



Sri Lanka Institute of Information Technology

## **Data Warehousing and Business Intelligence**

**Assignment – 02**

**2022**

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## Table of Content

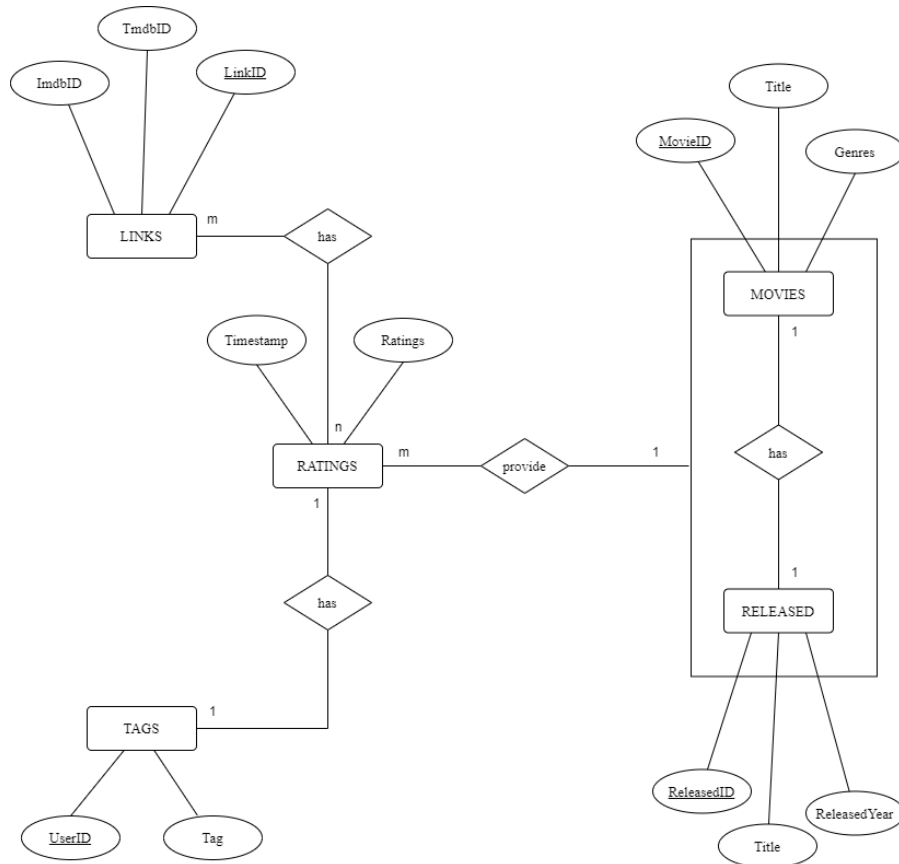
1. Data Source.....
2. SSAS Cube Implementation.....
3. Demonstrate of OLAP operations.....
4. SSRS Reports.....

## DATA SOURCE

Assignment 01 was completed using the Data Warehouse that was established in the previous assignment. The selected data collection was transactional data, as detailed in Assignment 01.

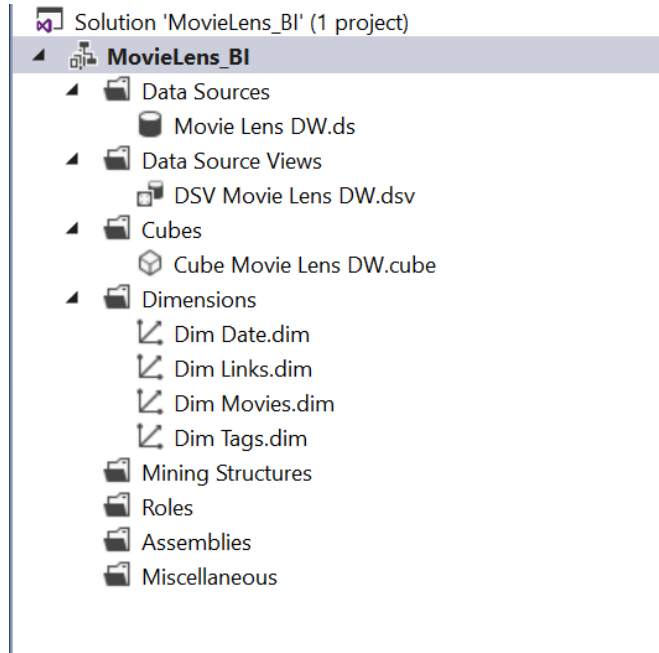
## ER DIAGRAM

The below ER- diagram shows the connection between the entities in the data set and the attributes.

