**Sri Lanka Institute of Information**

**Technology**



**Data Warehousing & Business Intelligence**

**Assignment 02**

**Submitted by:**

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**1. Data Source for the Assignment 02.**

Data Source – HetRecMovies\_DW

**HetRecMovies\_DW have following tables**

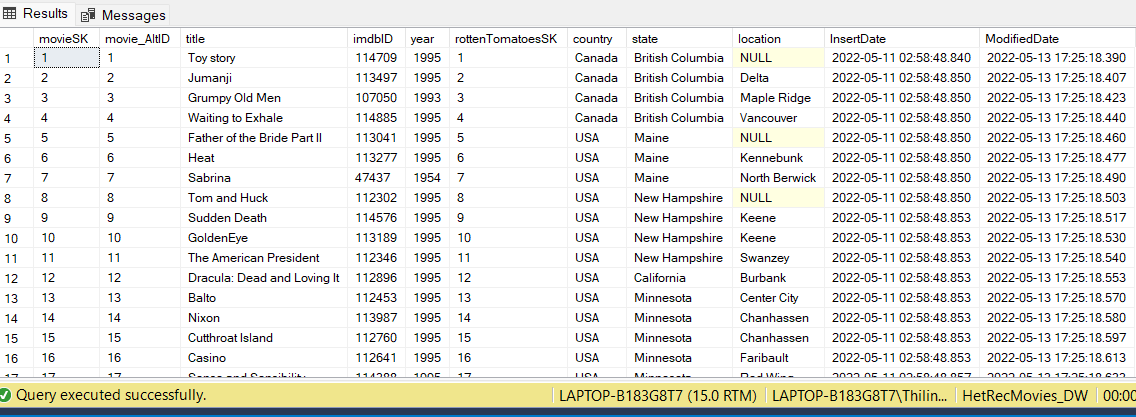
* DimDate
* DimMovieActors
* DimMovieGenres
* DimMovies
* DimRottenTomatoes
* FactUserRatedMovies

