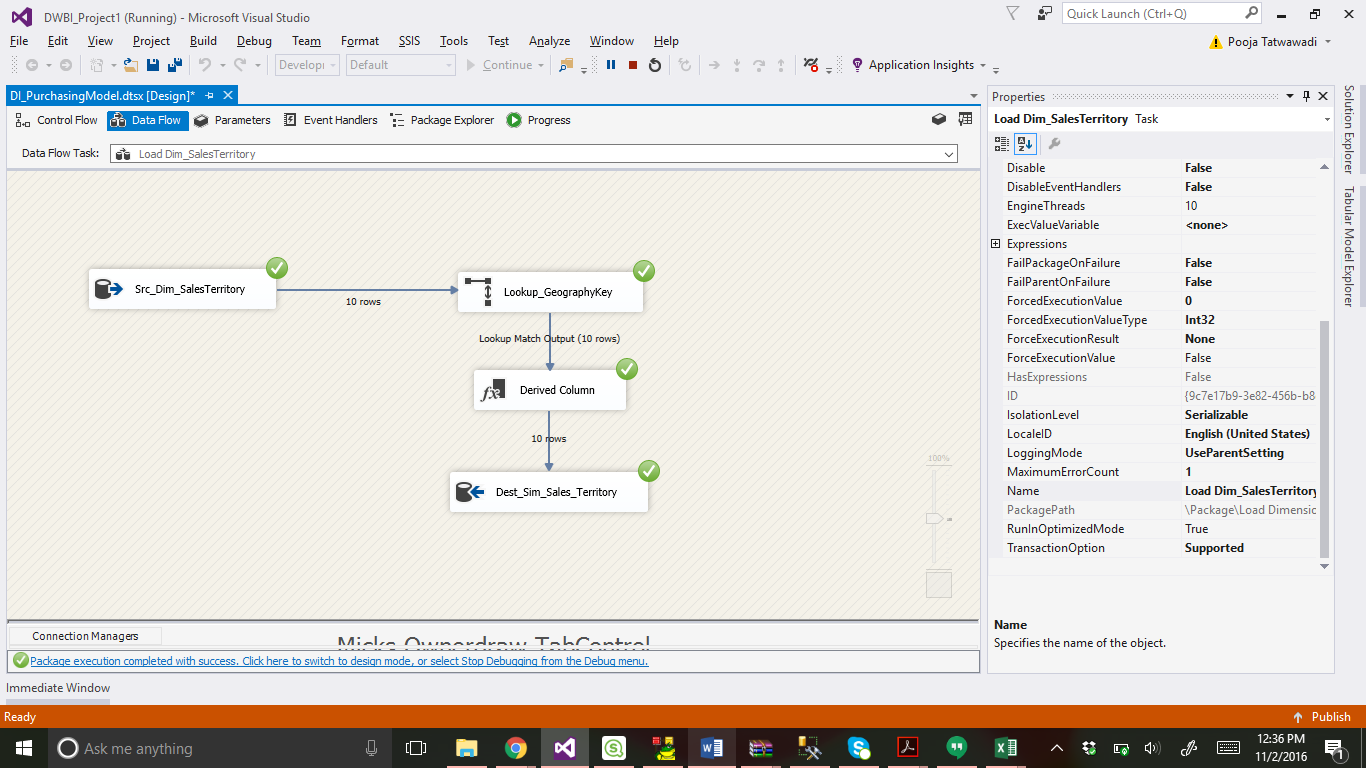
**2) Dim\_Vendor**



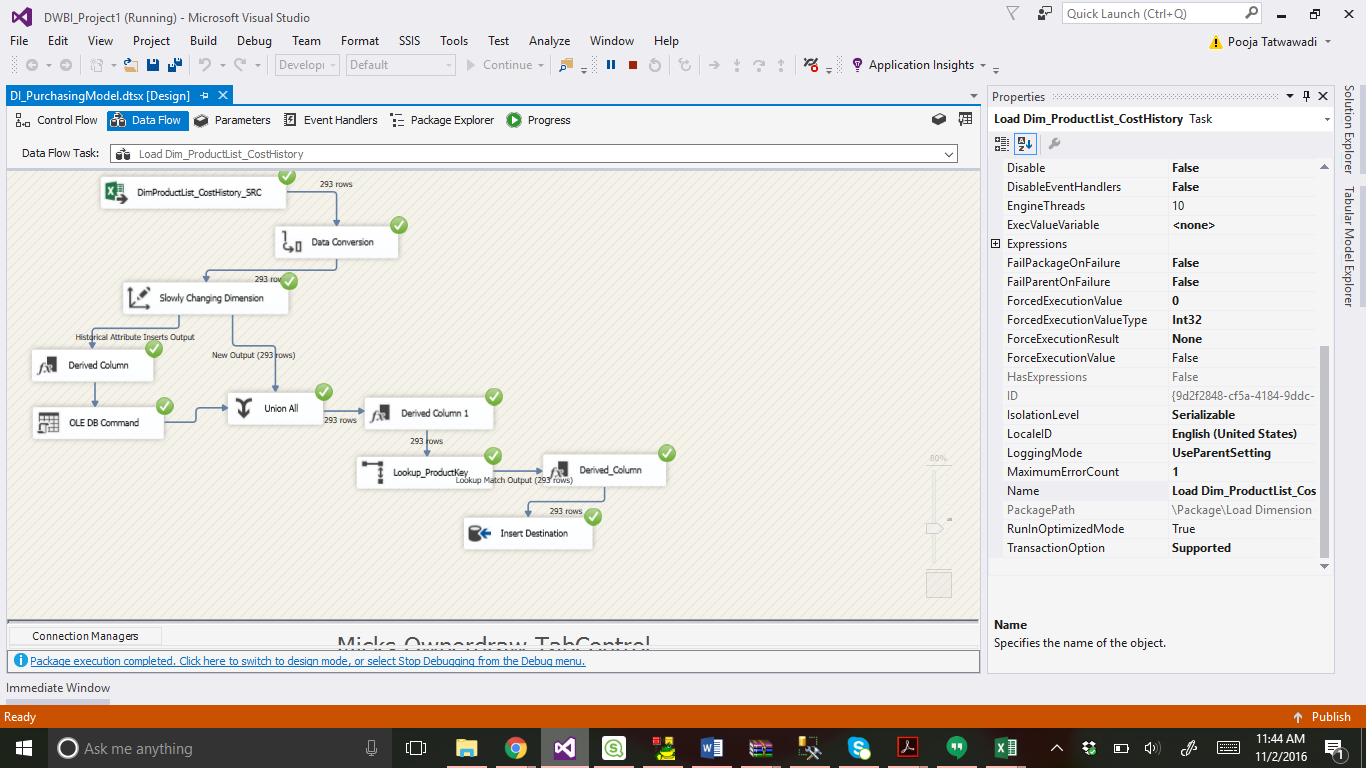
**3) Dim\_VendorEmployee**



