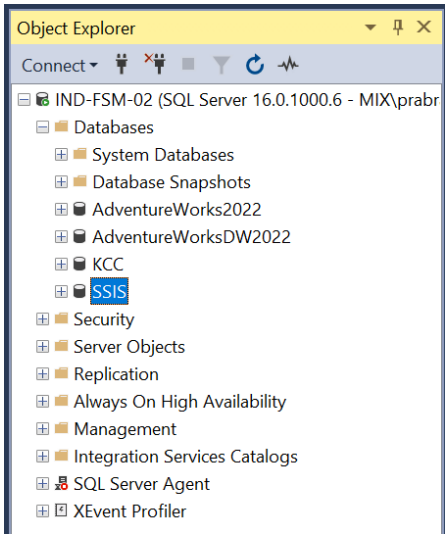
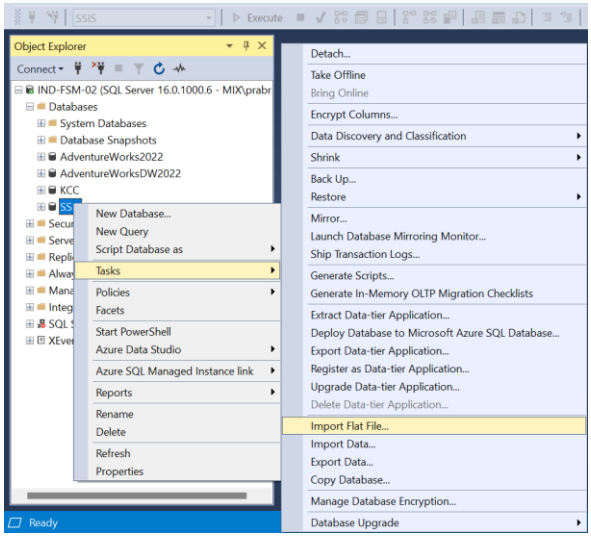
# Data 415 Final Assignment

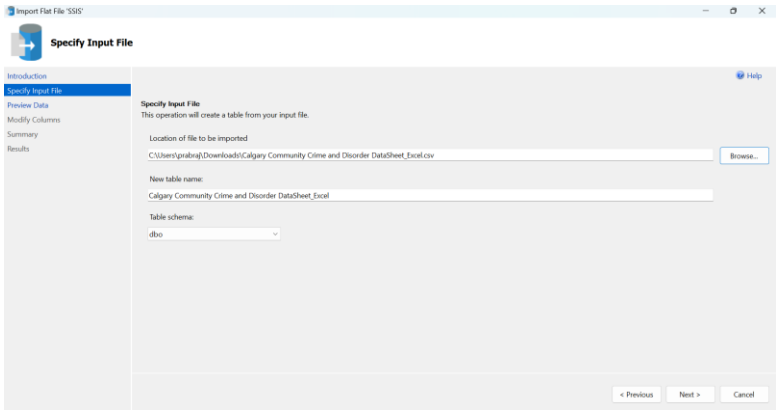
**SSIS Integration process**

### I Created Separate Database for SSIS.

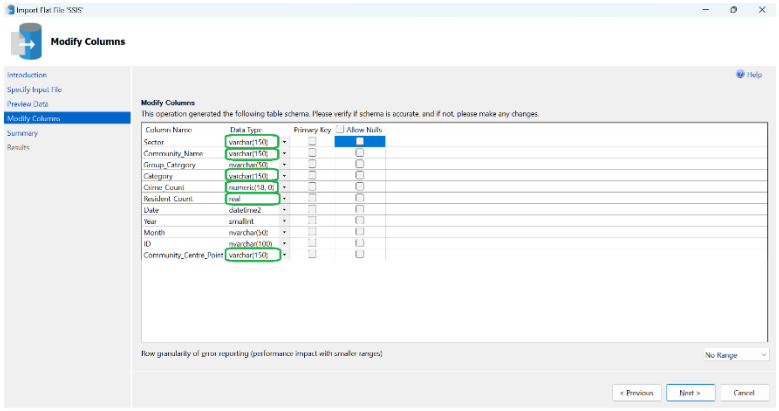



### 3. Upload to your SQL Server as CSV or Excel.

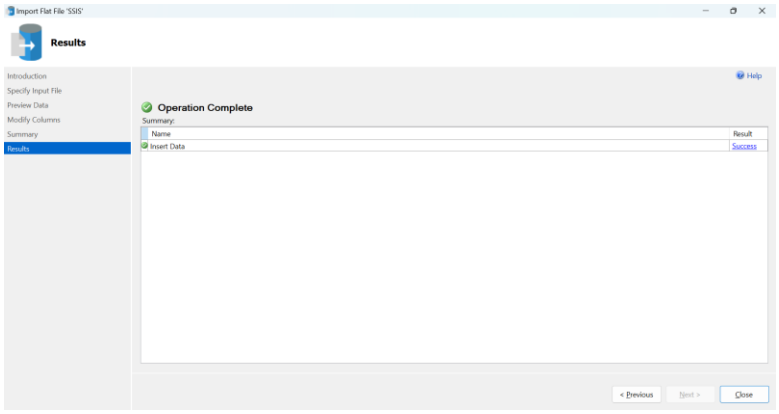


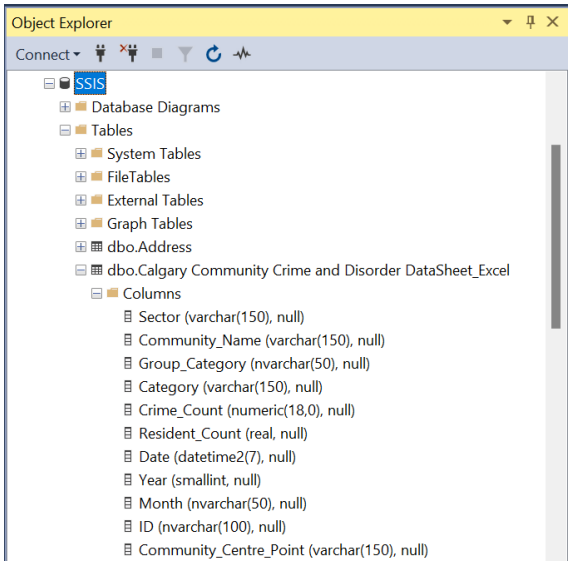
**4. If uploaded as CSV, ensure the datatypes for the columns have been assigned correctly.**