A screenshot of a computer

Description automatically generated with medium confidence**DimDate**

** DimMovieActors**

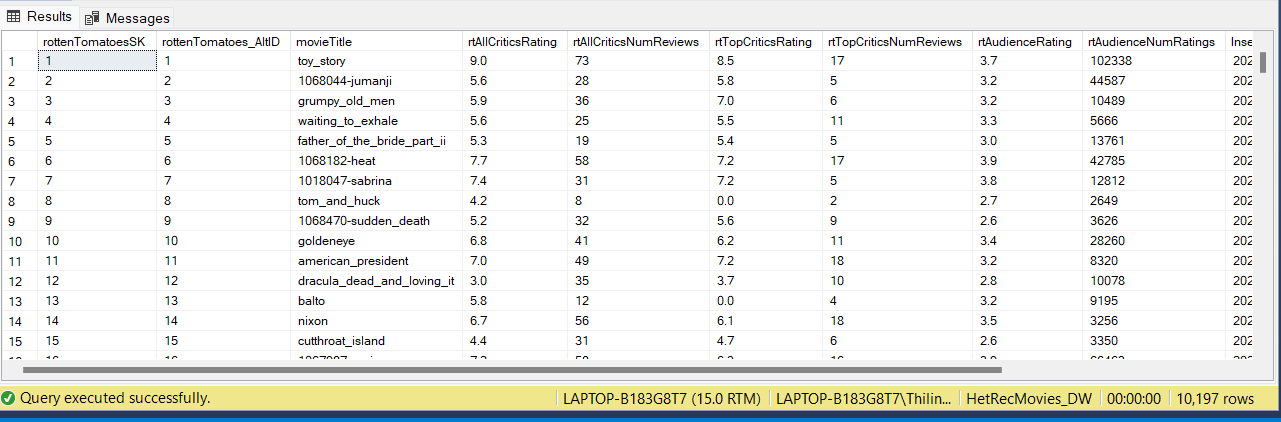
**DimMovies**

****

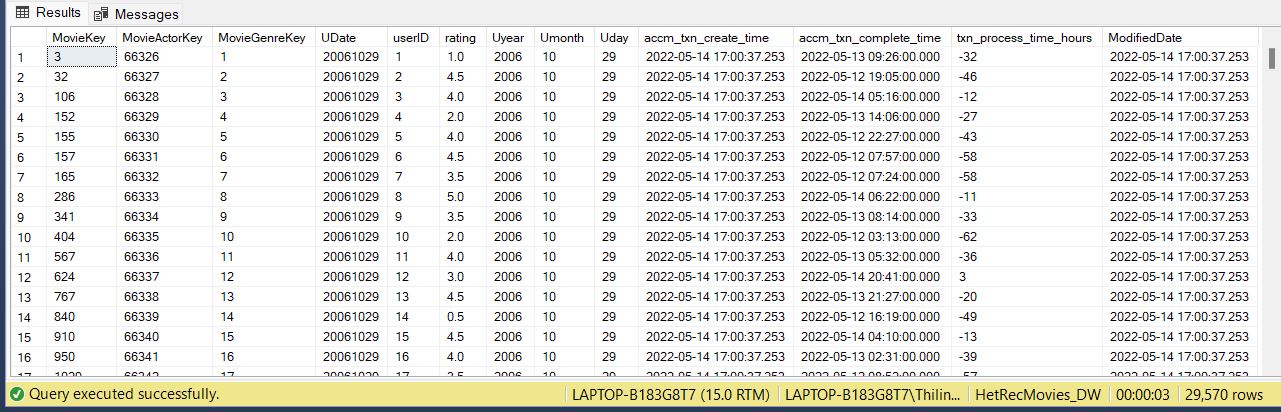
**DimMovieGenres**

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**DimRottenTomatoes**



**FactUserRatedMovies**

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**ER Diagram.**

Diagram

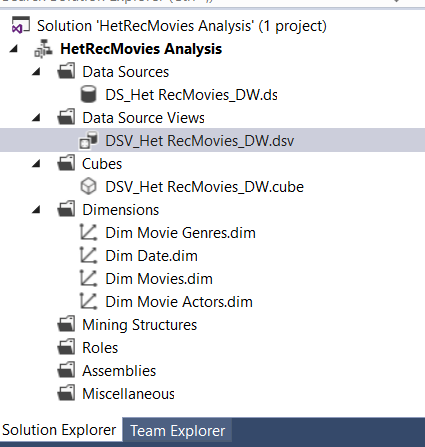
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**2)SSAS Cube Implementation.**

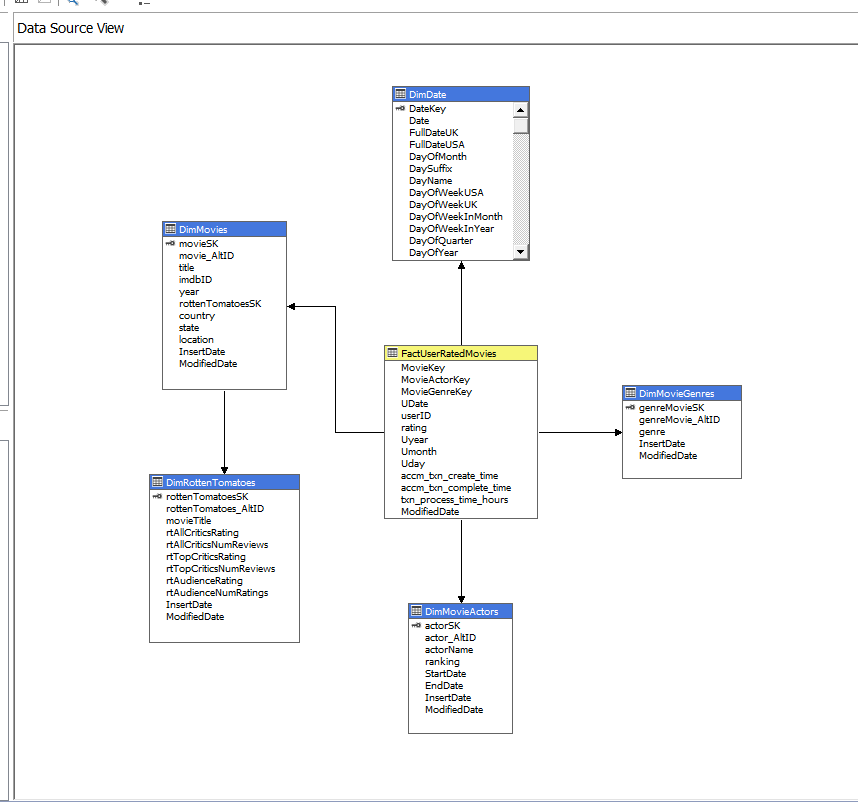
* First, I create Analysis Service Project renamed as “HetRecMovies Analysis”.
* Then we should configure components starting from data sources to dimensions.
* Then I create my Data Source Which is

DS\_HetRecMovies\_DW.

* Created Date source View as DSV\_Het RecMovies\_DW.



