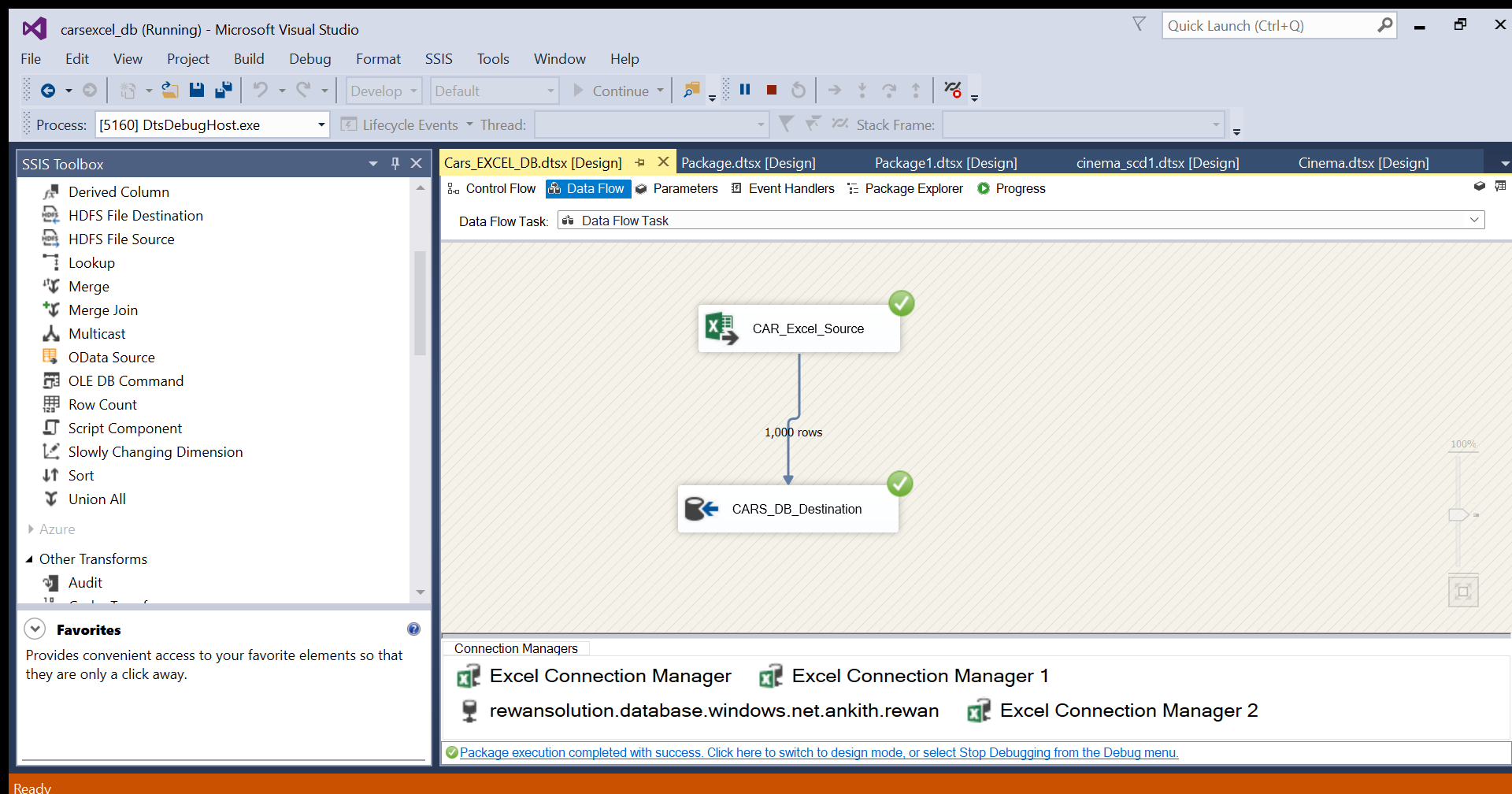
**-------------------MODULE 2-----------------**

**1. Make connection to different data source ( Excel Source )**

**2. Extract**

**3. Transform**

**4. Load to new target system - SQL Server**



**---------SQL SERVER TABLE Cars--------**

**CREATE** **TABLE** Cars (

[SupplierID] **float**,

[SupplierAddress] **nvarchar**(255),

[SupplierName] **nvarchar**(255),

[SupplierContactDetails] **nvarchar**(255),

[ProductID] **float**,

[CarMaker] **nvarchar**(255),

[CarModel] **nvarchar**(255),

[CarColor] **nvarchar**(255),

[CarModelYear] **float**,

[CarPrice] **float**,

[CustomerID] **nvarchar**(255),

[CustomerName] **nvarchar**(255),

[Gender] **nvarchar**(255),

[JobTitle] **nvarchar**(255),

[PhoneNumber] **nvarchar**(255),

[EmailAddress] **nvarchar**(255),

[City] **nvarchar**(255),

[Country] **nvarchar**(255),

[CountryCode] **nvarchar**(255),

[State] **nvarchar**(255),

[CustomerAddress] **nvarchar**(255),

[OrderDate] **float**,

[OrderID] **nvarchar**(255),

[ShipDate] **float**,

[ShipMode] **nvarchar**(255),

[Shipping] **nvarchar**(255),

[PostalCode] **float**,

[Sales] **float**,

[Quantity] **float**,

[Discount] **float**,

[CreditCardType] **nvarchar**(255),

[CreditCard] **float**,

[CustomerFeedback] **nvarchar**(255)

)