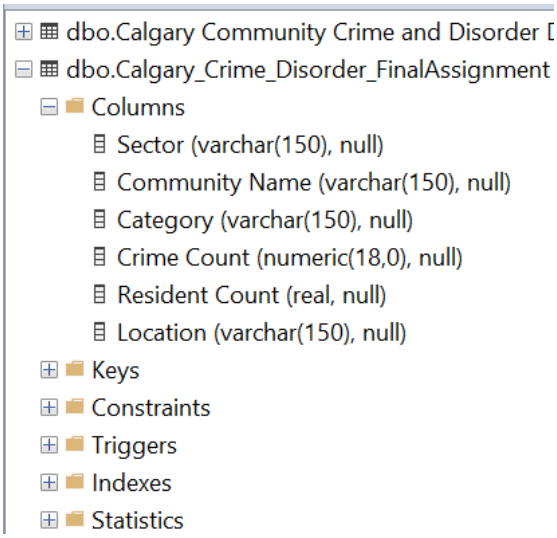

**5. You can save the CSV as Excel and upload it to SQL Server**



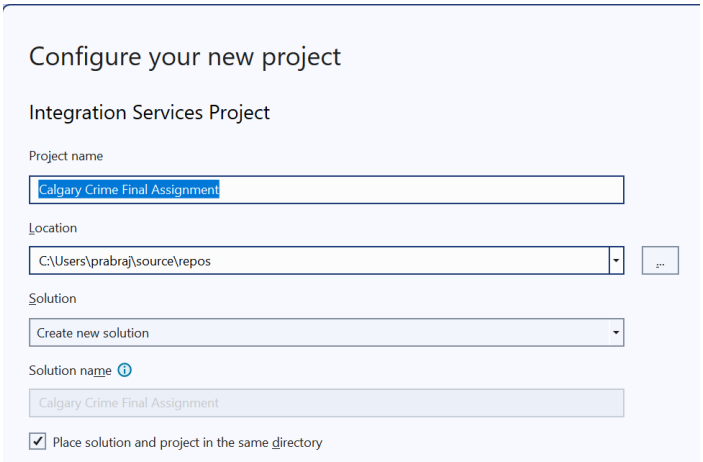

**6. Choose your data file from SQL.**



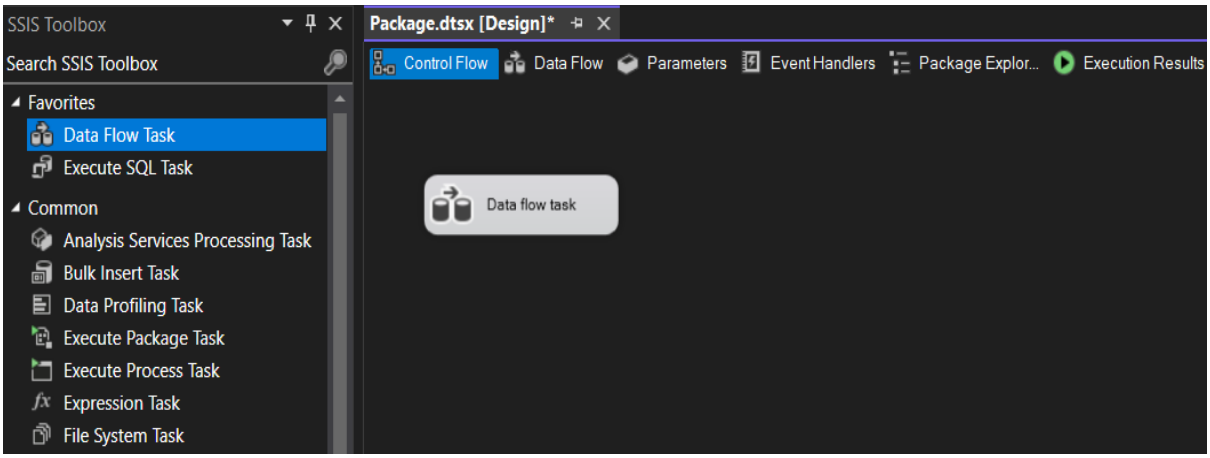
**7. Create a new Table called Calgary_Crime_Disorder_FinalAssignment with columns [Sector] [Community Name] [Category] [Crime Count] [Resident Count] and [Location]. Ensure the datatypes are correct.**