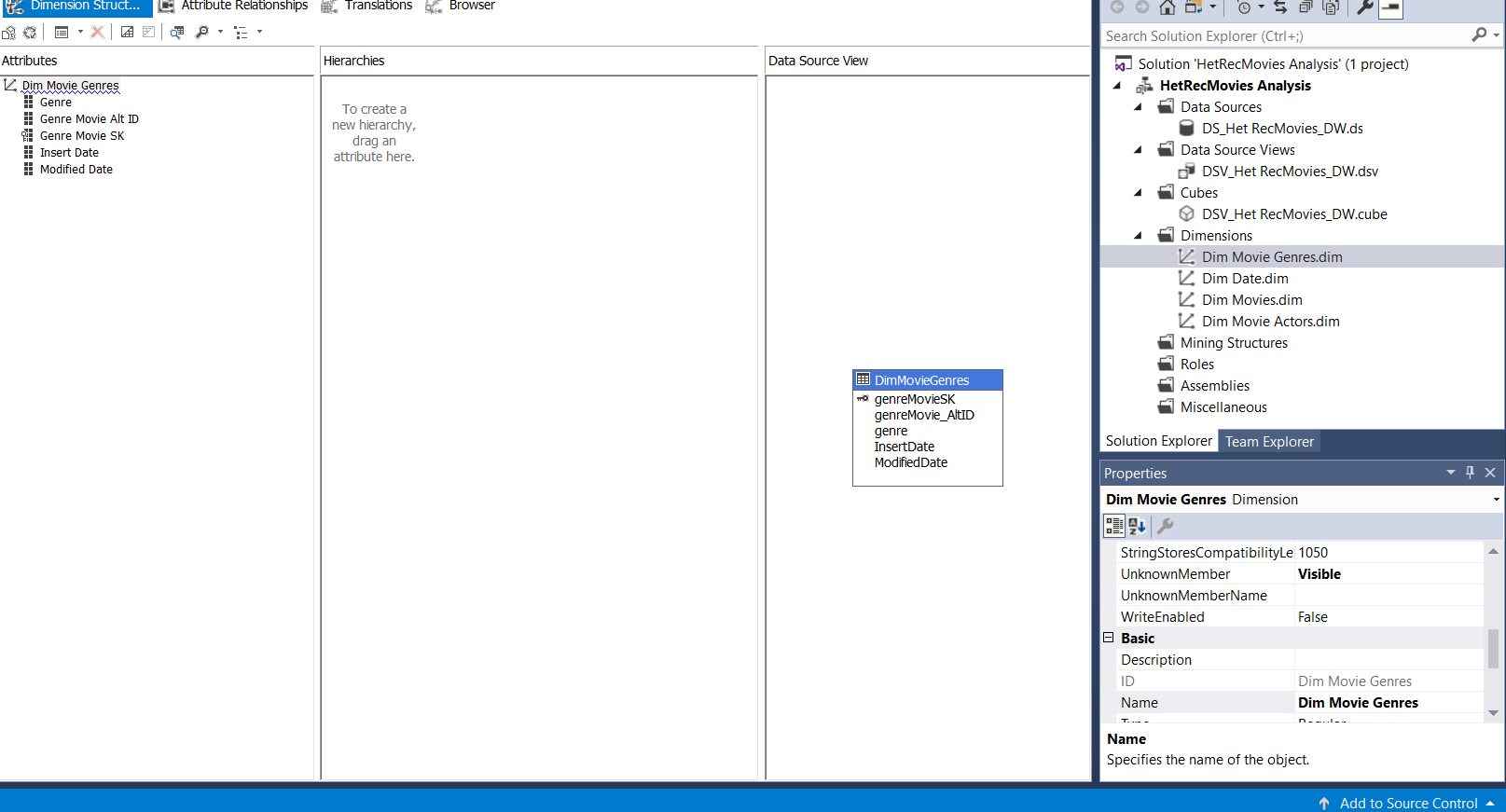
Then create the cube named DSV\_Het RecMovies\_DW. cube. This is the snowflake schema