Graphical user interface, text, application, email

Description automatically generated

---ddl,dml,dql on data source tables---

**Truncate** **table** cars

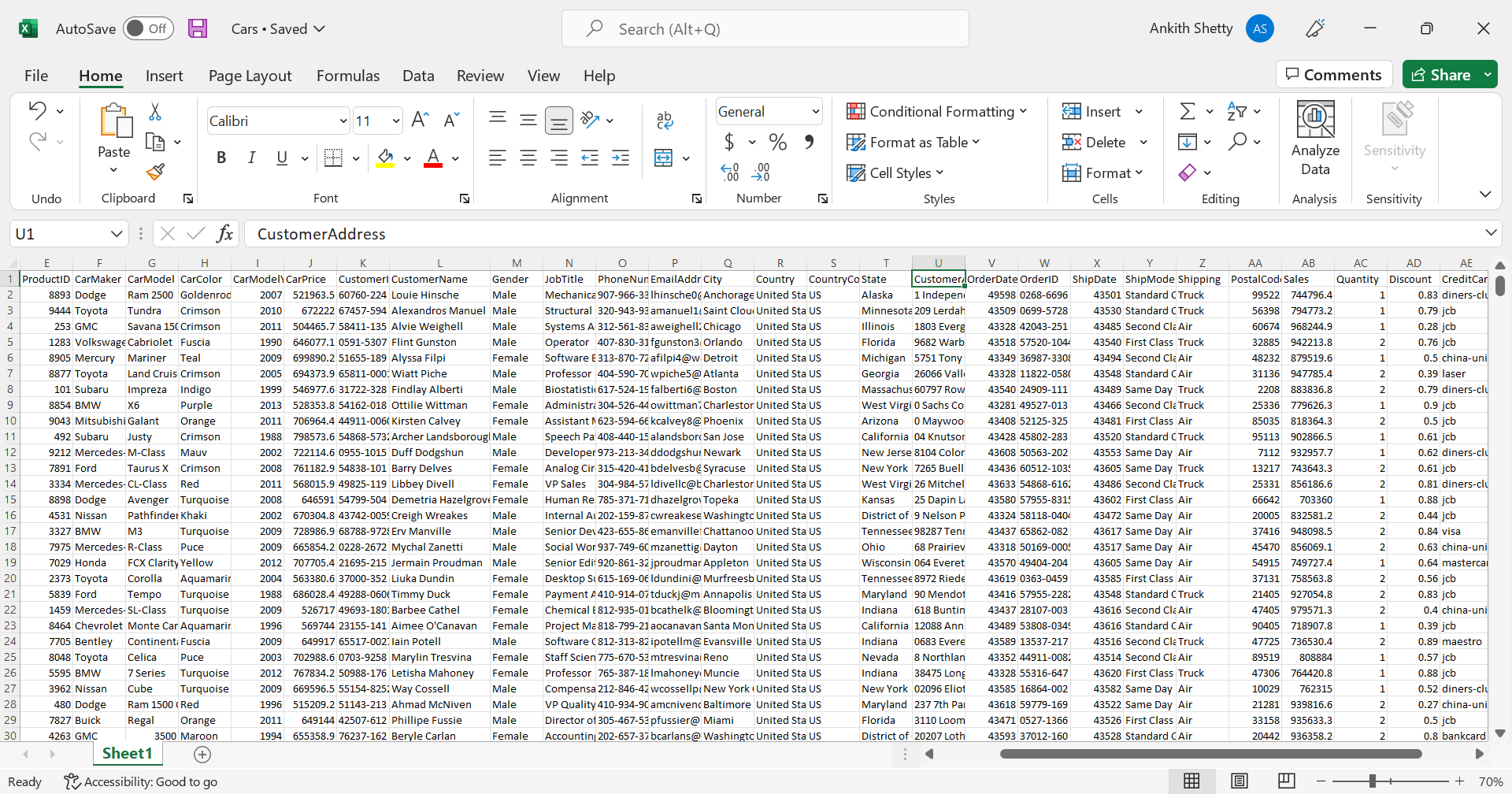
**select** \* **from** carsGraphical user interface, application, table

Description automatically generated

**5. Perform SCD 1 & SCD2 dimension table modelling**

**-----------From Excel source to OLE DB Destination----------**

**Excel Source**



**---OLE DB Destination---**

**CREATE** **TABLE** Cars\_SCD\_Transformation (

[SupplierID] **float**,

[SupplierAddress] **nvarchar**(255),

[SupplierName] **nvarchar**(255),

[SupplierContactDetails] **nvarchar**(255),

[ProductID] **float**,

[CarMaker] **nvarchar**(255),

[CarModel] **nvarchar**(255),

[CarColor] **nvarchar**(255),

[CarModelYear] **float**,

[CarPrice] **float**,

[CustomerID] **nvarchar**(255),

[CustomerName] **nvarchar**(255),

[Gender] **nvarchar**(255),

[JobTitle] **nvarchar**(255),

[PhoneNumber] **nvarchar**(255),

[EmailAddress] **nvarchar**(255),

[City] **nvarchar**(255),

[Country] **nvarchar**(255),

[CountryCode] **nvarchar**(255),

[State] **nvarchar**(255),

[CustomerAddress] **nvarchar**(255),

[OrderDate] **float**,

[OrderID] **nvarchar**(255),

[ShipDate] **float**,

[ShipMode] **nvarchar**(255),

[Shipping] **nvarchar**(255),

[PostalCode] **float**,

[Sales] **float**,

[Quantity] **float**,

[Discount] **float**,

[CreditCardType] **nvarchar**(255),

[CreditCard] **float**,

[CustomerFeedback] **nvarchar**(255)

)