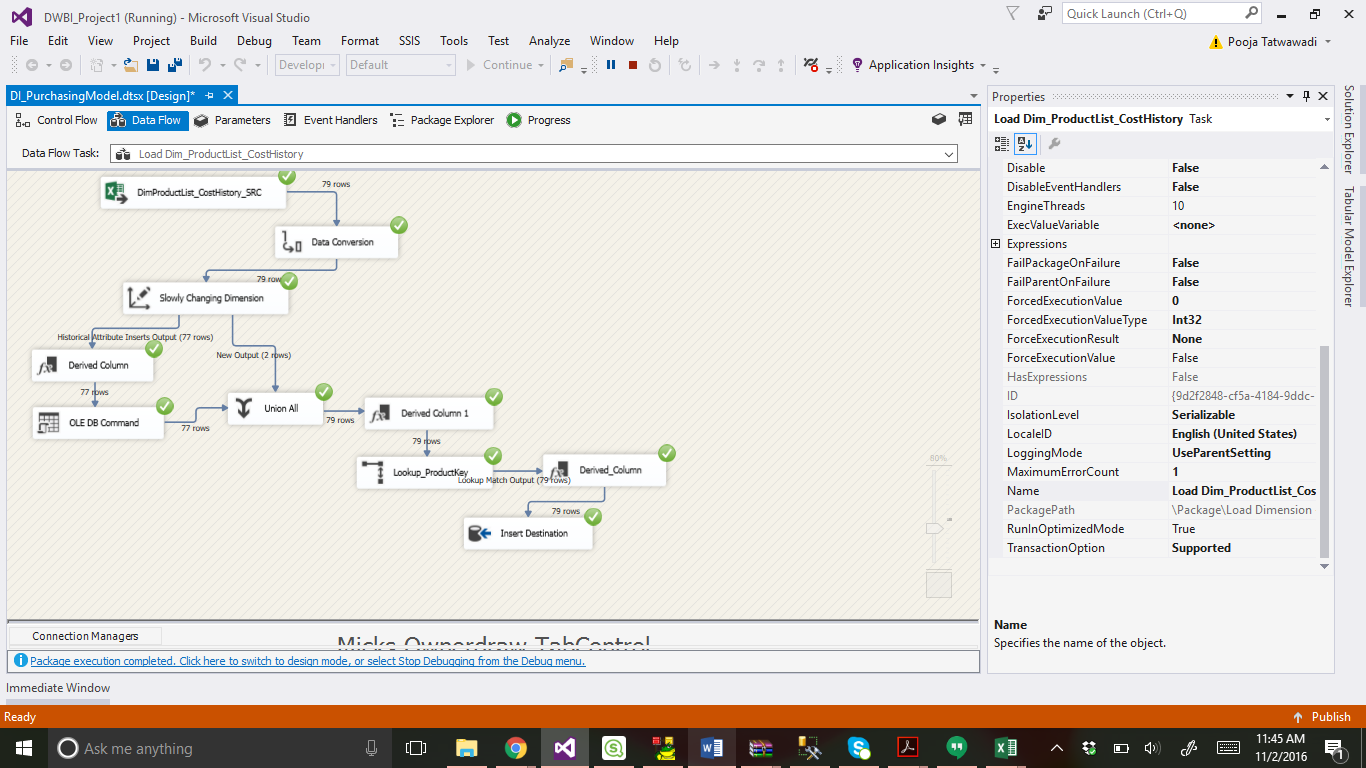
**4) Dim\_SalesTerritory**



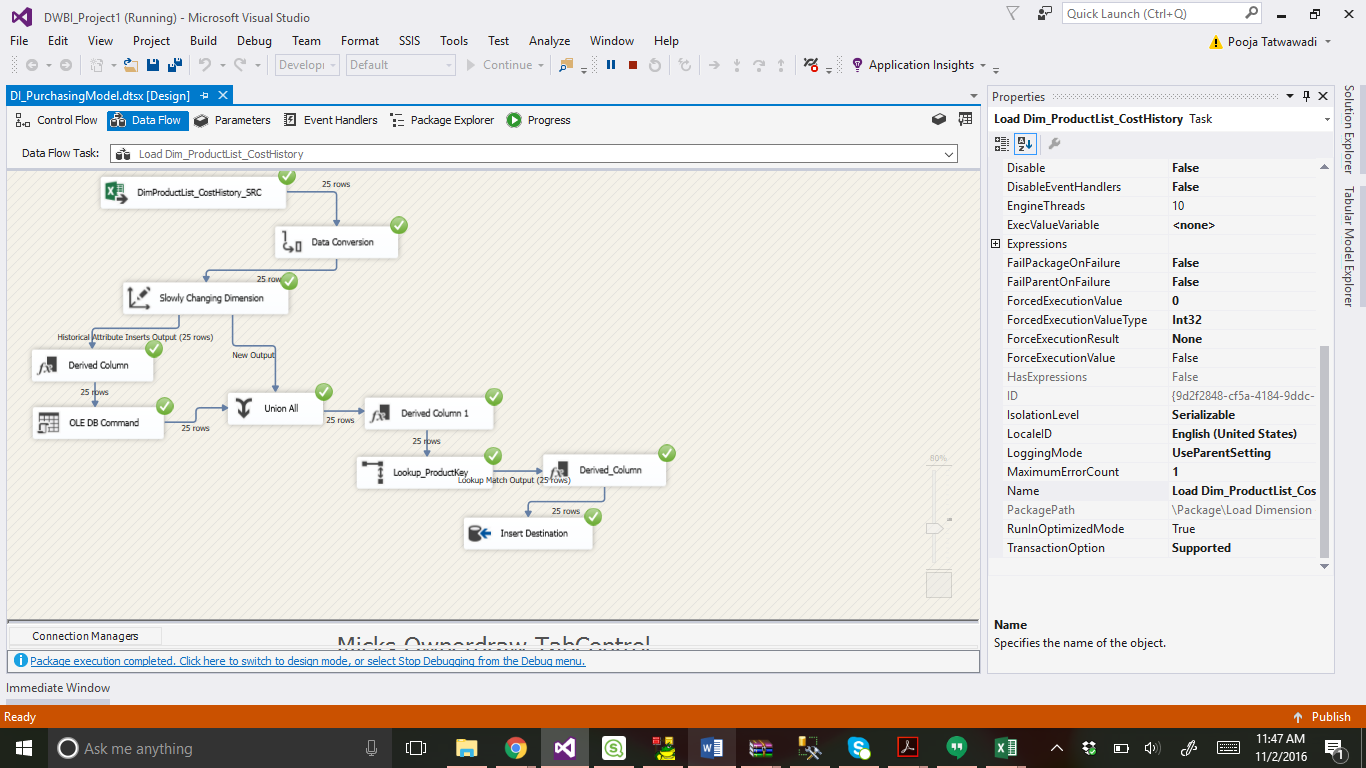
**5) SCD: Dim\_ProductList\_CostHistory\_1**