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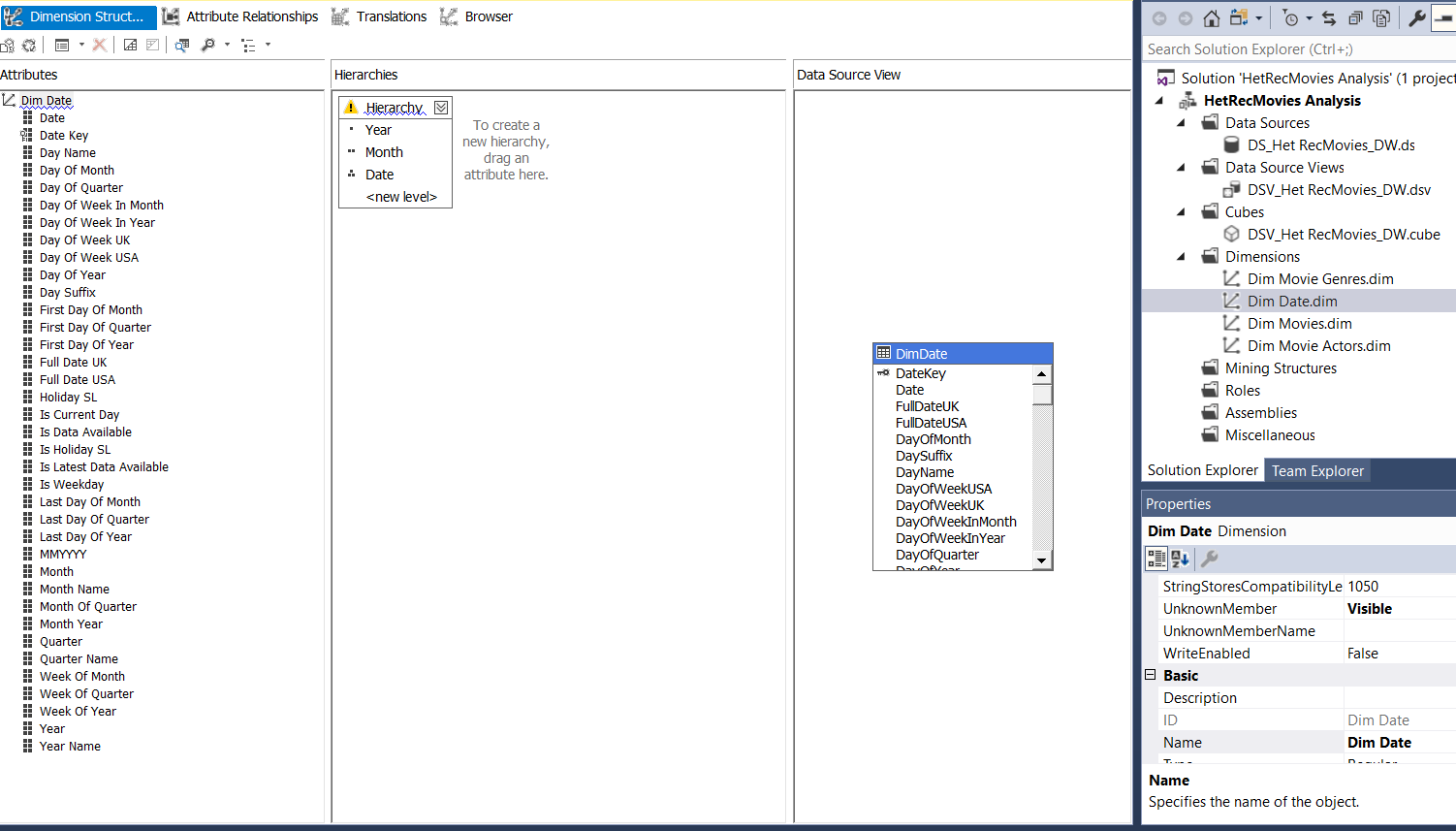
**Create Hierarchies:**

A) Right click on the Dimension and Click open.

B) Select all the attributes that needs to create reports on the dimension and drag them into the left side of attributes section.