**---Slowly Changing Dimension Columns---**Graphical user interface, text, application, email

Description automatically generated

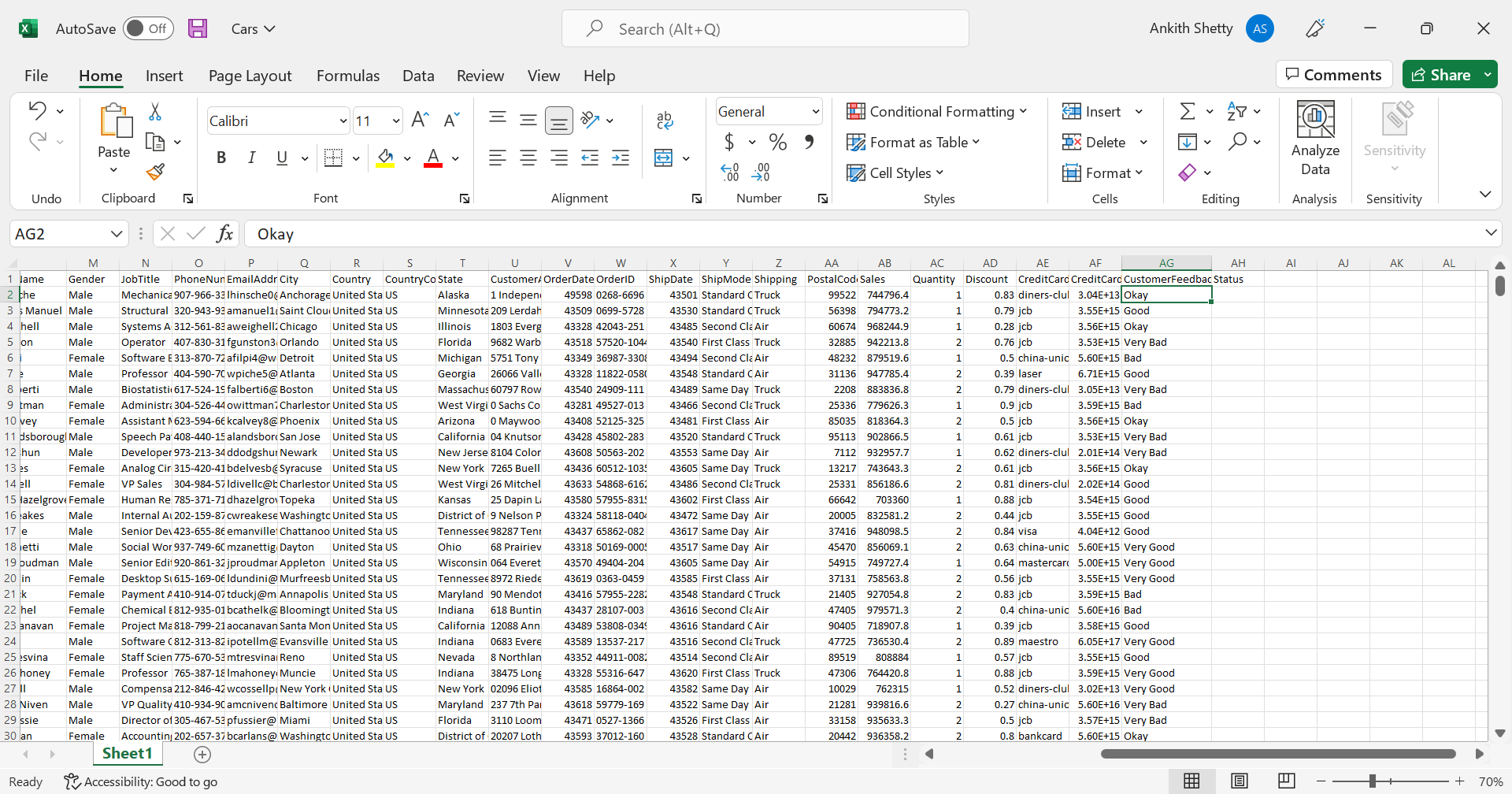
**----Here in slowly changing dimension columns we change customer feedback to changing attribute to get the updated values---**