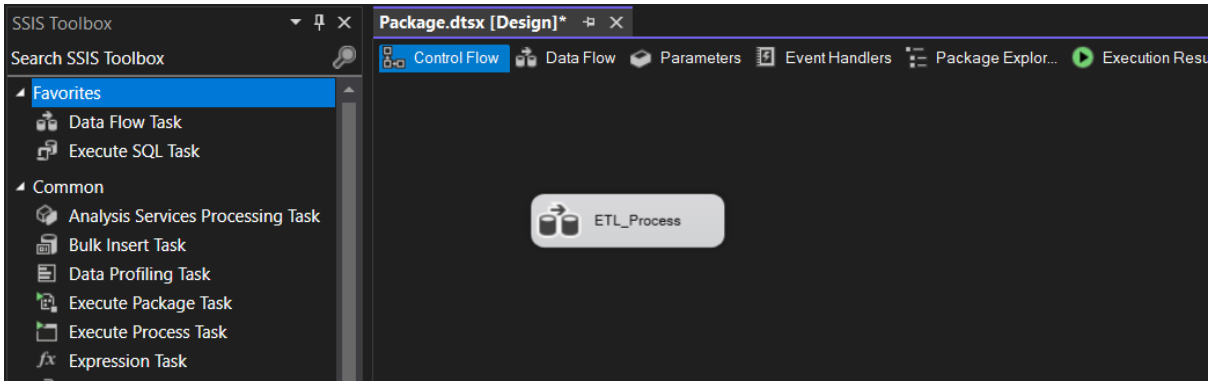



**8. Create an Integrated Project**

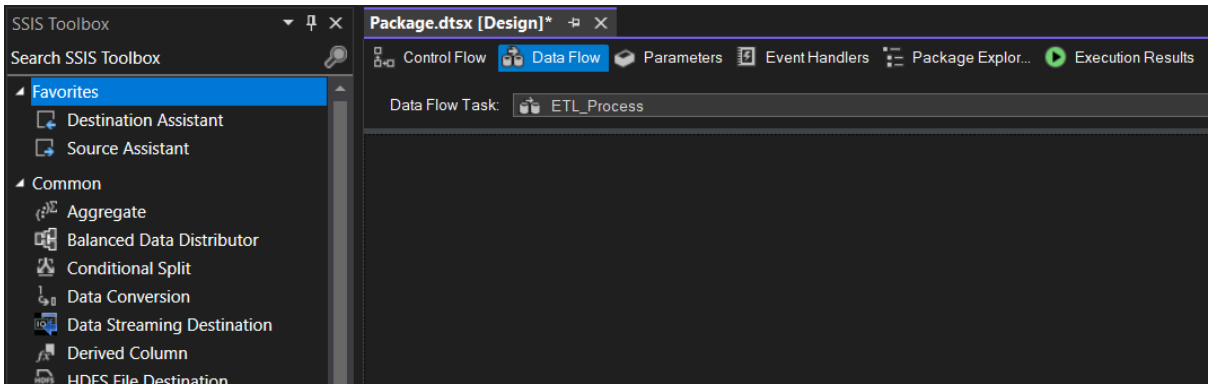



**Drag the data flow task and rename it, <ELT_Process>**

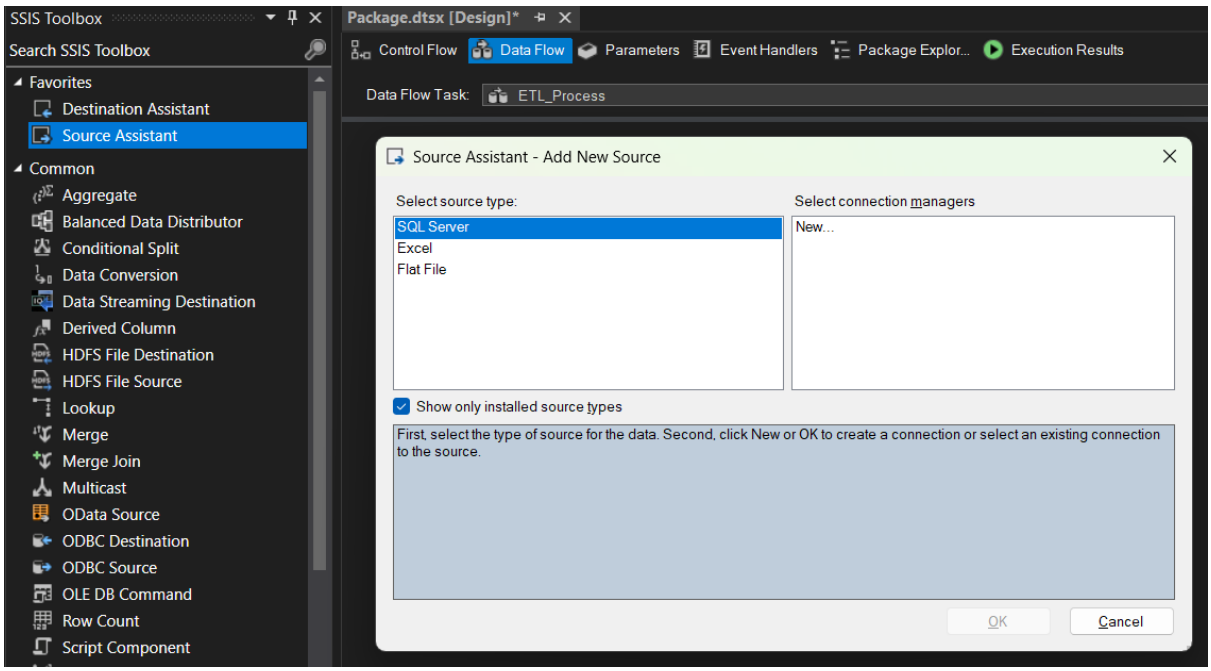




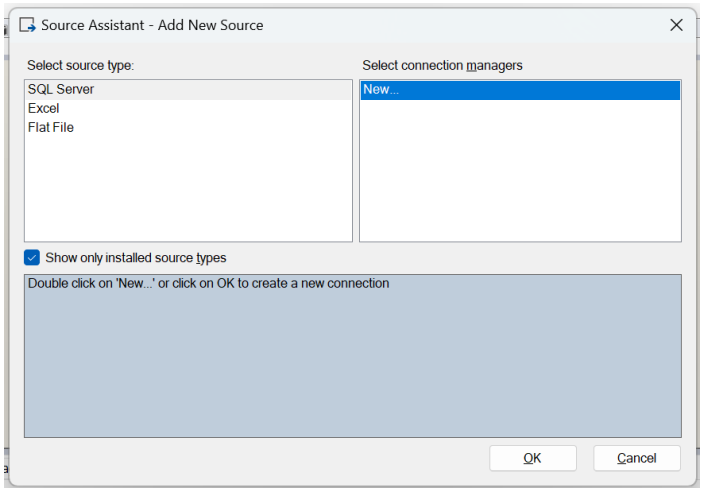

**Double-click on task ETL_Process ... And open dataflow task.**



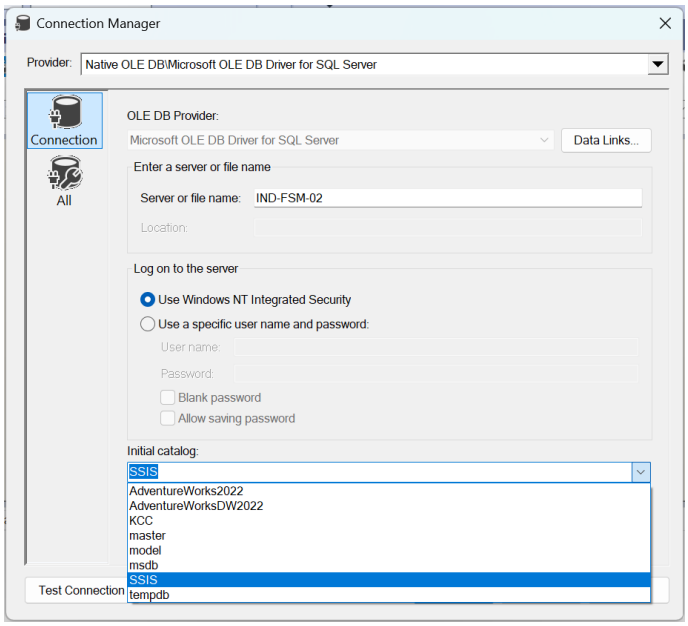

**Drag Source Assistant to the work area.**



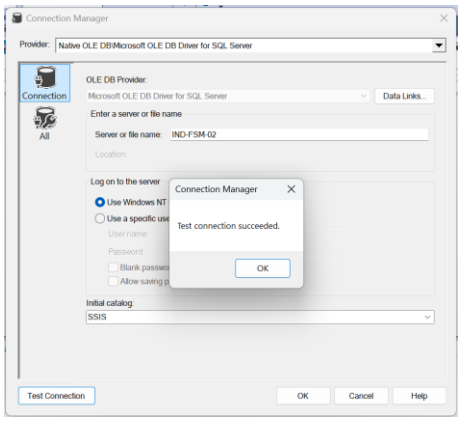
## Source Assistant Connection Box:



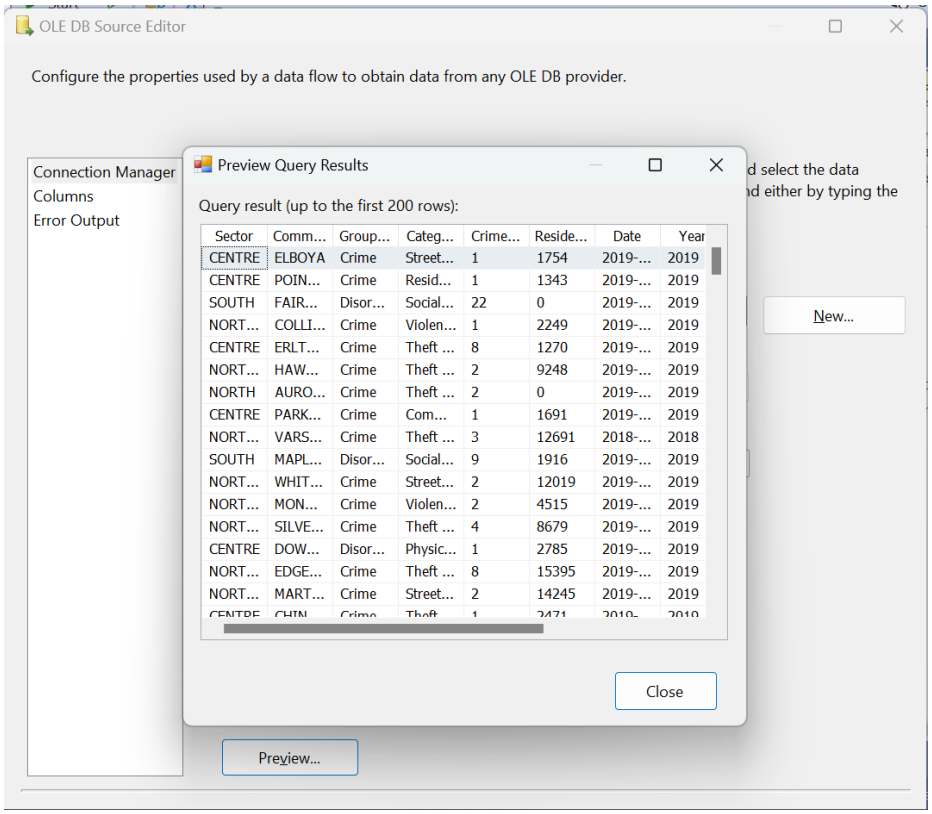

## Selecting the Main Table.



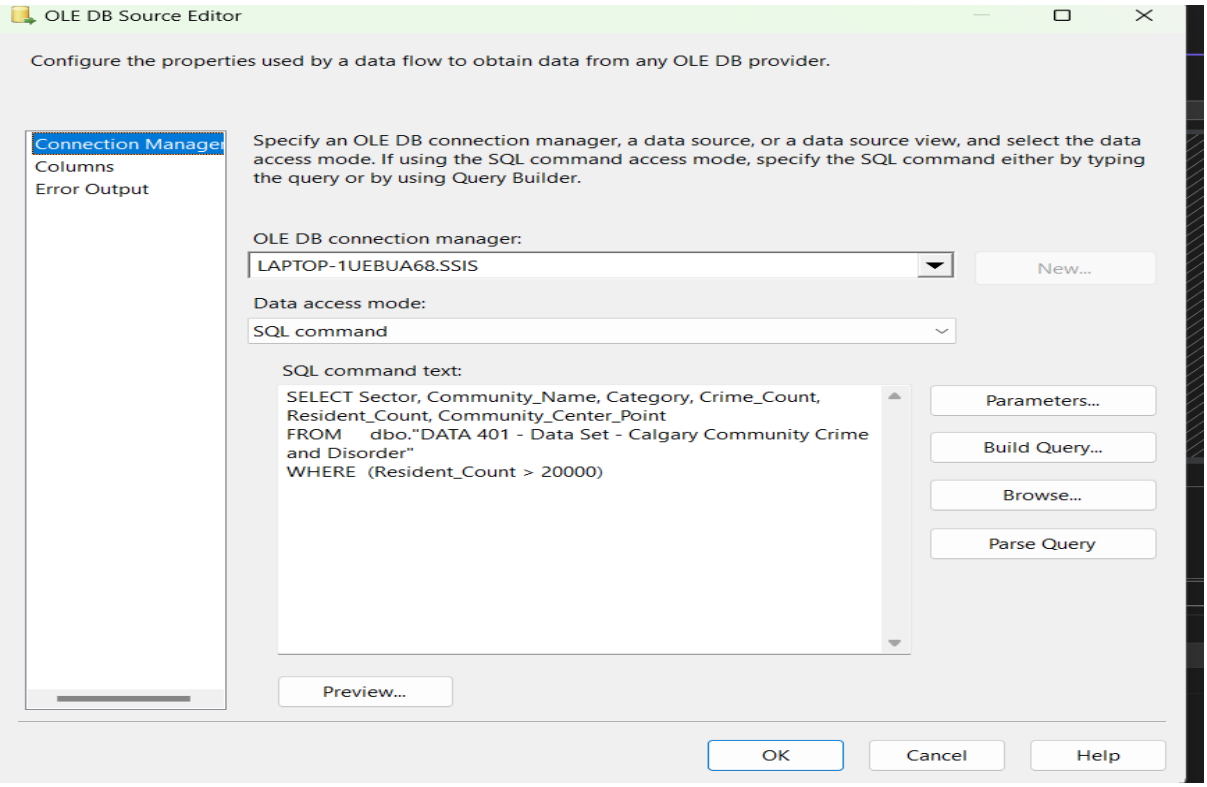

## Testing the connection,



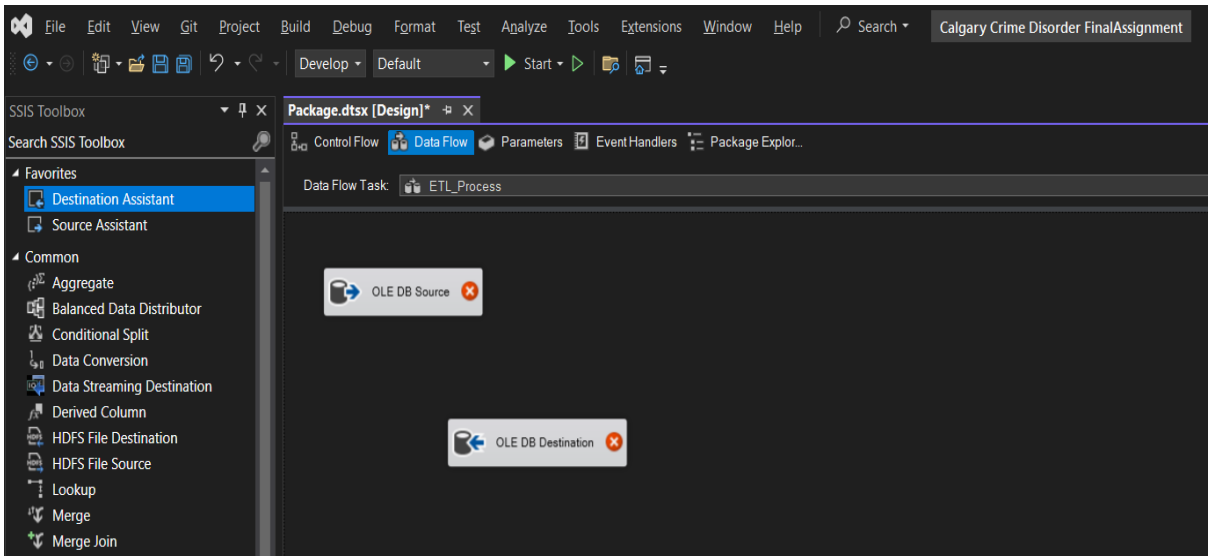
**Previewing the table for the source Assistant.**



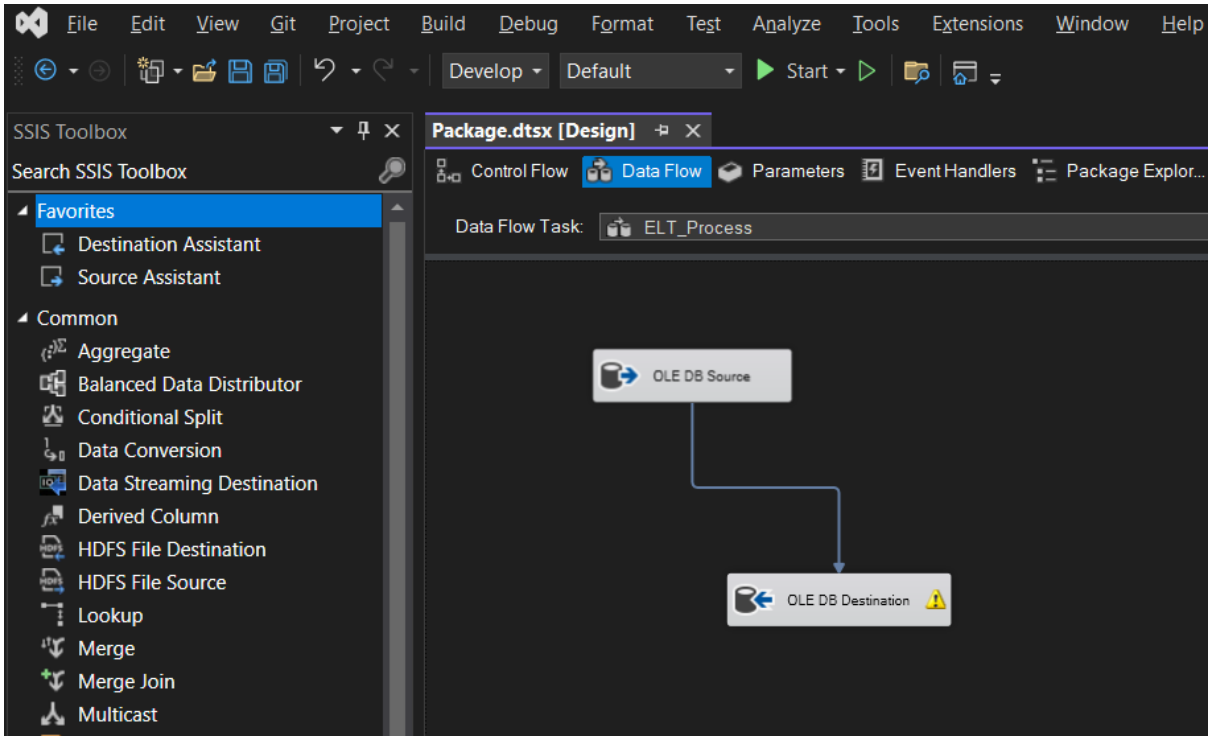
**16. Click on data access mode, select SQL command, and write the following SQL query. SELECT [Sector], [Community Name], [Category], [Crime Count], [Resident Count], [Community Centre Point] FROM [dbo]. [YYC_Calgary_Crime_and_Disorder_Exercise] WHERE [Resident Count] > 20000**