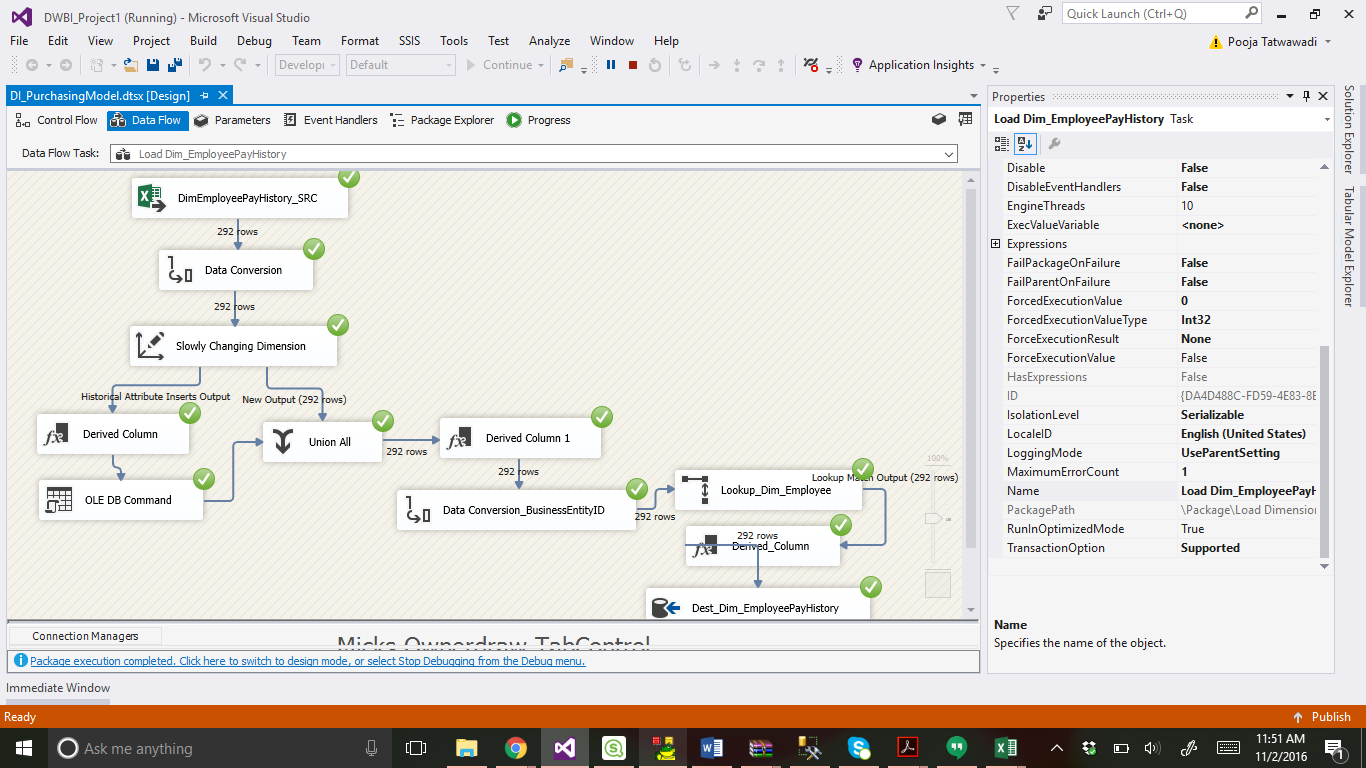
**Dim\_ProductList\_CostHistory\_2**



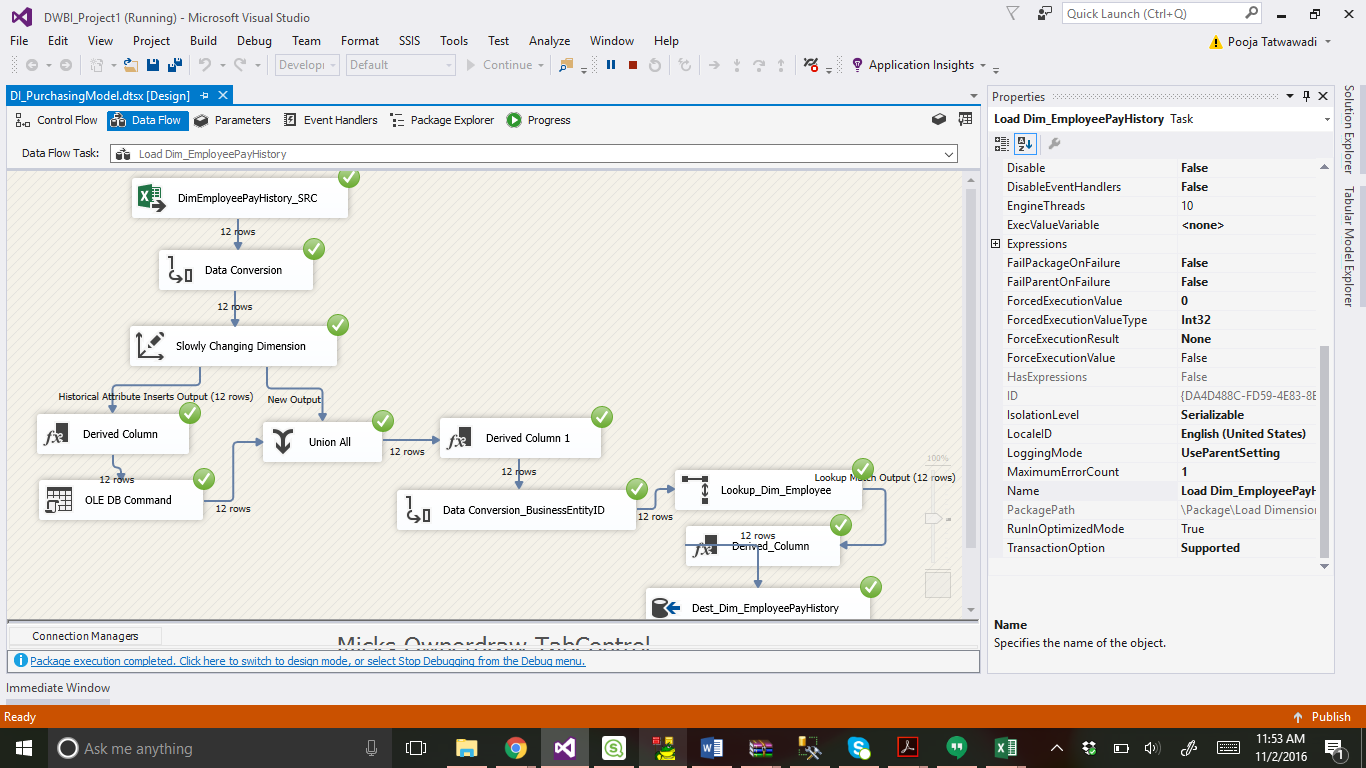
**Dim\_ProductList\_CostHistory\_3**