**---Current Excel Source Customer Feedback(In Row 1)---**

Graphical user interface, application, table, Excel

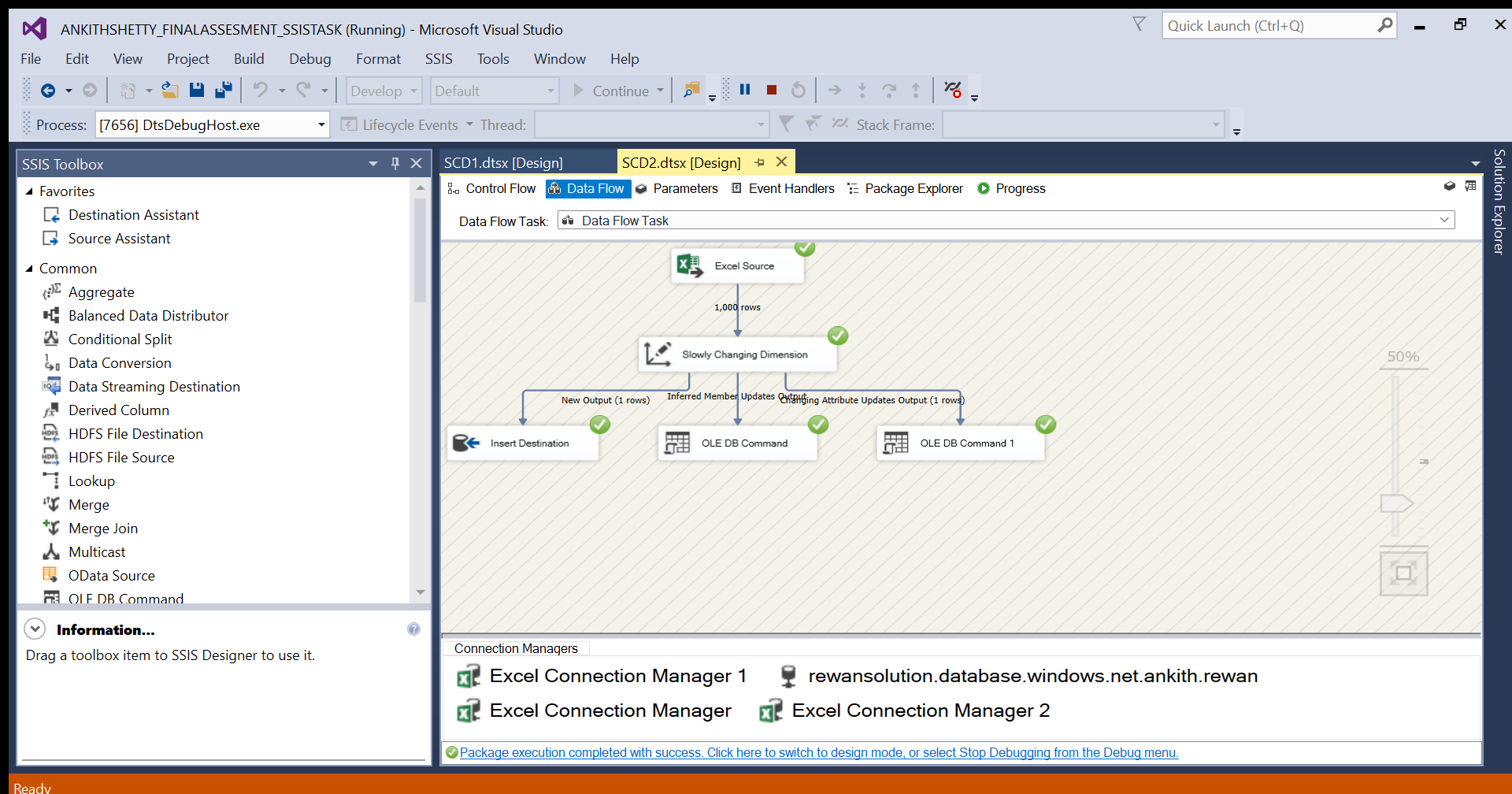
Description automatically generated

**---Updated Customer feedback(In Row 1)---**



**-----Customer feedback changed from bad to okay in excel source----**

**---SCD1 Transformation---**



**---Cars\_SCD\_Transformation DB destination after SCD1 transformation output---**

Graphical user interface, table

Description automatically generated

**----Customer feedback value is updated in destination table---**

**---SCD2 Transformation---**

**---Current Excel source Values(Row 998 and Row 999)---**

**A picture containing table

Description automatically generated**

**---Updated Excel Source values---**

**A picture containing calendar

Description automatically generated**

**Here Order\_date and order\_Id is changed by keeping all other values same from row 998**

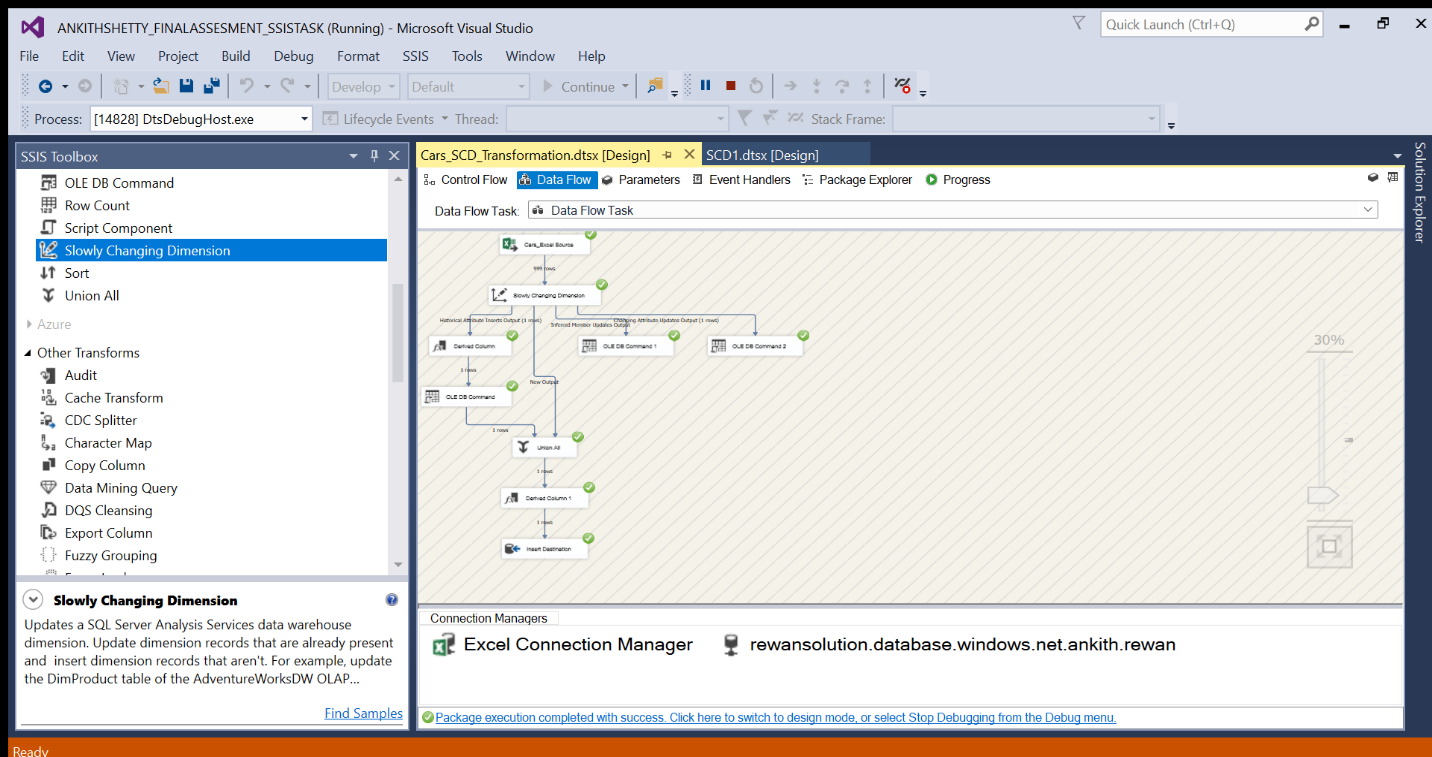
**---SCD2 Column Values---**

Graphical user interface, text, table

Description automatically generated with medium confidence

**Customer\_name and Customer\_feedback as historical attributes and order\_date, order\_id, ship\_date and ship\_mode as changing attributes.**