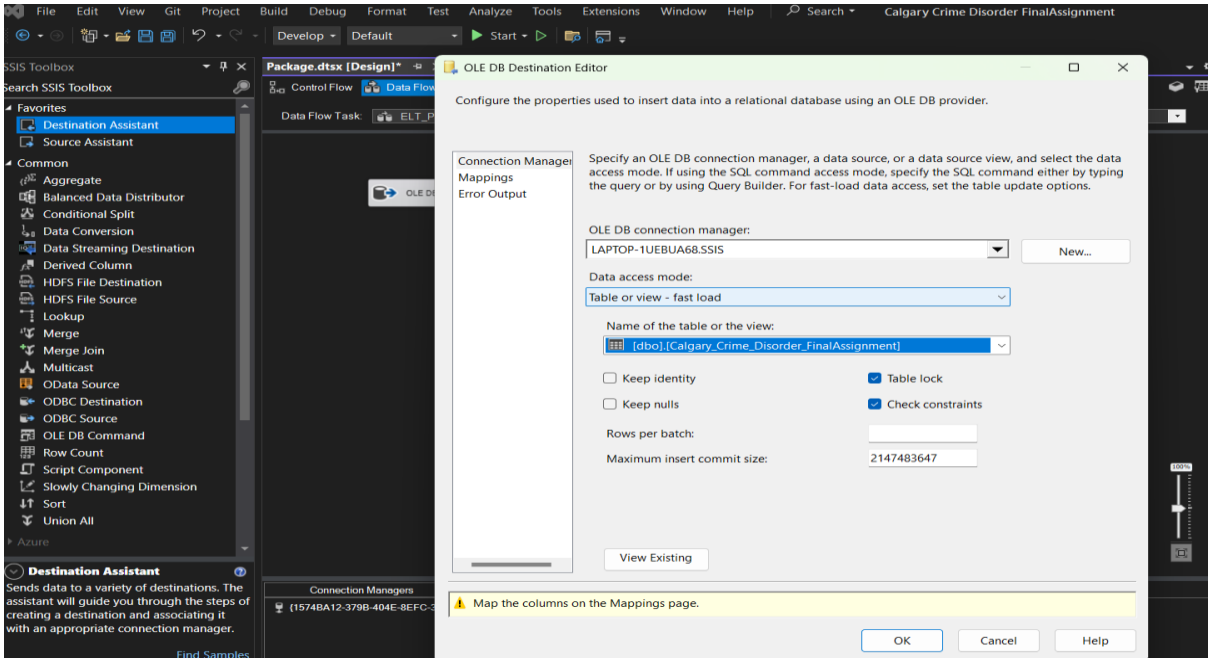

**17. Drag Destination Assistant to the work area.**



**Connecting Source to Destination.**

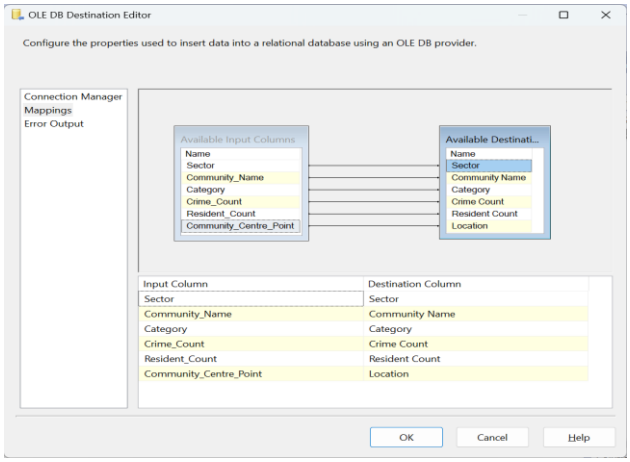



**18. Double click on OLE DB Destination and select the destination table, Calgary_Crime_Disorder_FinalAssignment.**



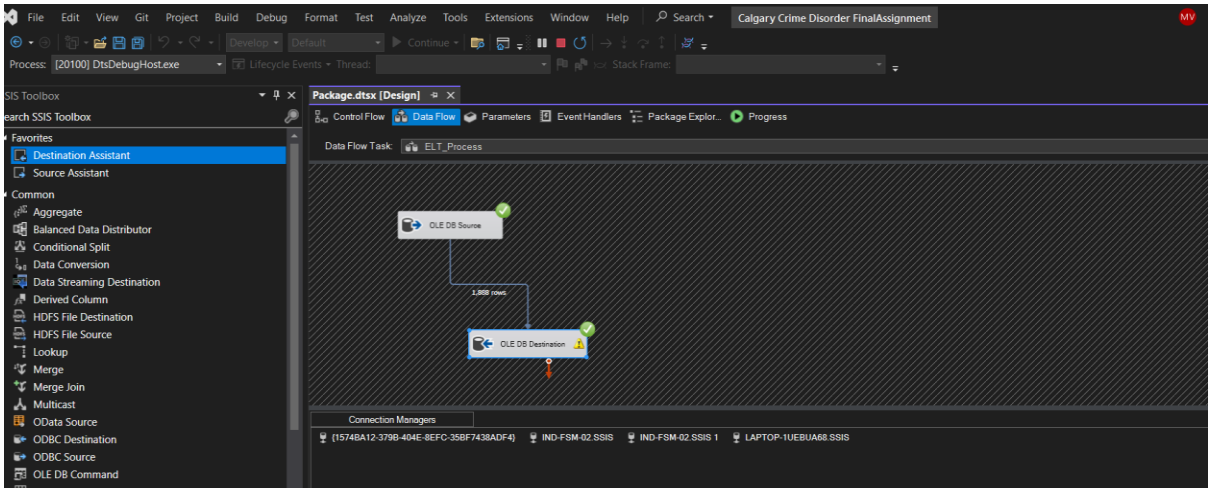
**19. Click on Mapping and map the input column to the output column.**