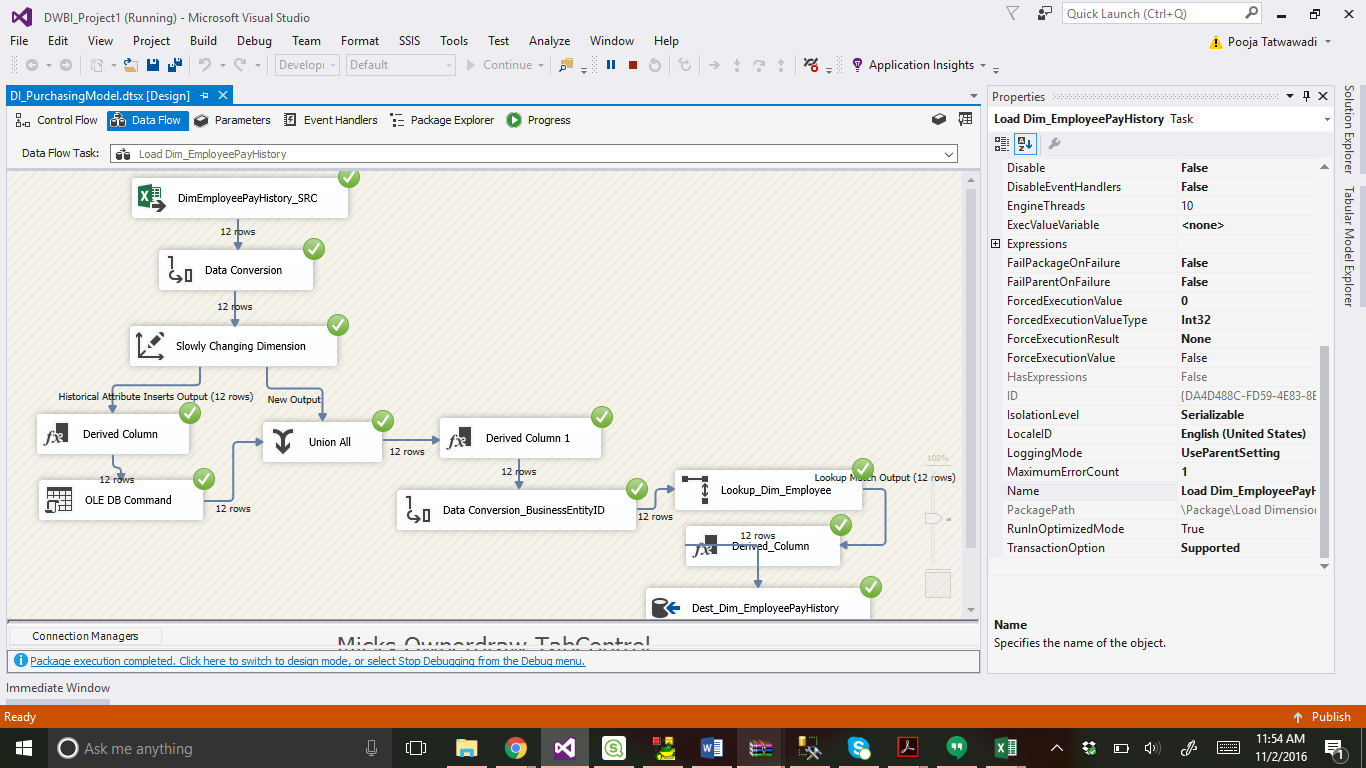
**6) Dim\_Employee\_PayHistory\_1**



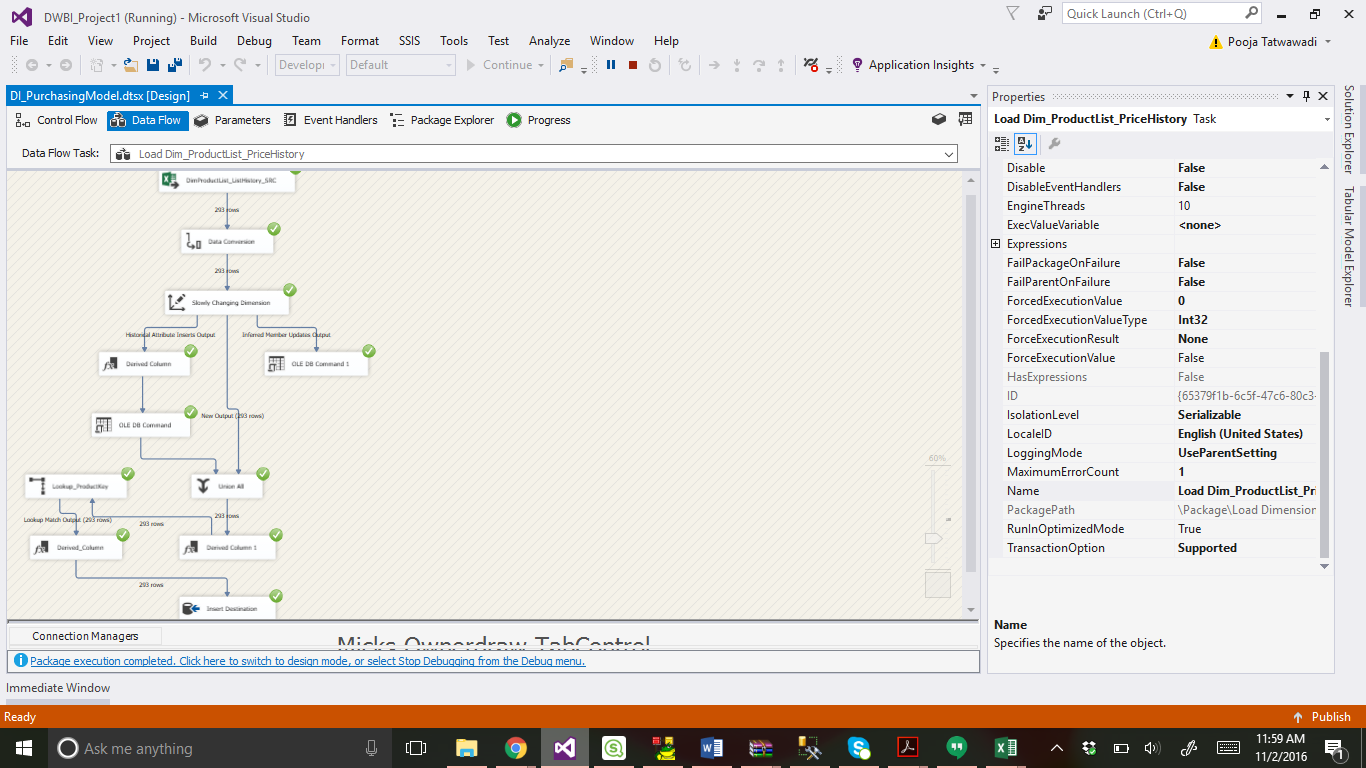
**Dim\_Employee\_PayHistory\_2**