**---SCD2 Transformation SSIS---**



**---SCD2 Output---**

**select** \* **from** Cars\_SCD\_Transformation

Graphical user interface, application

Description automatically generated

**Output shows current and expired values**

**---AGGREGATE Function---**

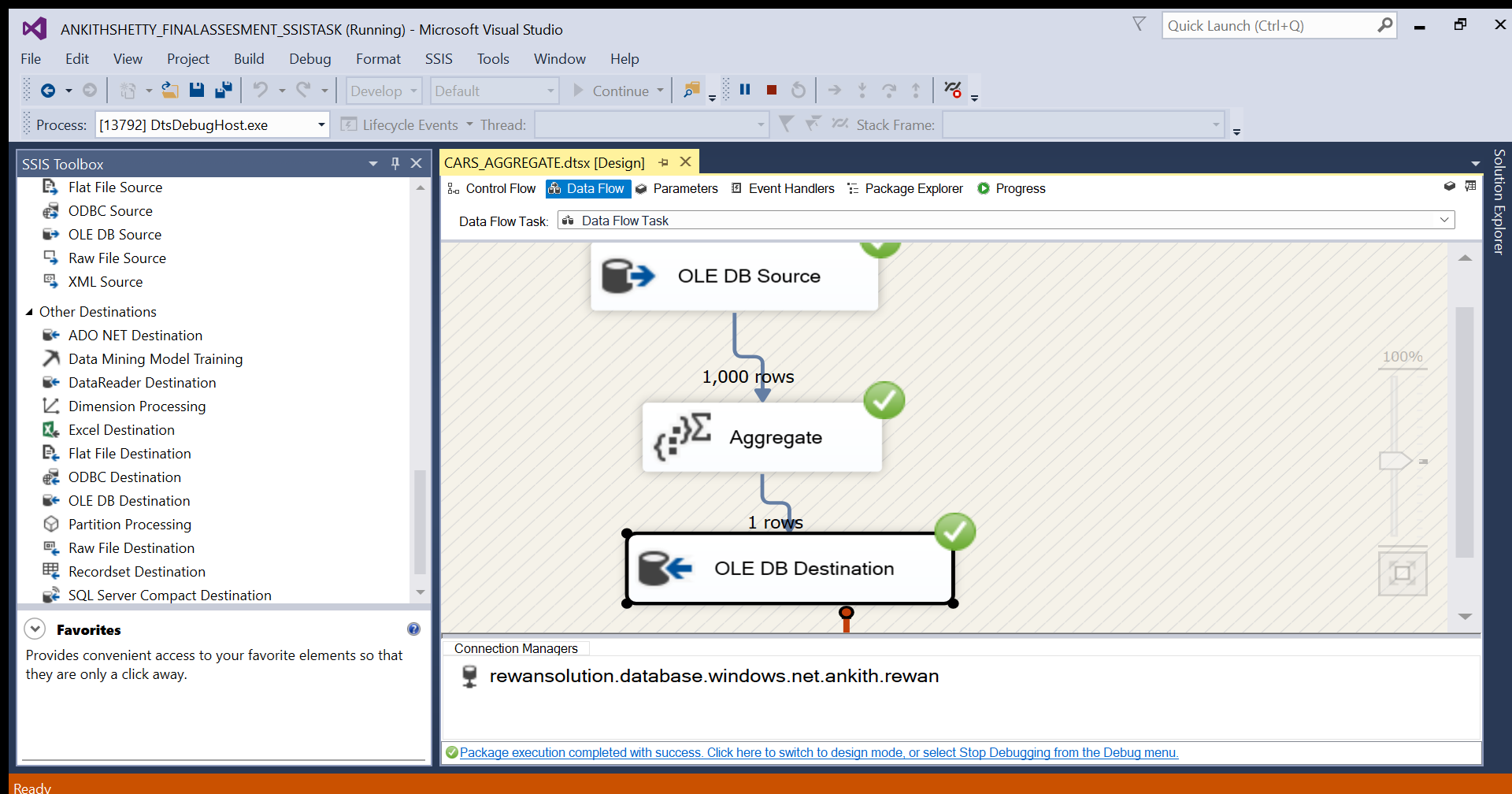
---Cars Aggregate table---

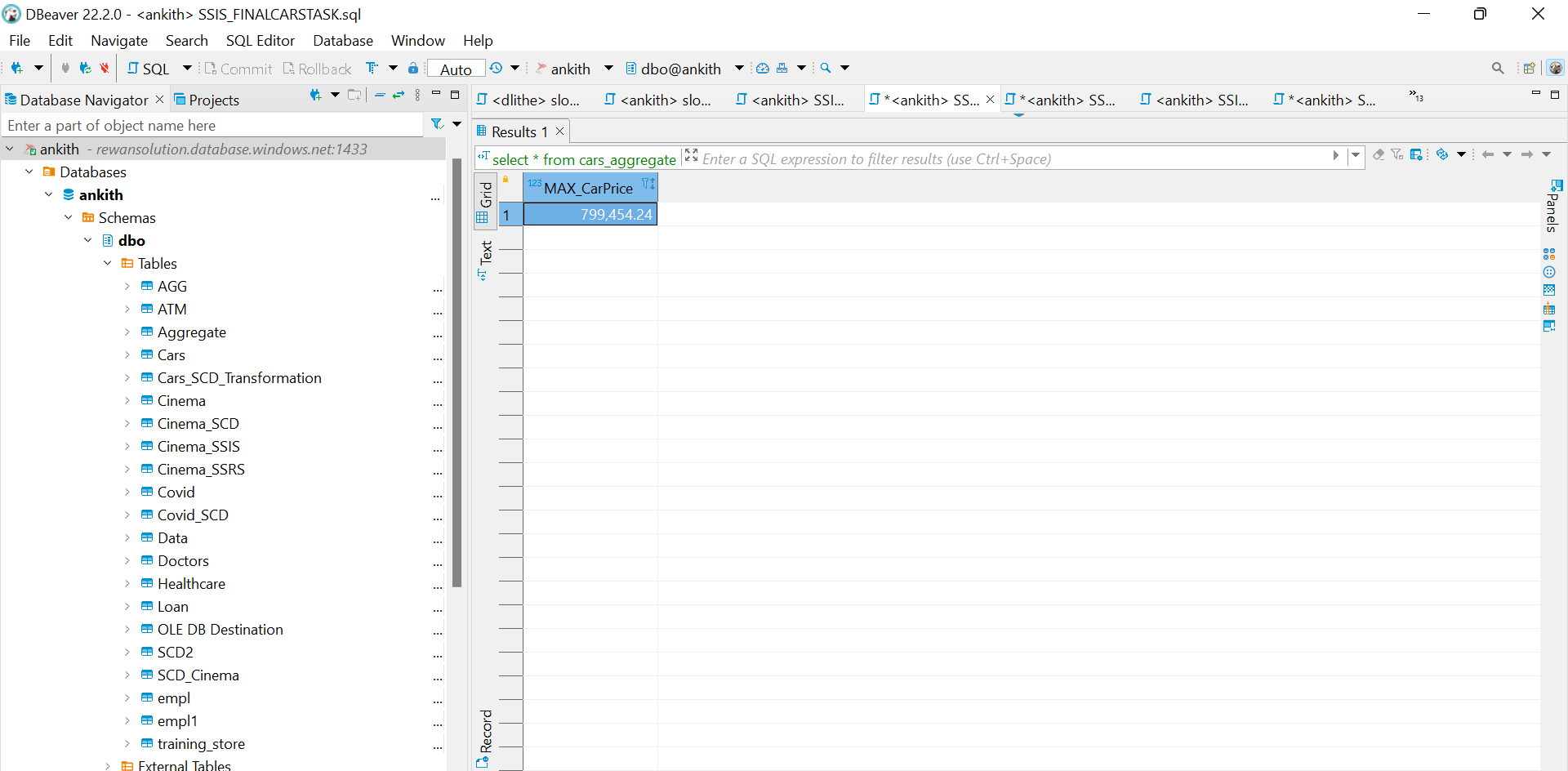
**CREATE** **TABLE** Cars\_Aggregate(

[MAX\_CarPrice] **float**

)