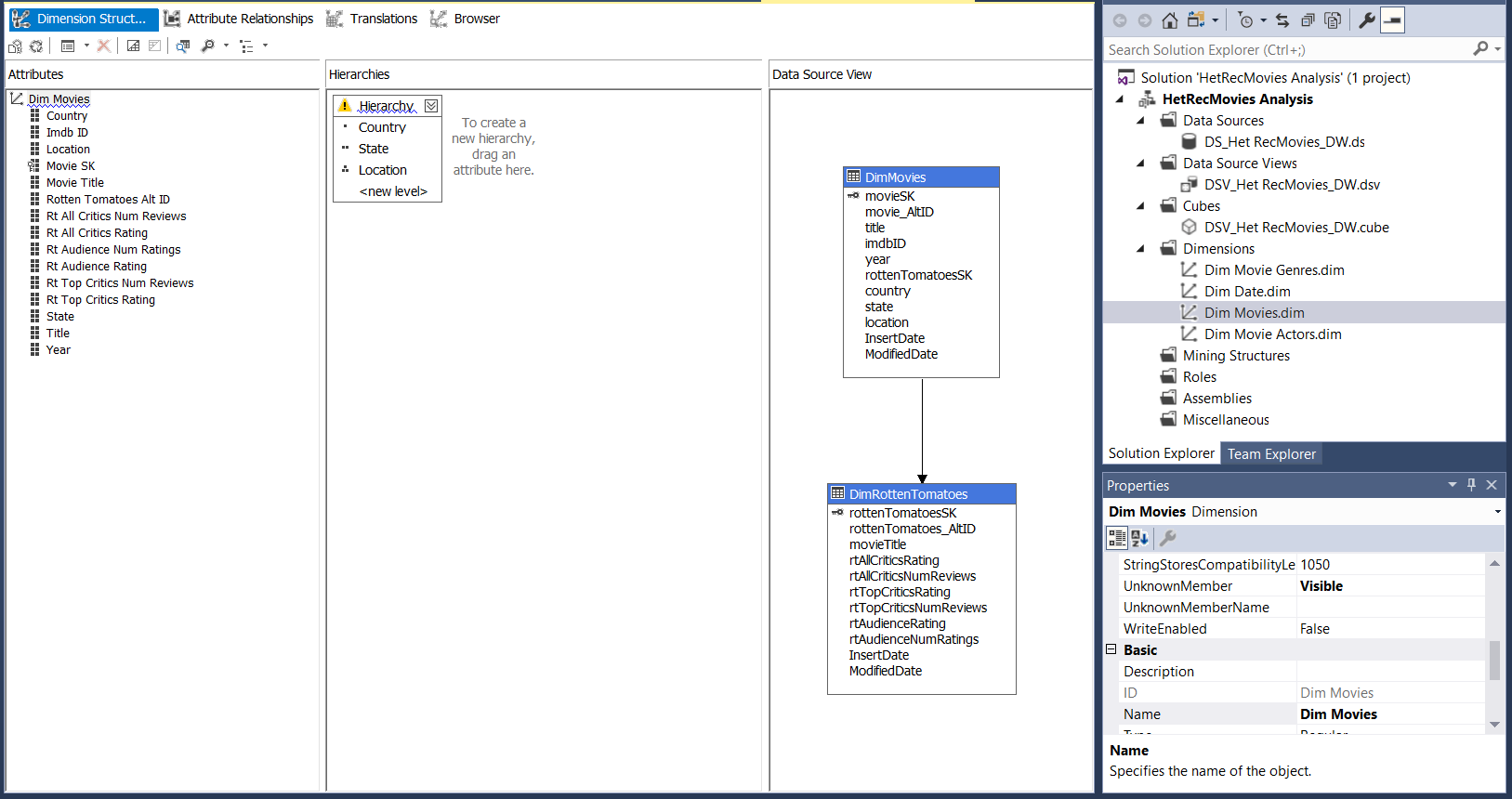
** DimMovieGenres**

**DimDate**

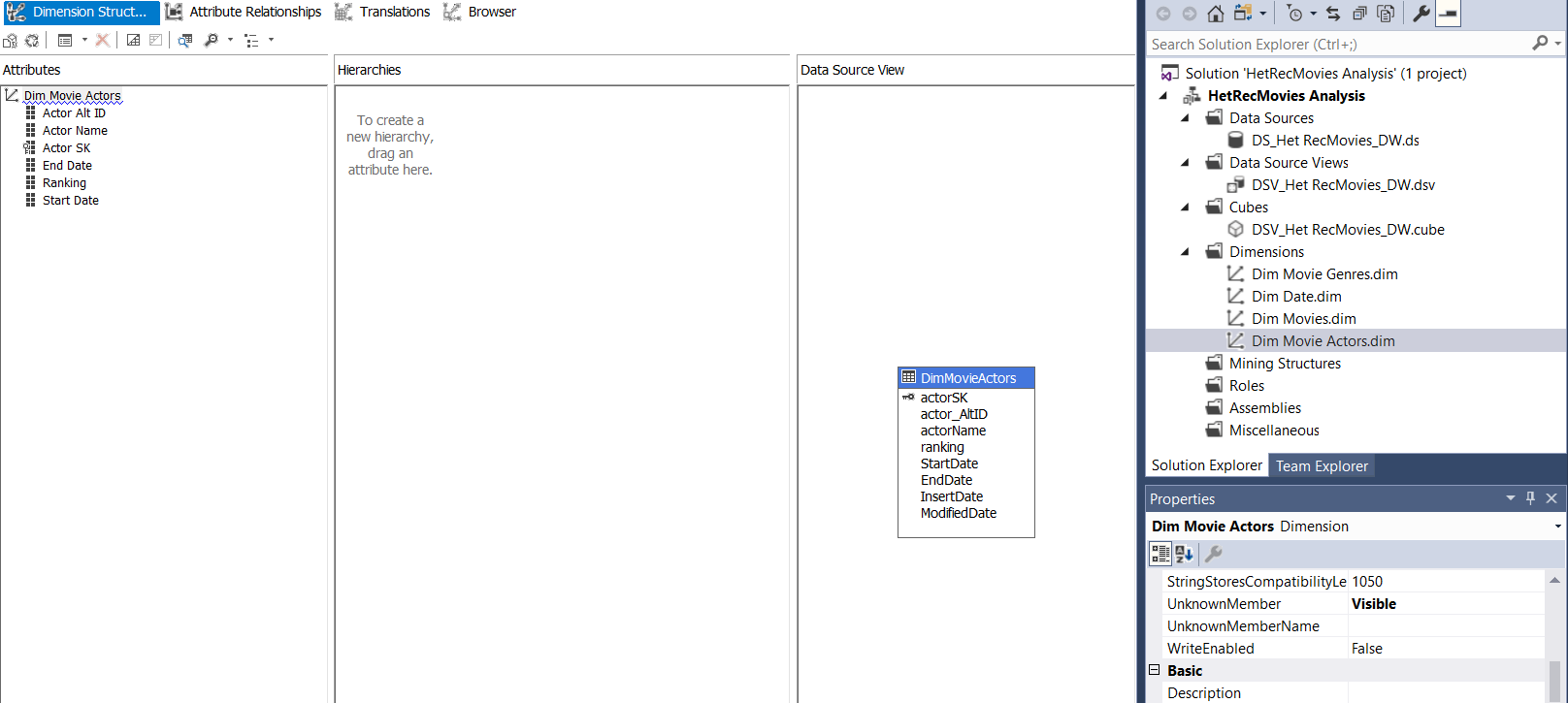
****Drag and drop Hierarchical attributes into the DimDate Hierarchy section and create new Hierarchy.