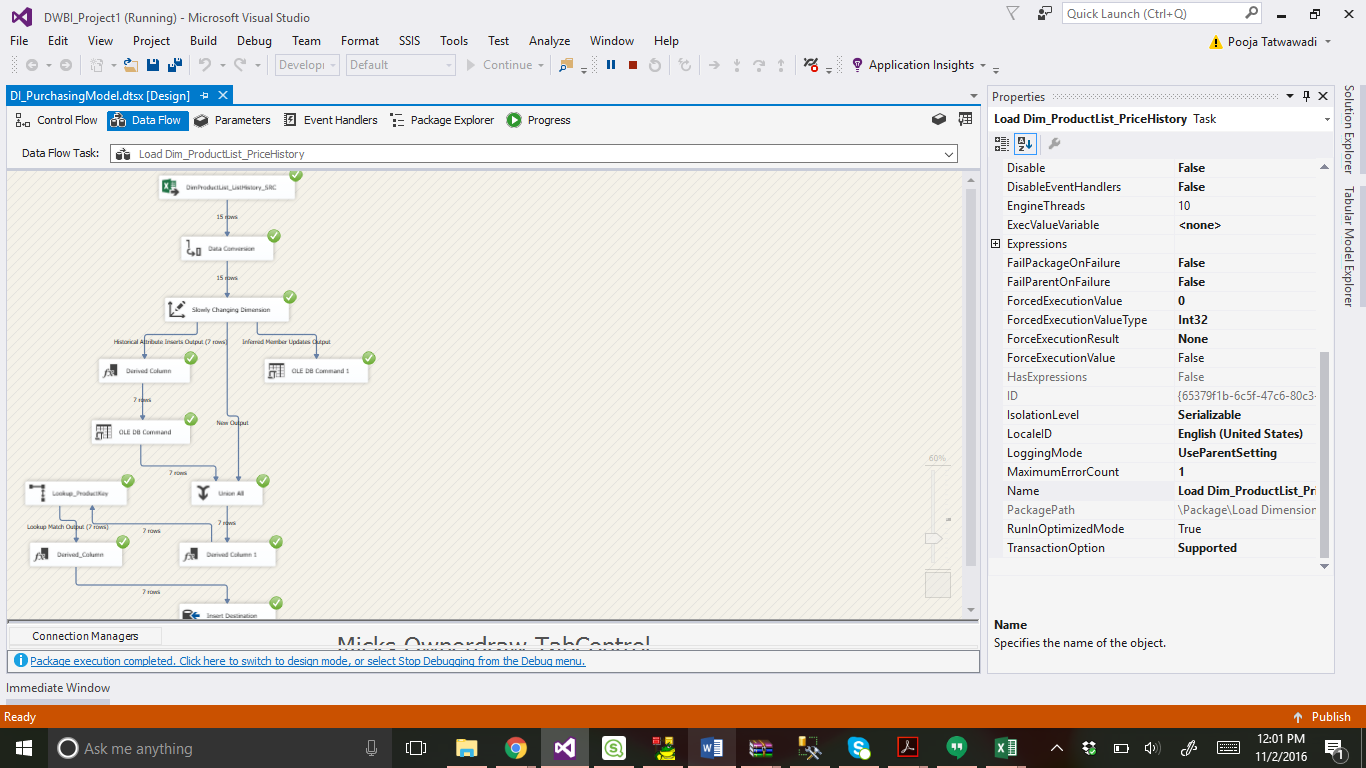
**Dim\_Employee\_PayHistory\_3**



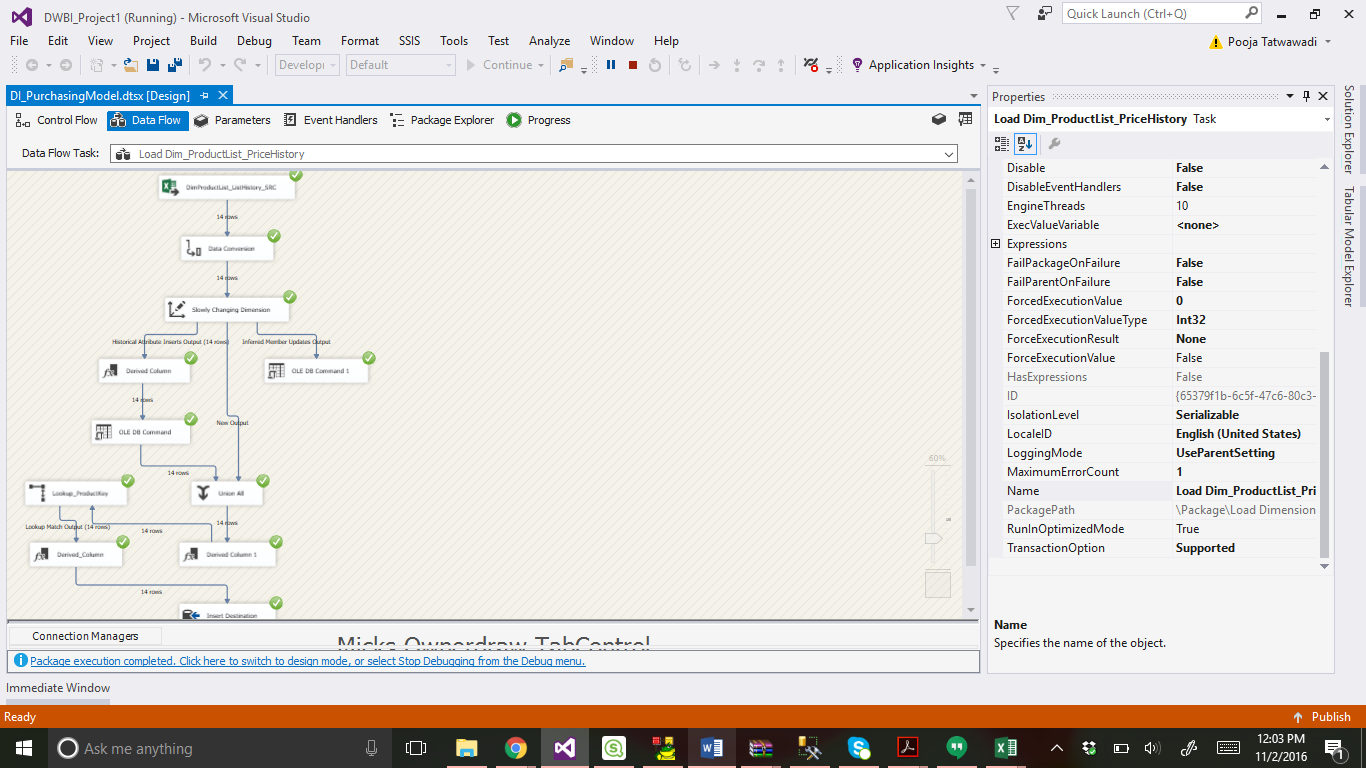
**7) SCD: ProductList\_PriceHistory\_1**