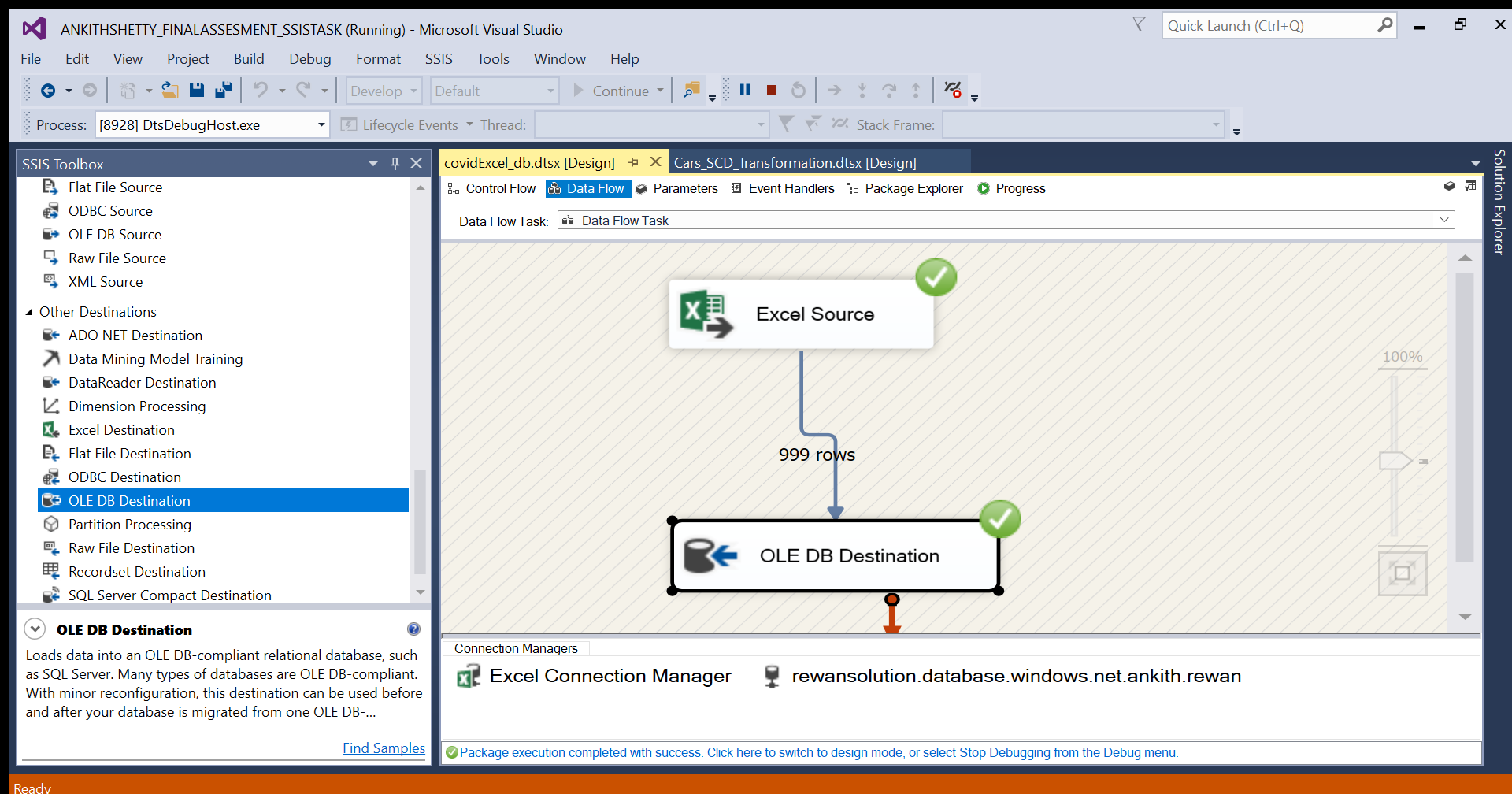
**---Aggregate transformation---**



**---Cars\_agrregate destination table output---**

**---2nd Data Source---**

**---Covid Excel to DB conversion---**



**---SQL DB destination---**

**CREATE** **TABLE** Covid(

[DRG ID] **float**,

[DRG Definition] **nvarchar**(255),

[Provider Id] **float**,

[Provider Name] **nvarchar**(255),

[Provider Street Address] **nvarchar**(255),

[Provider City] **nvarchar**(255),

[Provider State] **nvarchar**(255),

[Provider Zip Code] **float**,

[Hospital Referral Region (HRR) Description] **nvarchar**(255),

[Total Discharges] **float**,

[Average Covered Charges] **float**,

[Average Total Payments] **float**,

[Average Medicare Payments] **float**

)

---SCD Table---

**CREATE** **TABLE** Covid\_SCD(

[DRG ID] **float**,

[DRG Definition] **nvarchar**(255),

[Provider Id] **float**,

[Provider Name] **nvarchar**(255),

[Provider Street Address] **nvarchar**(255),

[Provider City] **nvarchar**(255),

[Provider State] **nvarchar**(255),

[Provider Zip Code] **float**,

[Hospital Referral Region (HRR) Description] **nvarchar**(255),

[Total Discharges] **float**,

[Average Covered Charges] **float**,

[Average Total Payments] **float**,

[Average Medicare Payments] **float**

)

---SCD1 COLUMN Values---

Graphical user interface, text, application, email

Description automatically generated

**In slowly changing dimension column update provider Id as changing attribute to update value**

---update Source Covid value---

**update** Covid

**set** [Provider Id]=10002 **where** [Average Covered Charges]=32963.07692

---SCD1 Transformation---A screenshot of a computer

Description automatically generated

---SCD1 Output---

Graphical user interface, application, Excel

Description automatically generated

Output shows updated provider Id value

**---SCD 2 Transformation---**

**---Create SCD2 Destination Table---**

**CREATE** **TABLE** Covid\_SCD2 (

[DRG ID] **float**,

[DRG Definition] **nvarchar**(255),

[Provider Id] **float**,

[Provider Name] **nvarchar**(255),

[Provider Street Address] **nvarchar**(255),

[Provider City] **nvarchar**(255),

[Provider State] **nvarchar**(255),

[Provider Zip Code] **float**,

[Hospital Referral Region (HRR) Description] **nvarchar**(255),

[Total Discharges] **float**,

[Average Covered Charges] **float**,

[Average Total Payments] **float**,

[Average Medicare Payments] **float**,

[start\_date] **datetime**,

[end\_date] **datetime**,

[status] **varchar**(255)

)