**DimMovie**

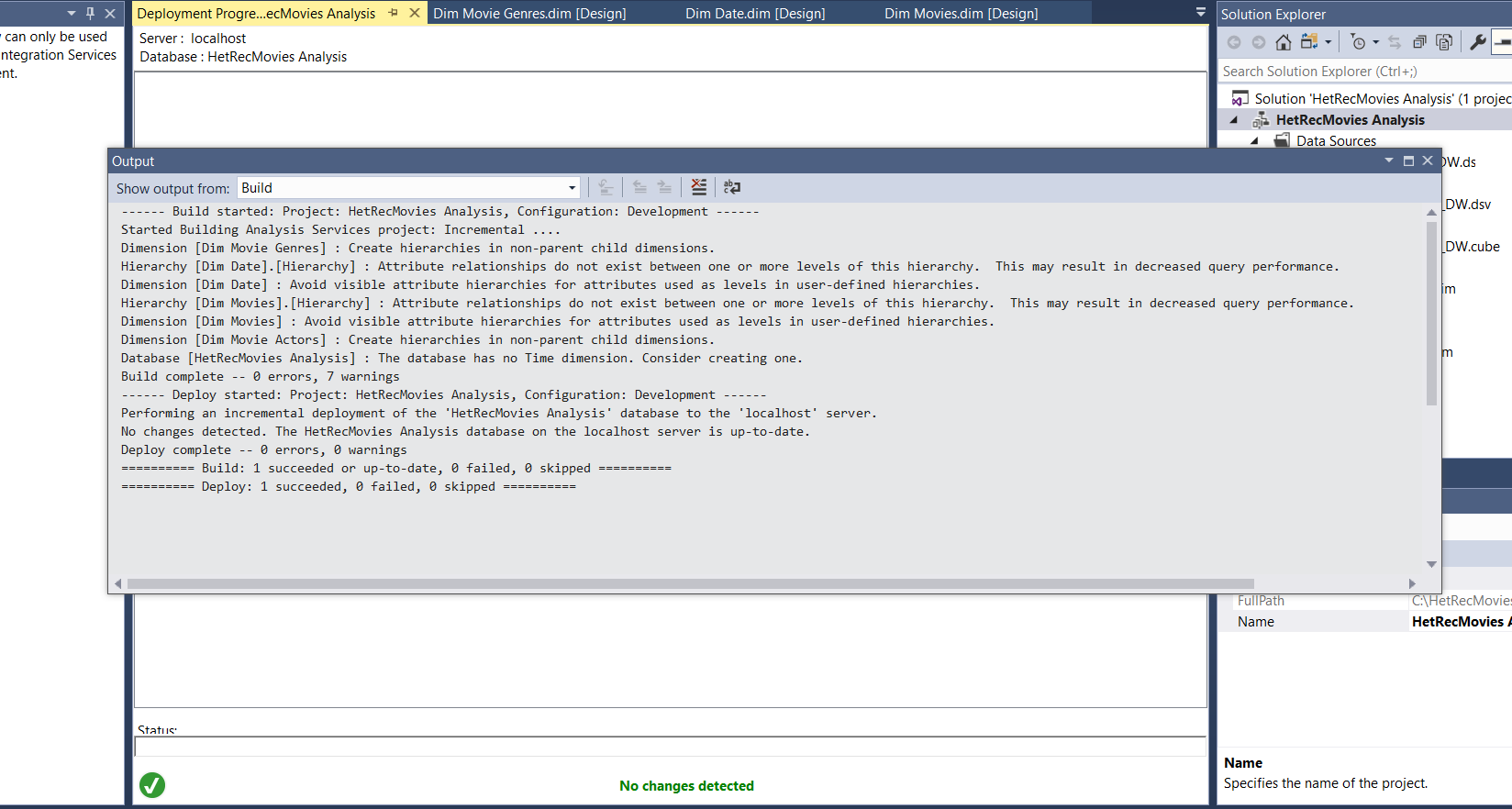
Drag and drop Hierarchical attributes into the DimMovies Hierarchy section and create new Hierarchy

****

**DimMovieActors**

****

**Deploy the project:**

 Right click on the SSAS project and click Deploy

Then I deploy the cube. -cube successfully deployed

**KPI**

* Create the KPI.Name the KPI as **“KPI User Rating”.**
* Then select “FactUserRatedMovies” as the Associated Measure Group. In the Measure Group on the lower left side panel, expand Measures and the expand “FactUserRatedMovies”. Drag and drop ‘rating’ attribute to Global Expression area and modify the expression as flows:

**[Measures]. [Rating] > 2.0**

**Graphical user interface, application

Description automatically generated**

* Then I save the all the changes. After processing the cube we can see like this.