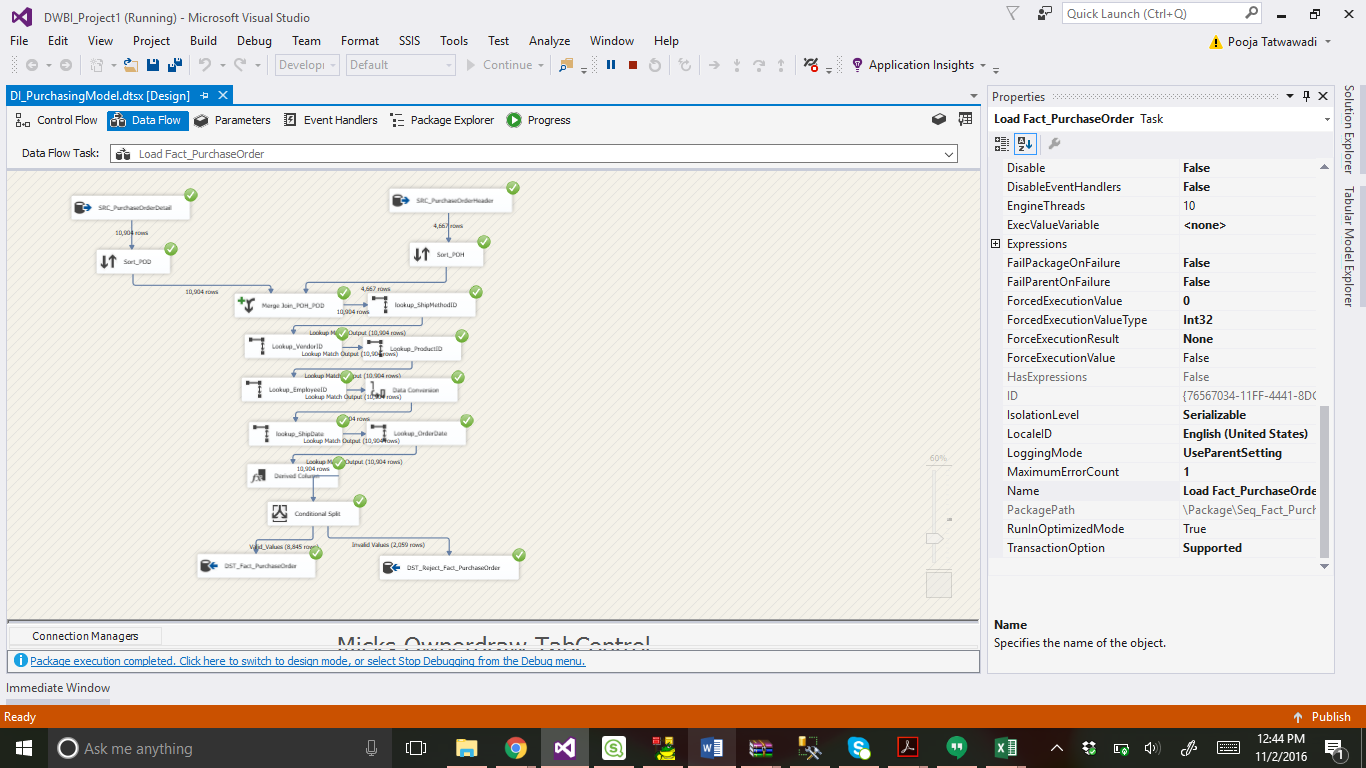
**ProductList\_PriceHistory\_2**



**ProductList\_PriceHistory\_3**



**FactTable-PurchaseOrder**



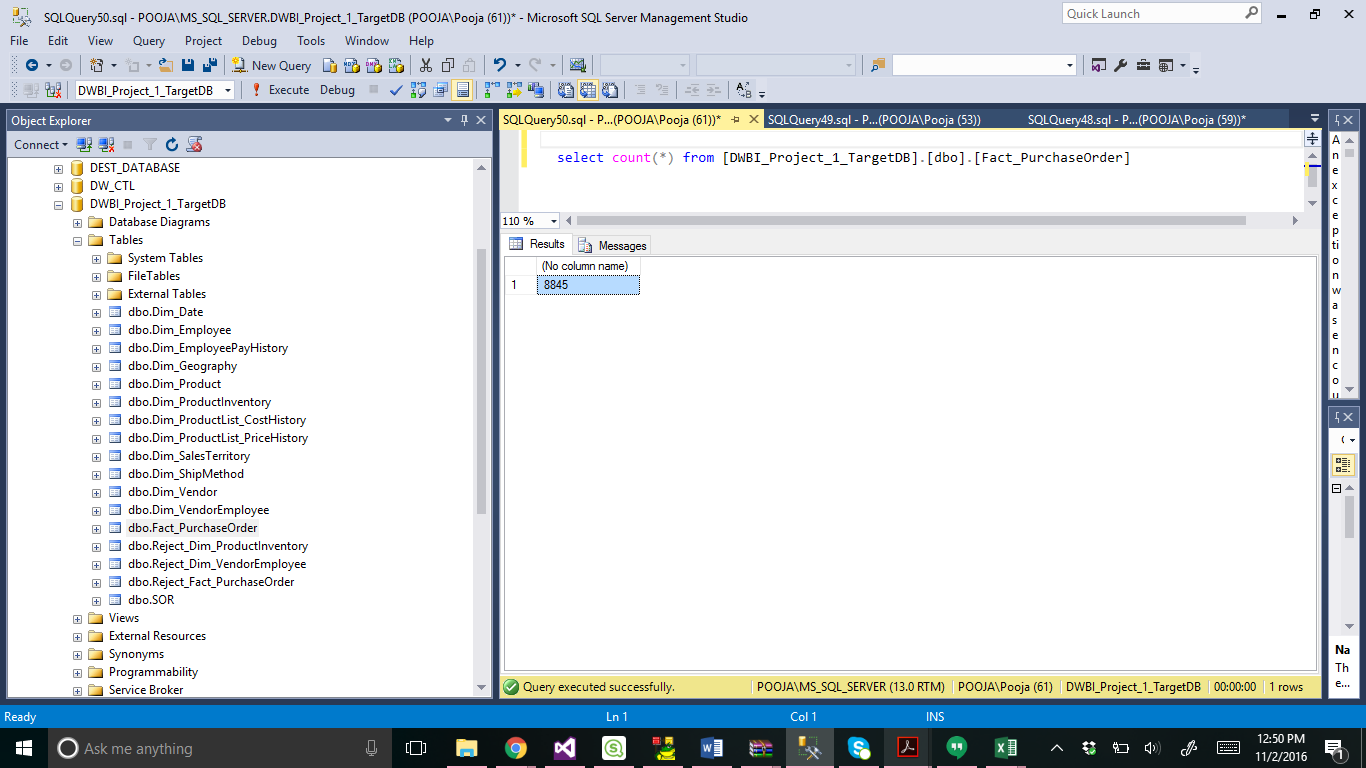
**QUESTION-4**

**Performance Statistics of Talend Load**

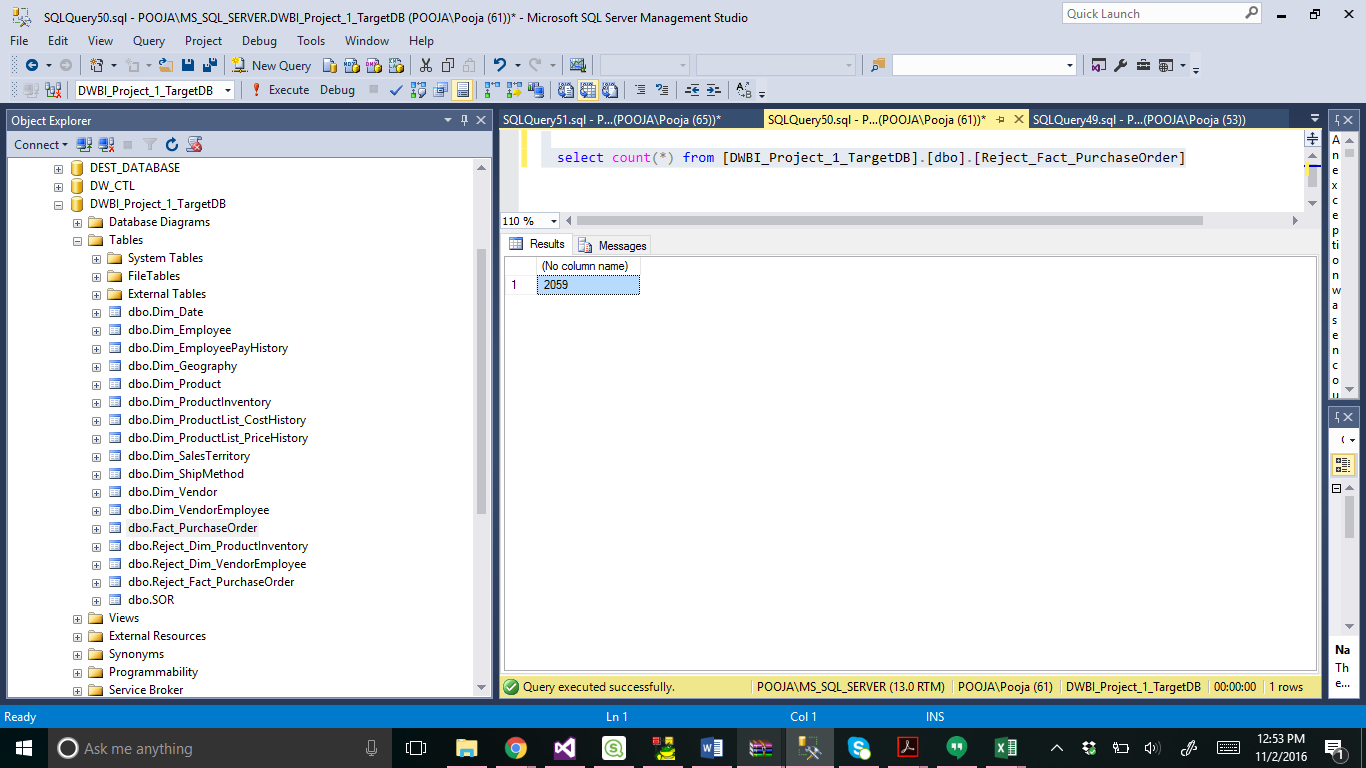