**20. Connect the Columns, Community Centre Point to the Location.**

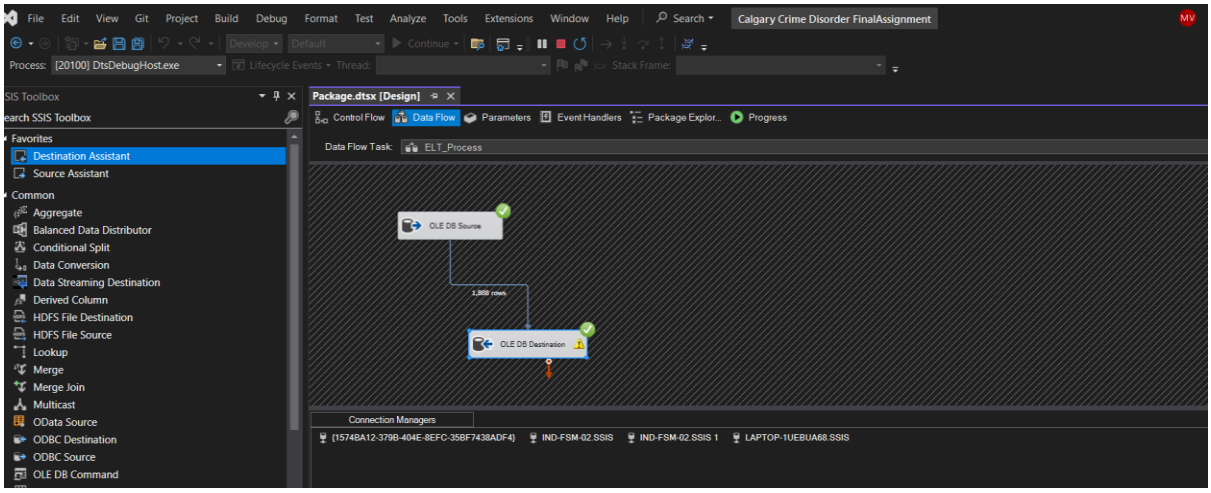



**The X mark goes off in the destination folder,**

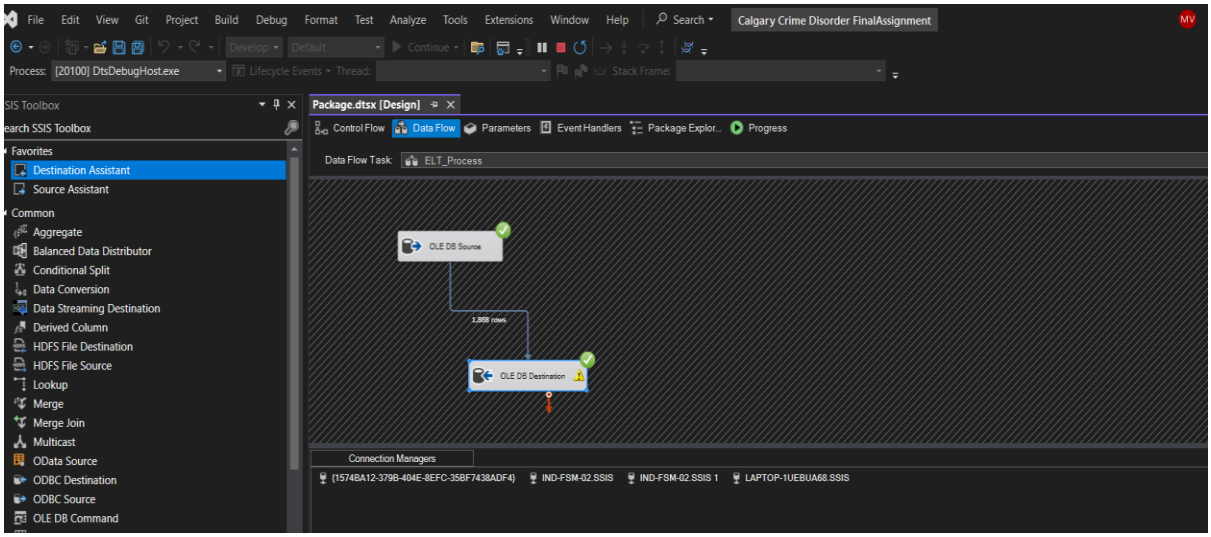
**21. Click on Start and execute the project**




**22. You should get the green check mark for executing the project successfully.**




**23. Package execution completed with success.**




**24. Now you can see the queried data should be in your SQL server in the new Calgary_Crime_Disorder_FinalAssignment Table.**

SQLQuery6.sql - L...UEBUA68\KEAR (63)) | SQLQuery5.sql - L...UEBUA68\KEAR (55)) | SQLQuery4.sql - L...UEBUA68\KEAR (52))

```
SELECT TOP (1000) [Sector]
      ,[Community Name]
      ,[Category]
      ,[Crime Count]
      ,[Resident Count]
      ,[Location]
  FROM [SSIS].[dbo].[Calgary_Crime_Disorder_FinalAssignment]
```

100 %

Results | Messages

| | Sector | Community Name | Category | Crime Count | Resident Count | Location |
|---|---|---|---|---|---|---|
| 1 | NORTHEAST | SADDLE RIDGE | Residential Break & Enter | 3 | 22321 | (51.13057324213389, -113.94562252266931) |
| 2 | NORTH | PANORAMA HILLS | Social Disorder | 38 | 25710 | (51.15971101107547, -114.08806340626336) |
| 3 | SOUTH | EVERGREEN | Theft OF Vehicle | 3 | 21500 | (50.91871439337275, -114.11532492862042) |
| 4 | CENTRE | BELTLINE | Commercial Robbery | 3 | 25129 | (51.03743792621707, -114.05518879725622) |
| 5 | CENTRE | BELTLINE | Theft FROM Vehicle | 87 | 25129 | (51.03743792621707, -114.05518879725622) |
| 6 | SOUTH | EVERGREEN | Theft FROM Vehicle | 5 | 21500 | (50.91871439337275, -114.11532492862042) |
| 7 | SOUTH | EVERGREEN | Commercial Break & Enter | 1 | 21500 | (50.91871439337275, -114.11532492862042) |
| 8 | CENTRE | BELTLINE | Physical Disorder | 52 | 25129 | (51.03743792621707, -114.05518879725622) |
| 9 | NORTHEAST | SADDLE RIDGE | Assault (Non-domestic) | 4 | 22321 | (51.13057324213389, -113.94562252266931) |
| 10 | NORTHEAST | SADDLE RIDGE | Theft FROM Vehicle | 7 | 22321 | (51.13057324213389, -113.94562252266931) |
| 11 | NORTH | PANORAMA HILLS | Theft FROM Vehicle | 5 | 25710 | (51.15971101107547, -114.08806340626336) |
| 12 | NORTHEAST | SADDLE RIDGE | Theft OF Vehicle | 4 | 22321 | (51.13057324213389, -113.94562252266931) |
| 13 | CENTRE | BELTLINE | Street Robbery | 4 | 25129 | (51.03743792621707, -114.05518879725622) |
| 14 | NORTHEAST | SADDLE RIDGE | Street Robbery | 1 | 22321 | (51.13057324213389, -113.94562252266931) |
| 15 | SOUTH | EVERGREEN | Physical Disorder | 5 | 21500 | (50.91871439337275, -114.11532492862042) |
| 16 | NORTH | PANORAMA HILLS | Theft OF Vehicle | 2 | 25710 | (51.15971101107547, -114.08806340626336) |

**25. What was the total number of monthly reported records for these communities with resident counts greater than 20,000?**

SQLQuery7.sql - L...UEBUA68\KEAR (55))* | SQLQuery6.sql - L...UEBUA68\KEAR (63))