Graphical user interface, text, application

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Graphical user interface, text, application

Description automatically generated

**3. Demonstration of OLAP operations.**

* First ,I generate the MDX query using the cube’s browser.

Table

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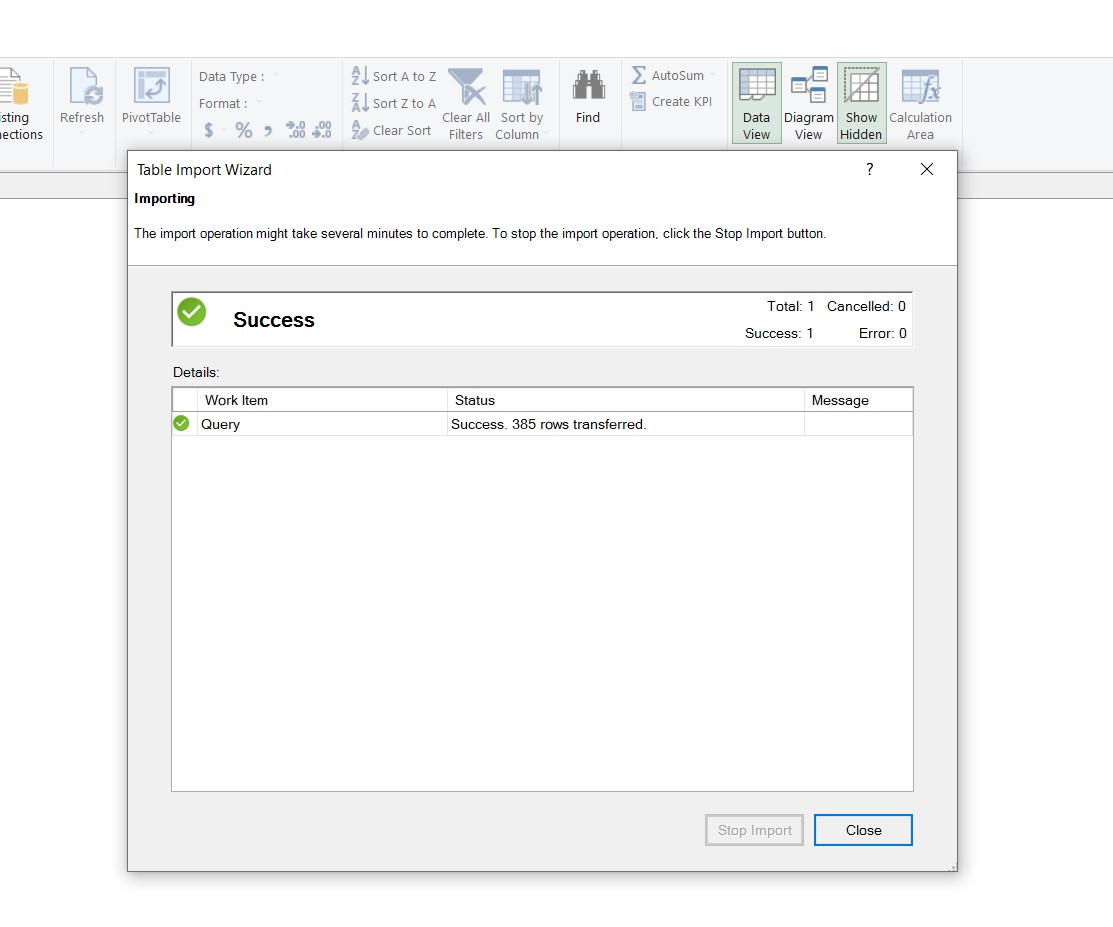
Then I click on execute button. To get MDX query I click on Design Mode button.

Table

Description automatically generated

* Then I connect to the Excel using HetRecMovies\_SSAS using the above MDX Query.

In the next window,past the MDX query I copied,and click on validate button to ensure there are no erros, and click finish.



Initially I see this interface.

Graphical user interface, application, table, Excel

Description automatically generated

In the Excel,I can see all the fields I selected via the MDX Query.