**QUESTION-5**

1) Data Integration rejection records

* Number of selected rows : 8845

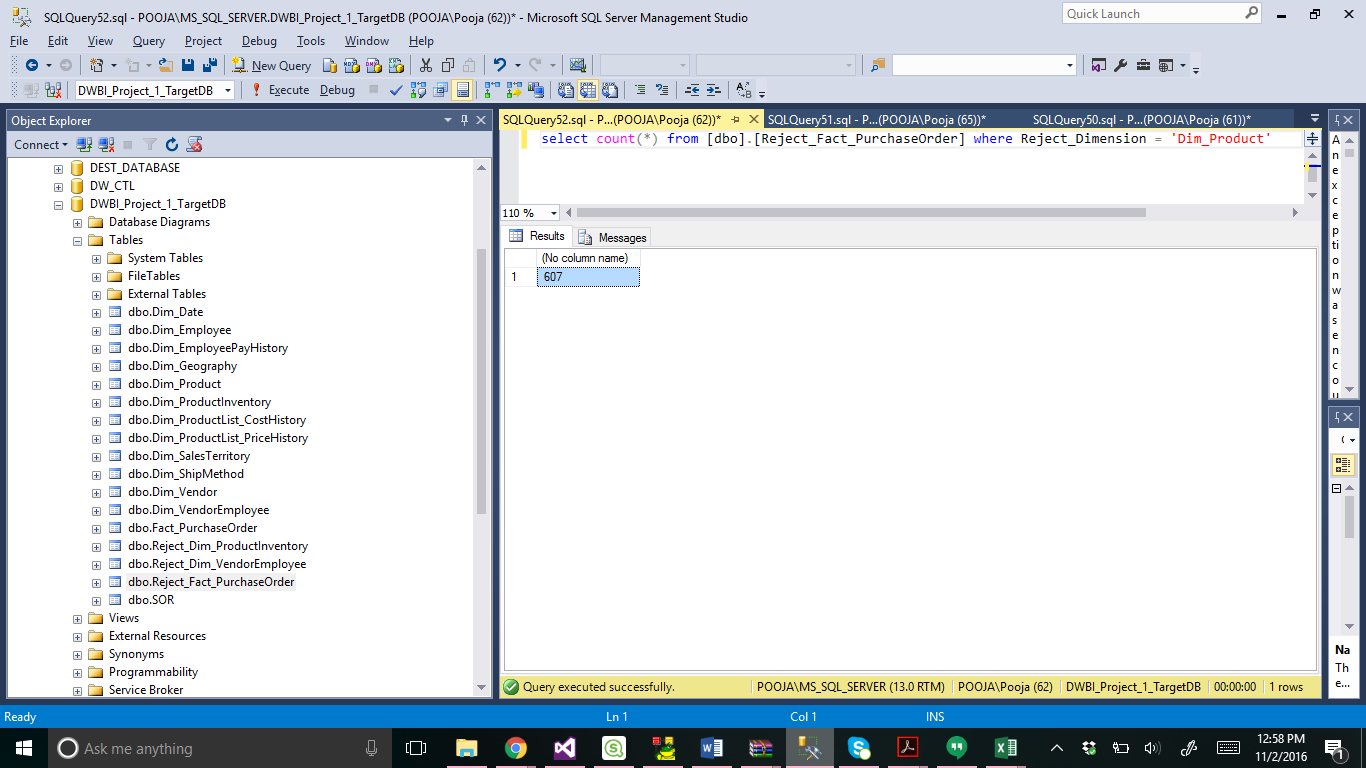


* Number of rejected rows: 2059

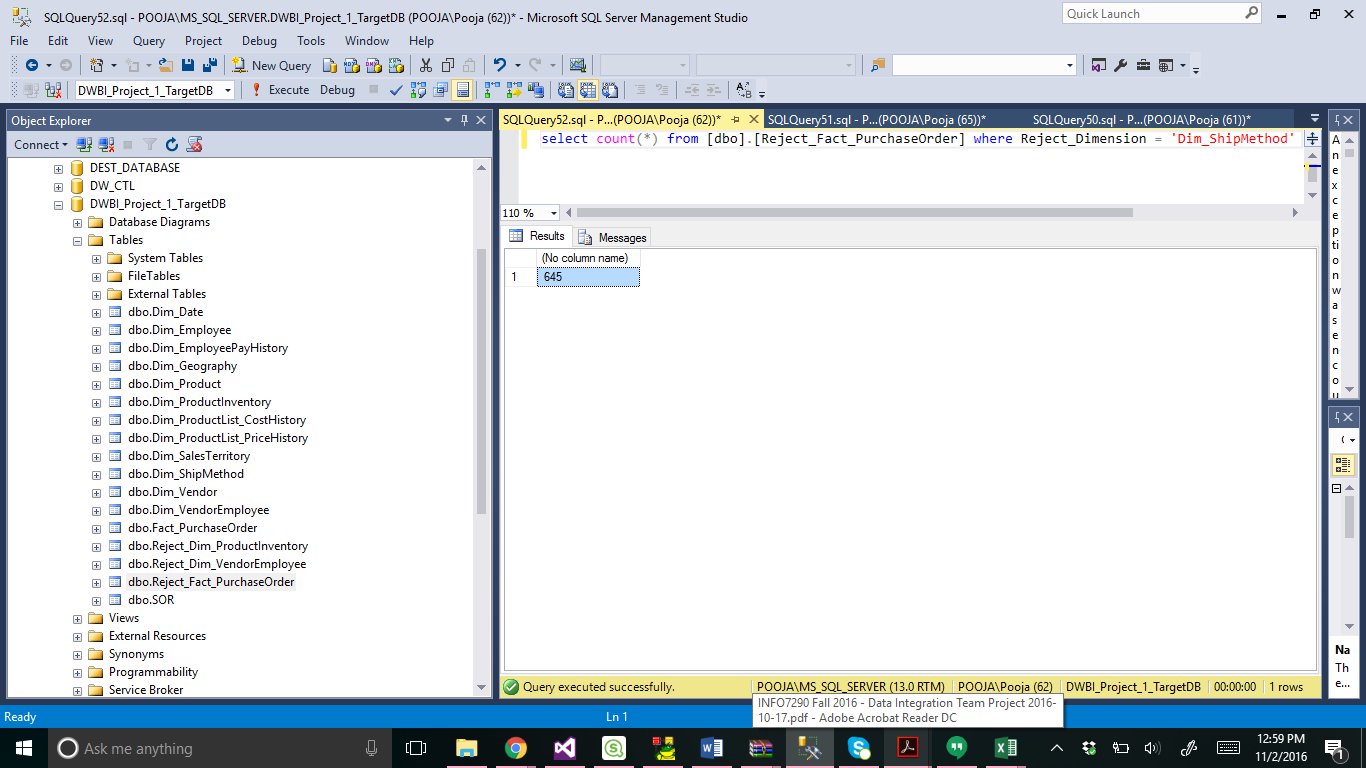


* Number or rows by rejection reason:

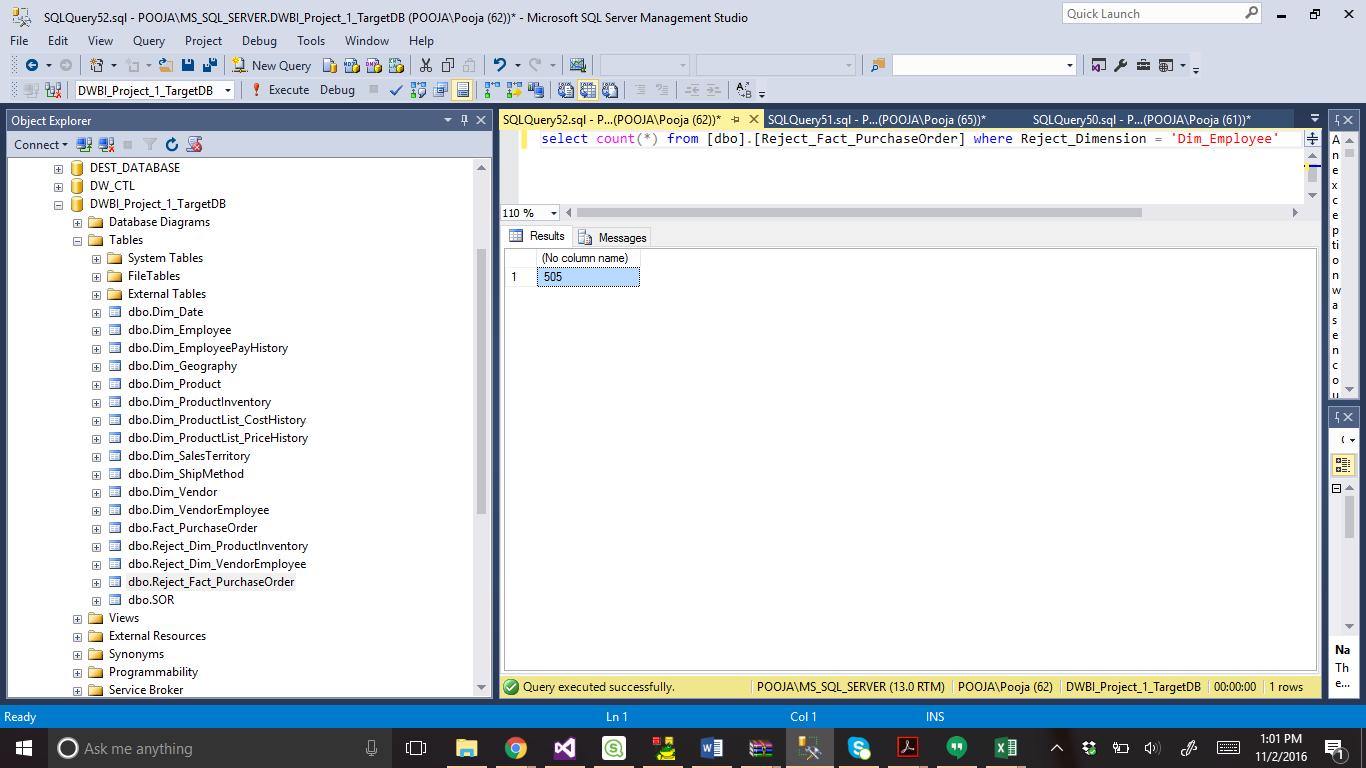
1. Due to Dim\_Product: 607



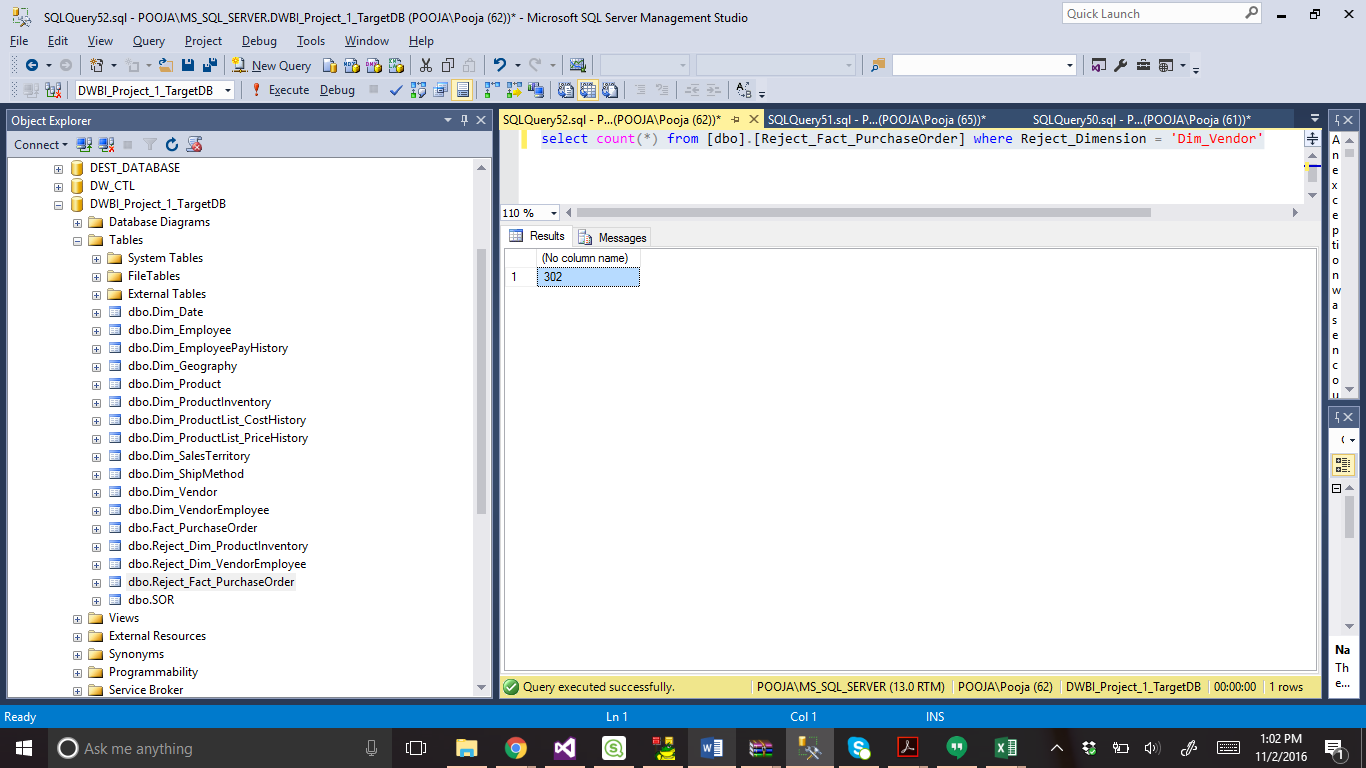
1. Due to Dim\_ShipMethod: 645



1. Due to Dim\_Employee: 505



1. Due to Dim\_Vendor: 302



2) Ranked Order of vendors by purchase amount

SELECT *Sum*(fact\_purchaseorder.totaldue)

TotalPurchase,   
       dim\_vendor.vendorid\_nk,   
       dim\_vendor.vendorname,   
       dim\_vendor.accountnumber,   
       **Dense\_rank**()   
         OVER (   
           ORDER BY *Sum*(fact\_purchaseorder.totaldue) DESC) AS Rank   
FROM   fact\_purchaseorder   
       INNER JOIN dim\_vendor   
               ON fact\_purchaseorder.vendorkey = dim\_vendor.vendor\_sk   
GROUP  BY vendorid\_nk,   
          dim\_vendor.vendorname,   
          dim\_vendor.accountnumber

3) Ranked Order of Product purchase by amount

* By Product Category

SELECT *Sum*(fact\_purchaseorder.totaldue)                    AS TotalPurchase,   
       dim\_product.categoryname,   
       **Dense\_rank**()   
         OVER (   
           ORDER BY *Sum*(fact\_purchaseorder.totaldue) DESC) AS Rank   
FROM   fact\_purchaseorder   
       INNER JOIN dim\_product   
               ON fact\_purchaseorder.productkey = dim\_product.product\_sk   
GROUP  BY dim\_product.categoryname   
HAVING dim\_product.categoryname IS NOT NULL

* By Product SubCategory

SELECT *Sum*(fact\_purchaseorder.totaldue)                    AS TotalPurchase,   
       dim\_product.subcategoryname,   
       **Dense\_rank**()   
         OVER (   
           ORDER BY *Sum*(fact\_purchaseorder.totaldue) DESC) AS Rank   
FROM   fact\_purchaseorder   
       INNER JOIN dim\_product   
               ON fact\_purchaseorder.productkey = dim\_product.product\_sk   
GROUP  BY dim\_product.subcategoryname   
HAVING dim\_product.subcategoryname IS NOT NULL

* By Product Model

SELECT TOP (20) *Sum*(fact\_purchaseorder.totaldue)   
                Totalpurchase,   
                dim\_product.modelname,   
                **Dense\_rank**()   
                  OVER (   
                    ORDER BY *Sum*(fact\_purchaseorder.totaldue) DESC) AS Rank   
FROM   fact\_purchaseorder   
       INNER JOIN dim\_product   
               ON fact\_purchaseorder.productkey = dim\_product.product\_sk   
GROUP  BY dim\_product.modelname   
HAVING dim\_product.modelname IS NOT NULL

* By Product

SELECT TOP (20) *Sum*(fact\_purchaseorder.totaldue)                    AS   
                Totalpurchase,   
                dim\_product.productname,   
                dim\_product.productid\_nk,   
                **Dense\_rank**()   
                  OVER (   
                    ORDER BY *Sum*(fact\_purchaseorder.totaldue) DESC) AS Rank   
FROM   fact\_purchaseorder   
       INNER JOIN dim\_product   
               ON fact\_purchaseorder.productkey = dim\_product.product\_sk   
GROUP  BY dim\_product.productid\_nk,   
          dim\_product.productname

* List of employees who purchased products with phone and email

SELECT DISTINCT dim\_employee.firstname,   
                dim\_employee.middlename,   
                dim\_employee.lastname,   
                dim\_employee.gender,   
                dim\_employee.phonenumber,   
                dim\_employee.email   
FROM   fact\_purchaseorder   
       INNER JOIN dim\_employee   
               ON fact\_purchaseorder.employeekey = dim\_employee.employee\_sk;

* List of Employees who purchased products with pay rate and raises (scd)

SELECT dim\_employeepayhistory.rate,   
       dim\_employeepayhistory.payfrequency,   
       dim\_employee.firstname,   
       dim\_employee.middlename,   
       dim\_employee.lastname   
FROM   dim\_employeepayhistory   
       INNER JOIN dim\_employee   
               ON dim\_employeepayhistory.employeekey = dim\_employee.employee\_sk

* List of Purchasing Vendor contacts with name and address

SELECT dim\_vendor.vendorname,   
       dim\_vendor.creditrating,   
       dim\_vendor.accountnumber,   
       dim\_geography.addressid,   
       dim\_geography.city,   
       dim\_geography.state,   
       dim\_geography.country   
FROM   dim\_vendor   
       INNER JOIN dim\_geography   
               ON dim\_vendor.geographykey = dim\_geography.geography\_sk   
WHERE  dim\_vendor.vendorname != 'Unknown'

* List of prices by product order by product and SCD effective ascending

SELECT dim\_productlist\_pricehistory.listprice,   
       dim\_productlist\_pricehistory.start\_date,   
       dim\_productlist\_pricehistory.current\_flag   
FROM   dim\_productlist\_pricehistory   
       INNER JOIN dim\_product   
               ON dim\_productlist\_pricehistory.productkey =   
                  dim\_product.productid\_nk   
ORDER  BY dim\_product.productname,   
          dim\_productlist\_pricehistory.start\_date ASC

* List of standard costs by product order by product and SCD effective ascending

SELECT dim\_product.productname,

dim\_productlist\_costhistory.current\_flag,

dim\_productlist\_costhistory.start\_date,

dim\_productlist\_costhistory.standard\_cost

FROM dim\_productlist\_costhistory

INNER JOIN dim\_product

ON dim\_productlist\_costhistory.productkey =

dim\_product.product\_sk

ORDER BY dim\_product.productname,

dim\_productlist\_costhistory.start\_date