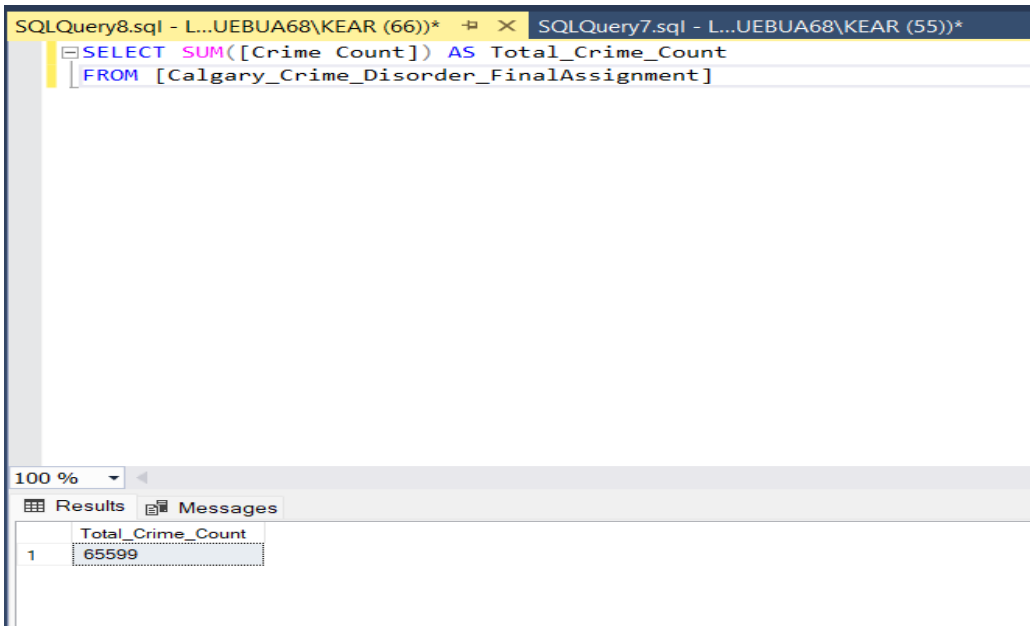
```
SELECT COUNT(*) AS [Total Montly Reported Records]
  FROM [SSIS].[dbo].[Calgary_Crime_Disorder_FinalAssignment];
```