**---Update Source Table value to get ---**

**update** Covid

**set** [Provider Name] ='Amit Rajput' **where** [Provider Street Address] ='Hampankatta,Mangalore'



---SCD Transformation Values---

Graphical user interface, text, application

Description automatically generated

**In slowly changing dimension column update Provider Name as Historical attribute**

Graphical user interface, text, application, email

Description automatically generated

**In slowly changing dimension column update start\_time and end\_time with variable set to System::StartTime**

---SCD Transformation---

A screenshot of a computer

Description automatically generated with medium confidence

---SCD output---

Graphical user interface, table

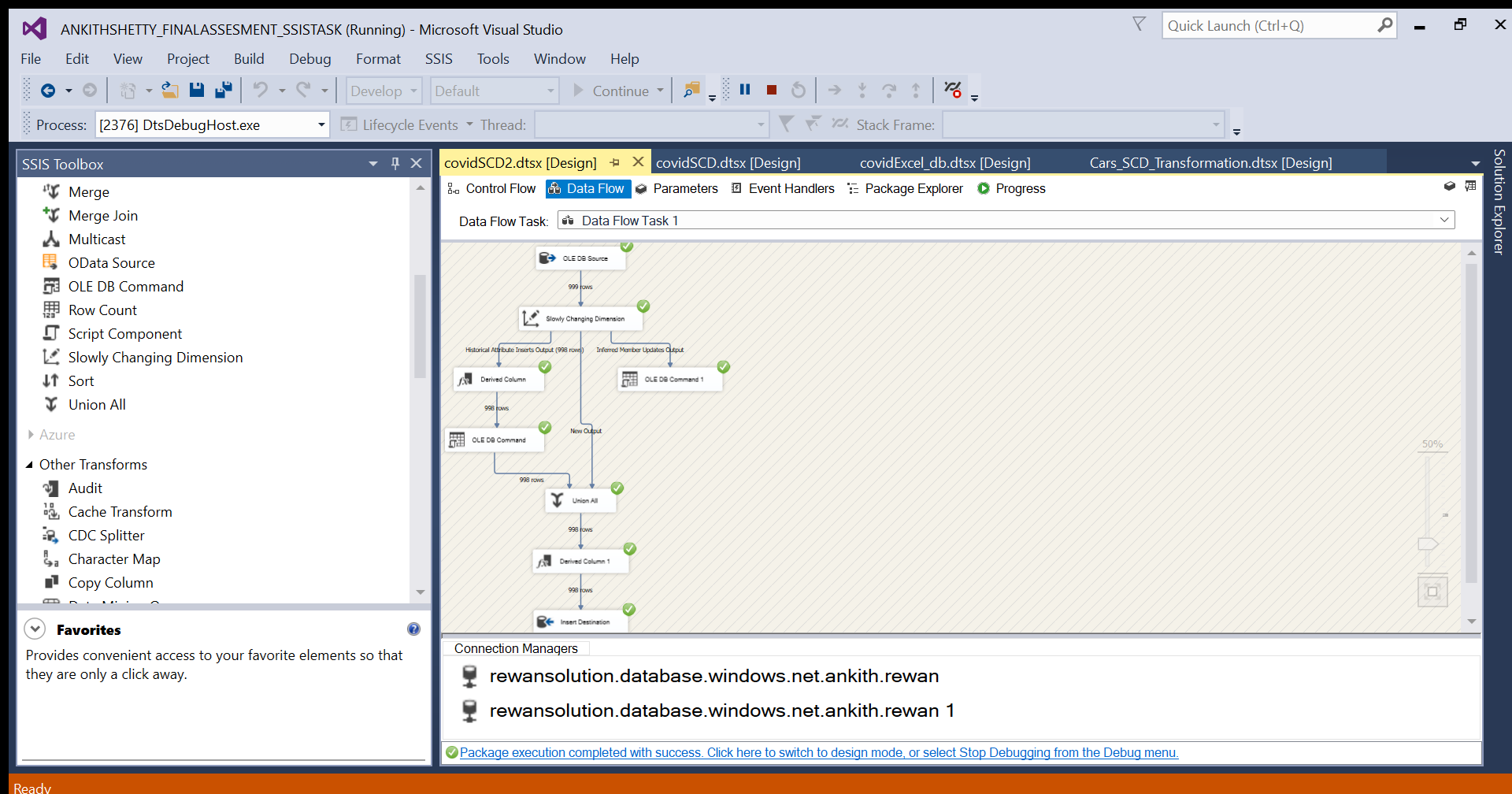
Description automatically generated

---Update Source Table again to get End\_date values---

**update** Covid

**set** [Provider Name] ='Ankith' **where** [Provider Id] =10005

---SCD Transformation---



---SCD Output---

Graphical user interface, application, table

Description automatically generated

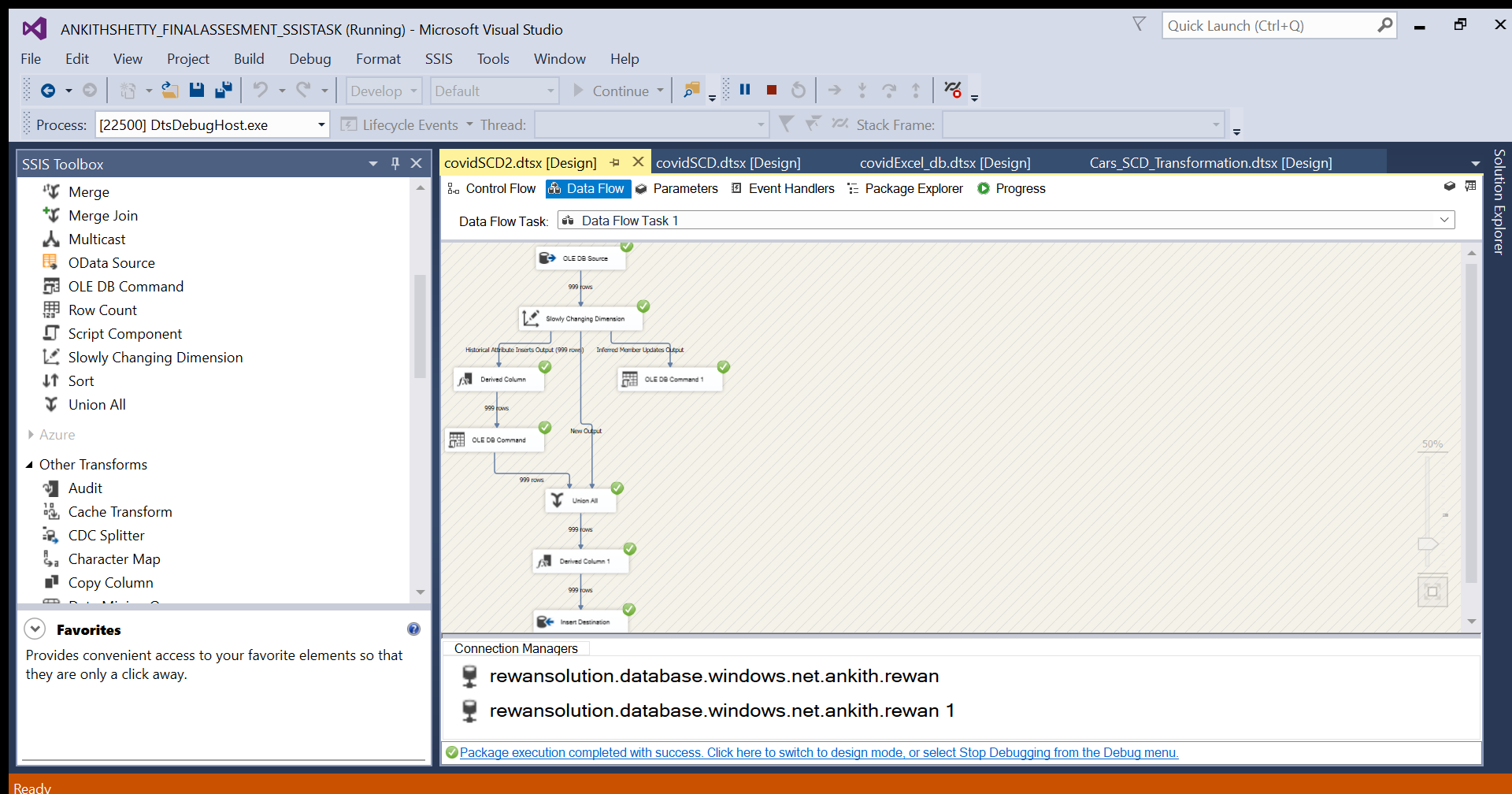
End\_date value is updated in destination table