**ROLL-UP OLAP OPERATION**

After OLAP Cube deployment, OLAP operations were demonstrated using Excel application

Graphical user interface, application, Excel

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Description automatically generated

**DRILL-DOWN OLAP OPERATION**

**Graphical user interface, application, table, Excel

Description automatically generatedChart, pie chart

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**Graphical user interface, application, table, Excel

Description automatically generatedSLICE OLAP OPERATION**

**Chart, pie chart

Description automatically generated**

**DICE OLAP OPERATION**

**Chart, pie chart

Description automatically generated**

**Graphical user interface, chart, pie chart

Description automatically generated**

**4.SSRS Reports.**

**I use Report Builder to create my reports.**

* First step to create Data Source. In order to create the data source, I add the my data source as data “DataSource1”.
* Next I create the data set. In order to create the data set right click on DataSet and open up Dataset properties window. In the query section, provide the dataset name as “Dataset1” and select use the data set embedded in my dataset.

**select fr.rating**

**,mo.country**

**,mo.title**

**,mg.genre**

**,dd.[Year]**

**,rt.rtAudienceRating**

**,rt.rtAllCriticsRating**

**,rt.rtTopCriticsRating**

**from FactUserRatedMovies fr**

**INNER JOIN DimMovieS mo ON mo.movieSK = fr.MovieKey**

**INNER JOIN DimMovieGenres mg ON mg.genreMovieSK = fr.MovieGenreKey**

**INNER JOIN DimDate dd ON dd.DateKey = fr.UDate**

**INNER JOIN DimRottenTomatoes rt ON rt.rottenTomatoesSK = fr.MovieKeyExceute**

the above query that I have create using SQL server. Then I click ok button to create the dataset.

**1.Create the Materix report.**

Graphical user interface, application

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Then I create matrix using matrix wizard and it display as below;

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Description automatically generated

Then I run the matrix report ;

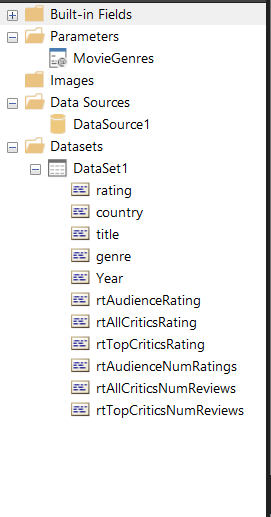
Graphical user interface, application, table, Excel

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Graphical user interface, application, table, Excel

Description automatically generated

**2.Create the Parameterized Report.**



And enable users to add multiple parameters values by changing the Dataset query Like this.

**select fr.rating**

**,mo.country**

**,mo.title**

**,mg.genre**

**,dd.[Year]**

**,rt.rtAudienceRating**

**,rt.rtAllCriticsRating**

**,rt.rtTopCriticsRating**

**,rt.rtAudienceNumRatings**

**,rt.rtAllCriticsNumReviews**

**,rt.rtTopCriticsNumReviews**

**from FactUserRatedMovies fr**

**INNER JOIN DimMovieS mo ON mo.movieSK = fr.MovieKey**

**INNER JOIN DimMovieGenres mg ON mg.genreMovieSK = fr.MovieGenreKey**

**INNER JOIN DimDate dd ON dd.DateKey = fr.UDate**

**INNER JOIN DimRottenTomatoes rt ON rt.rottenTomatoesSK = fr.MovieKey**

**Where mg.genre = @MovieGeneres**

Then I save the report-to-report server. Then I can see the report can get the output like this.

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**3.Create More than One Parameter Report**

Graphical user interface, application

Description automatically generated

. I Created 2 data sets to implement more than one parameter report

DataSet2 query:

**SELECT DISTINCT**

**DimMovies.[year]**

**,DimMovies.movieSK**

**FROM**

**DimMovies**

**ORDER BY**

**DimMovies.[year]**

DataSet3 query:

**SELECT**

**DimMovies.country**

**,DimMovies.movieSK**

**FROM**

**DimMovies**

**WHERE**

**DimMovies.movieSK = @YearParameter**

**ORDER BY**

**DimMovies.country**

Graphical user interface, application

Description automatically generated**YearParameter**

**Graphical user interface, text, application, email

Description automatically generated**

**Graphical user interface, text, application, email

Description automatically generatedGraphical user interface, application

Description automatically generatedCountryParameter**

**Graphical user interface, application

Description automatically generated**

**4.REPORT WITH DRILL Through**

Query for create drill down:

**SELECT**

**FactUserRatedMovies.rating**

**,DimMovieGenres.genre**

**,DimMovies.[year]**

**FROM**

**FactUserRatedMovies**

**INNER JOIN DimMovies**

**ON FactUserRatedMovies.MovieKey= DimMovies.movieSK**

**INNER JOIN DimMovieGenres**

**ON FactUserRatedMovies.MovieGenreKey = DimMovieGenres.genreMovieSK**

**A screenshot of a computer

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**Graphical user interface, application, table, Excel

Description automatically generated**

Graphical user interface, application

Description automatically generated

5.drill down

Graphical user interface, application

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Graphical user interface, application

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