100 %

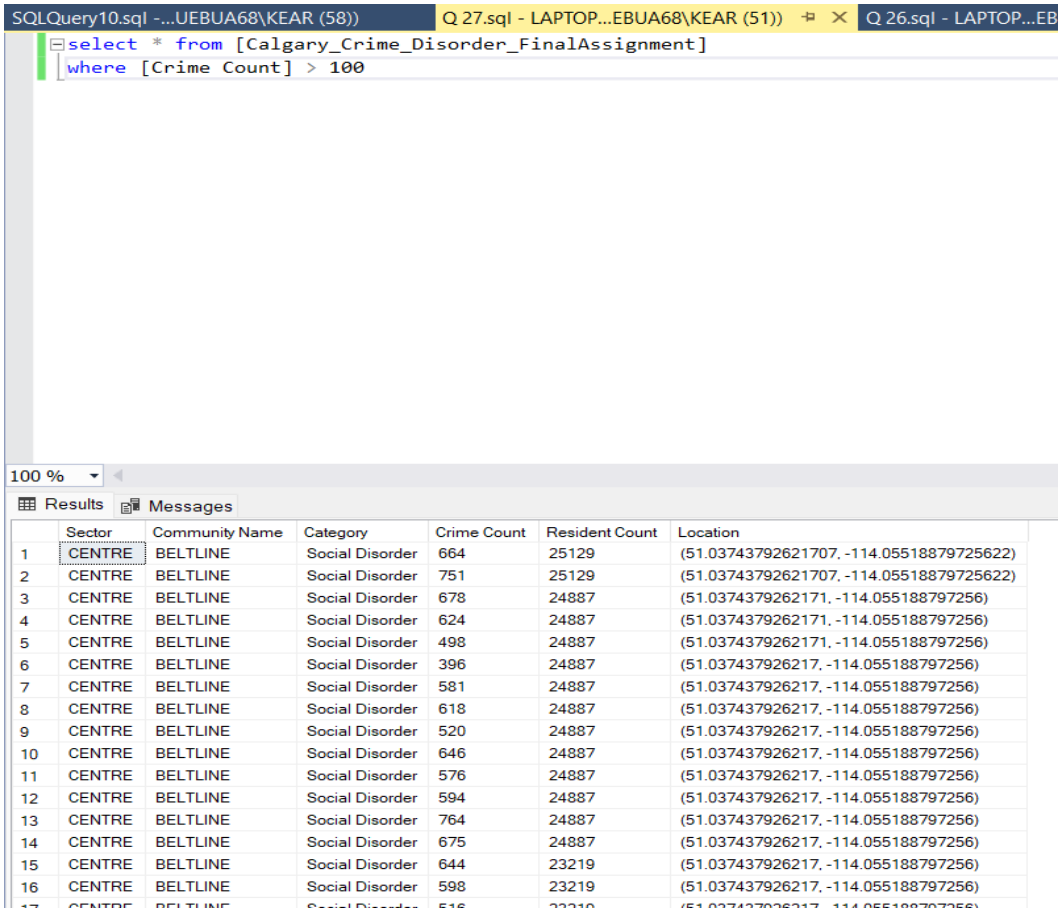
Results | Messages

| | Total Montly Reported Records |
|---|---|
| 1 | 1888 |

**26. What is the total crime count from all reported monthly records in this query from Section 25?**

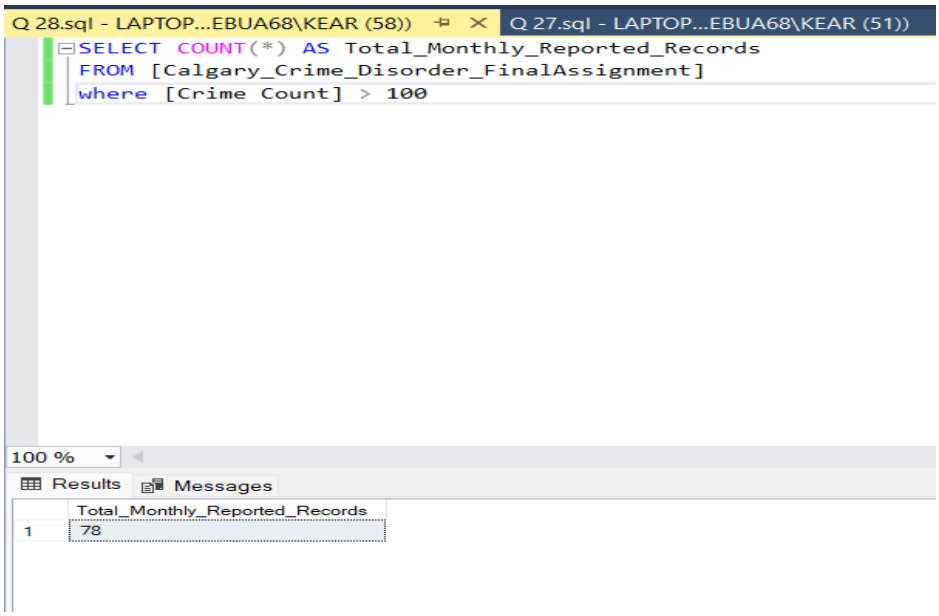



**27. Build a Query from the table in Section 24 where the Crime count is greater than 100.**

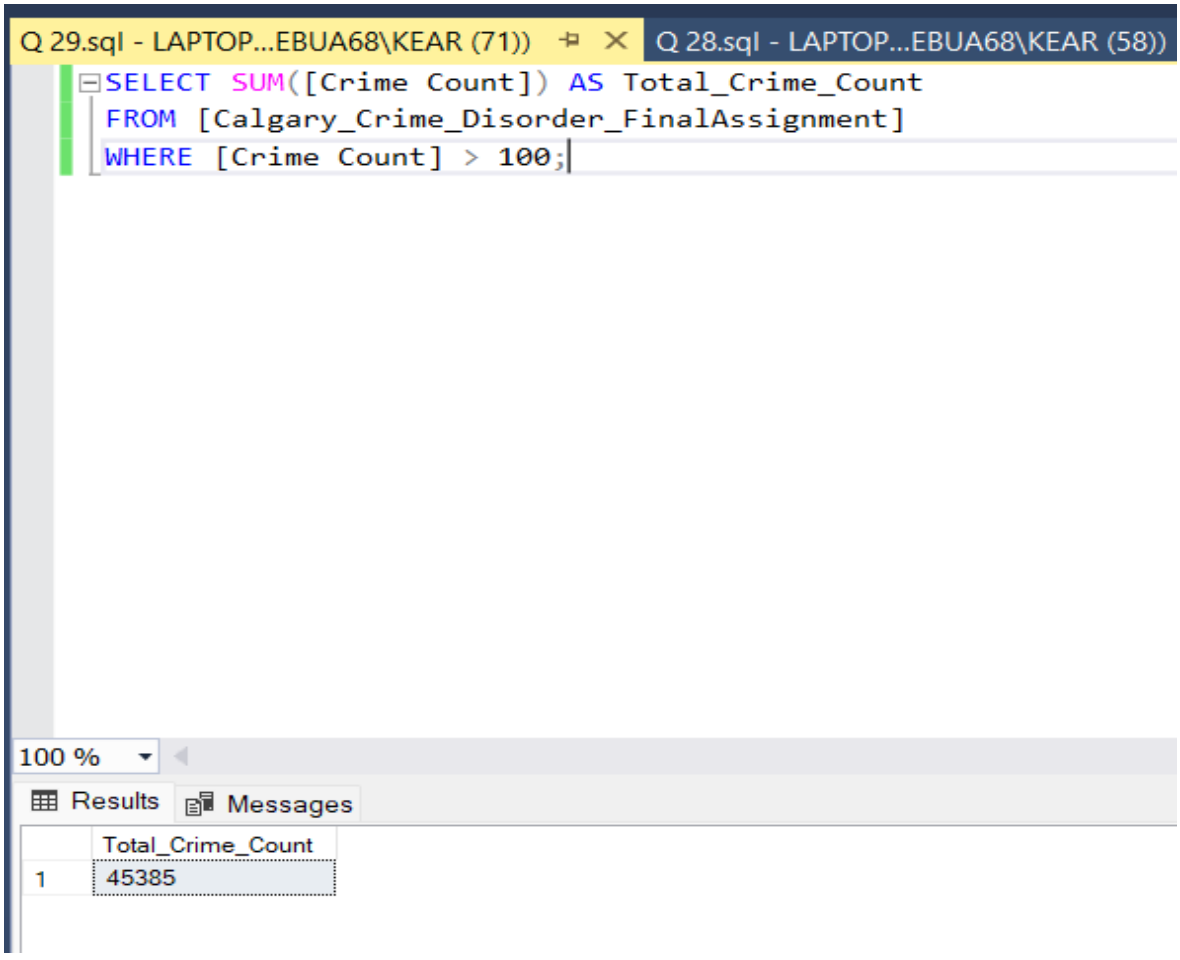



| | Sector | Community Name | Category | Crime Count | Resident Count | Location |
|---|---|---|---|---|---|---|
| 1 | CENTRE | BELTLINE | Social Disorder | 664 | 25129 | (51.03743792621707, -114.05518879725622) |
| 2 | CENTRE | BELTLINE | Social Disorder | 751 | 25129 | (51.03743792621707, -114.05518879725622) |
| 3 | CENTRE | BELTLINE | Social Disorder | 678 | 24887 | (51.0374379262171, -114.055188797256) |
| 4 | CENTRE | BELTLINE | Social Disorder | 624 | 24887 | (51.0374379262171, -114.055188797256) |
| 5 | CENTRE | BELTLINE | Social Disorder | 498 | 24887 | (51.0374379262171, -114.055188797256) |
| 6 | CENTRE | BELTLINE | Social Disorder | 396 | 24887 | (51.03743792621217, -114.055188797256) |
| 7 | CENTRE | BELTLINE | Social Disorder | 581 | 24887 | (51.03743792621217, -114.055188797256) |
| 8 | CENTRE | BELTLINE | Social Disorder | 618 | 24887 | (51.03743792621217, -114.055188797256) |
| 9 | CENTRE | BELTLINE | Social Disorder | 520 | 24887 | (51.03743792621217, -114.055188797256) |
| 10 | CENTRE | BELTLINE | Social Disorder | 646 | 24887 | (51.03743792621217, -114.055188797256) |
| 11 | CENTRE | BELTLINE | Social Disorder | 576 | 24887 | (51.03743792621217, -114.055188797256) |
| 12 | CENTRE | BELTLINE | Social Disorder | 594 | 24887 | (51.03743792621217, -114.055188797256) |
| 13 | CENTRE | BELTLINE | Social Disorder | 764 | 24887 | (51.03743792621217, -114.055188797256) |
| 14 | CENTRE | BELTLINE | Social Disorder | 675 | 24887 | (51.03743792621217, -114.055188797256) |
| 15 | CENTRE | BELTLINE | Social Disorder | 644 | 23219 | (51.03743792621217, -114.055188797256) |
| 16 | CENTRE | BELTLINE | Social Disorder | 598 | 23219 | (51.03743792621217, -114.055188797256) |

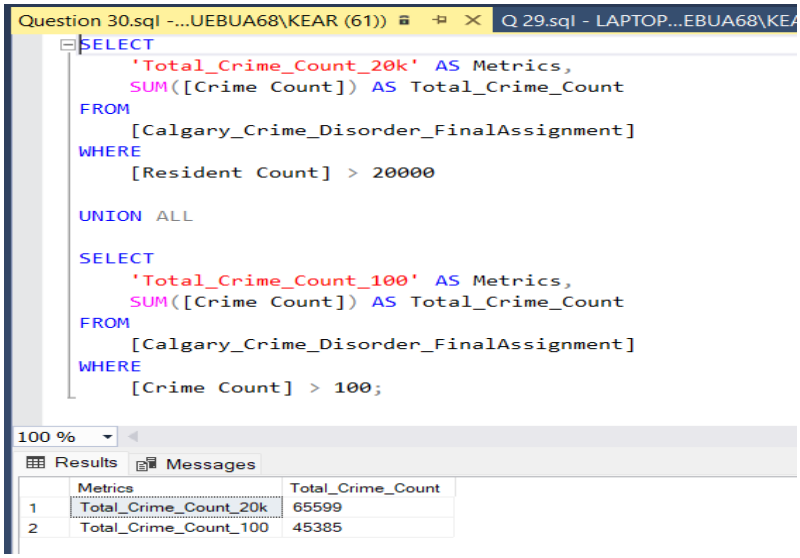
**28. What is the total number of monthly reported records for the crime count greater than 100 from Question 27?**




**29. What is the total crime count for this query in question 28?**



**30. How does the total crime count in question 29 for communities with a resident count greater than 20,000 compared to the total crime count for a query with the crime count greater than 100 from the whole Calgary dataset?**




**Calculate the Percentage Difference:**

**Comparison of Total Crime Counts**

1. Total Crime Count for Communities with a Resident Count Greater Than 20,000: **65,599**
2. Total Crime Count for Records Where the Crime Count is Greater Than 100: **45,385**

**Percentage Difference Calculation**

**Percentage Difference= {[(65,599−45,385)] / [45,385]} ×100 ≈ 44.3%**

The total crime counts for communities with a resident count greater than 20,000 is approximately 44.3% higher compared to the total crime count for records where the crime count is greater than 100. The total crime count for these communities is about 1.44 times (or 44%) higher than the total crime count for the other dataset.