---Update to get status values by unselecting start\_date,end\_date and selecting status in SCD column values---

**update** Covid

**set** [Provider Name] ='Amit SIngh' **where** [Provider Id] =10002

**---SCD2 Transformation---**



**---SCD2 Output---**

Graphical user interface, table

Description automatically generated

Status is updated in Destination table

**---Covid Aggregate Function---**

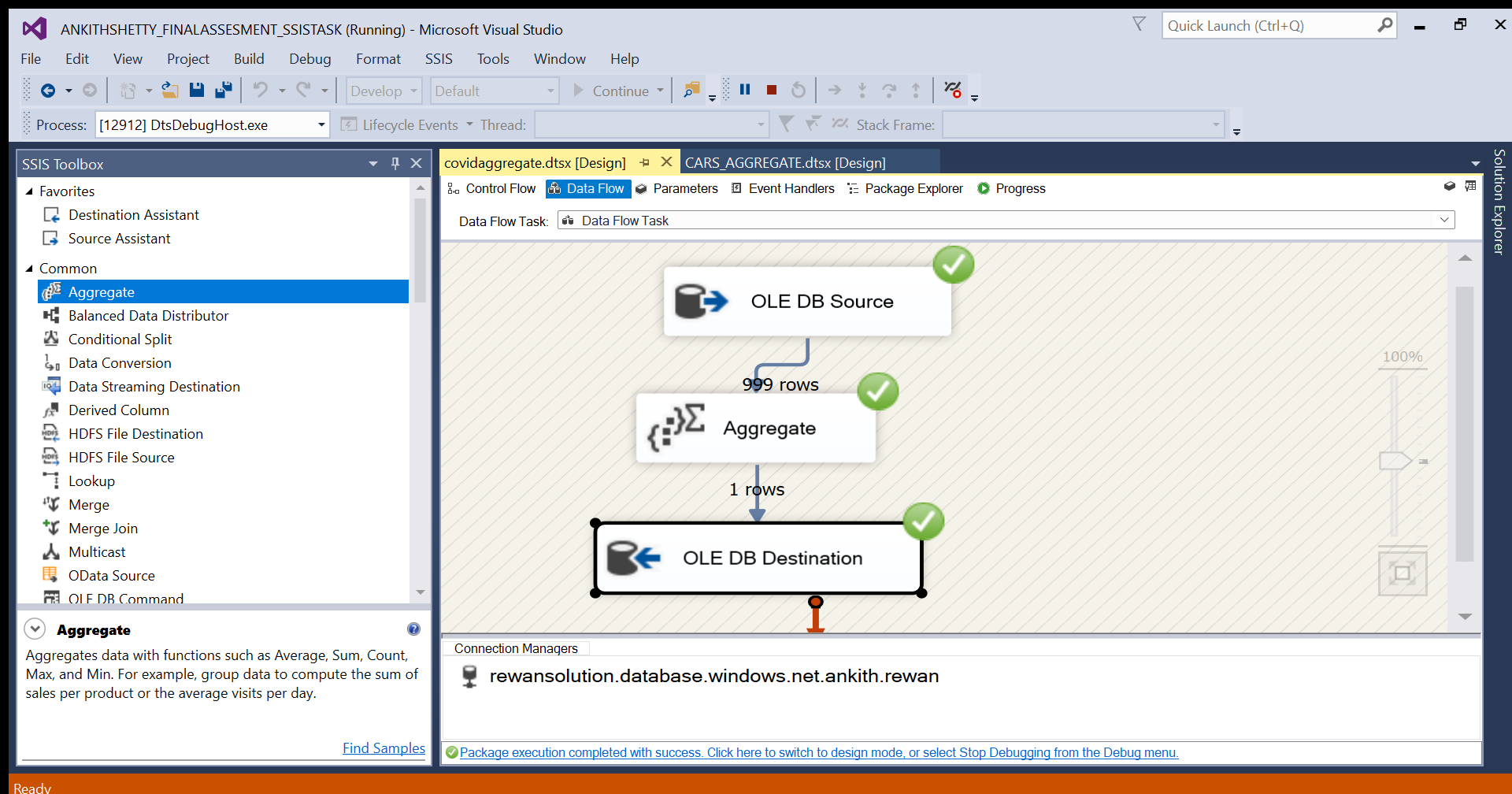
---create covid\_aggregate table---

**CREATE** **TABLE** covid\_aggregate (

[Sum\_Total Discharges] **float**

)

---Covid aggregate Transformation---



**---Covid\_aggregate destination table output---**

Graphical user interface, application, Word

Description automatically generated