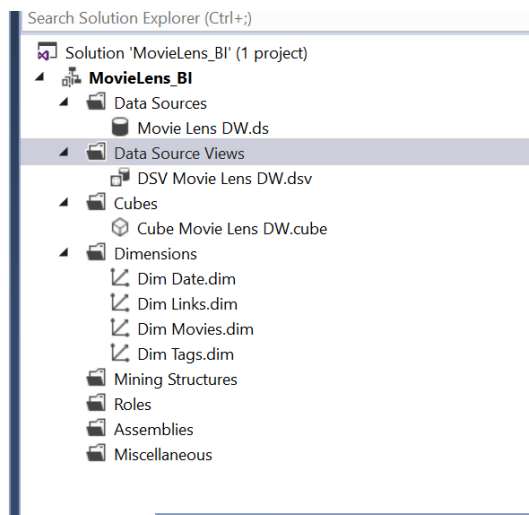
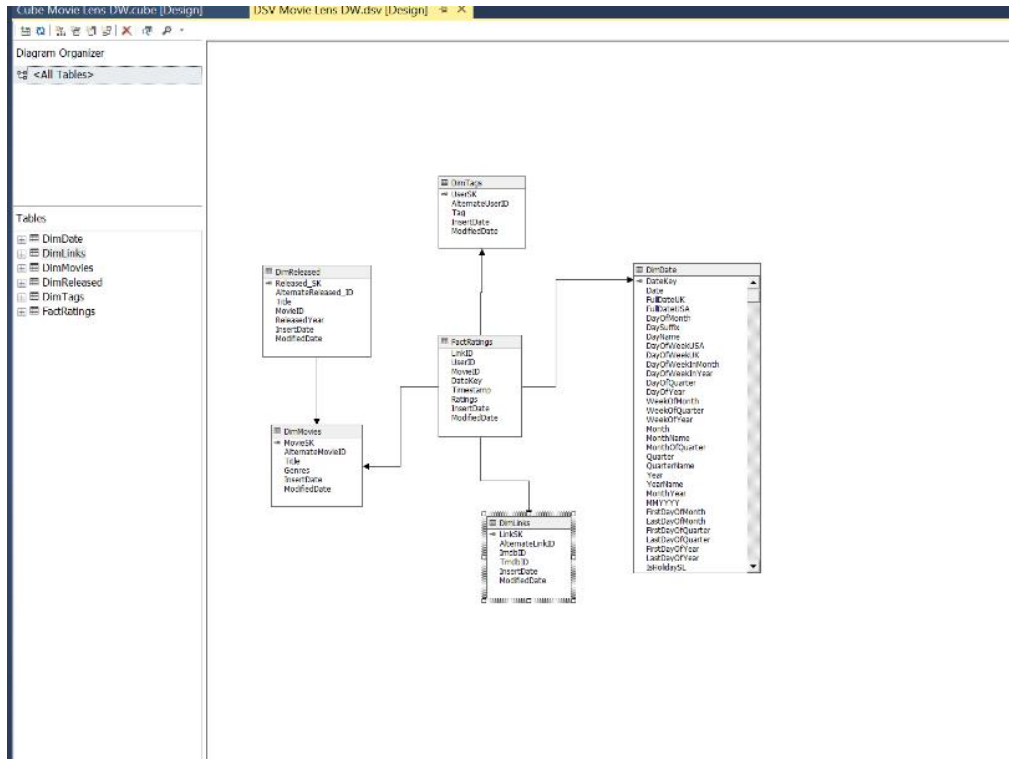


# SSAS CUBE IMPLEMENTATION

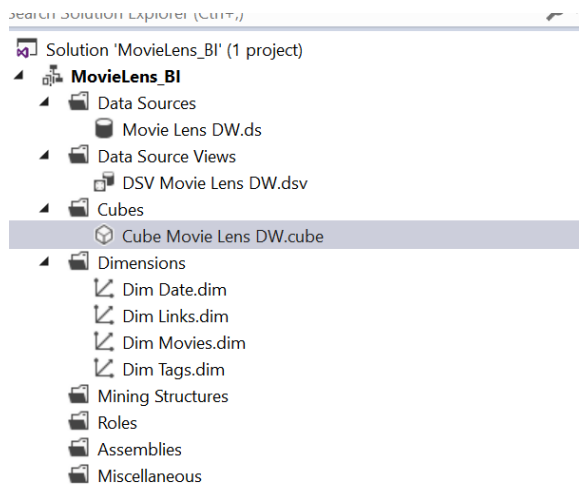
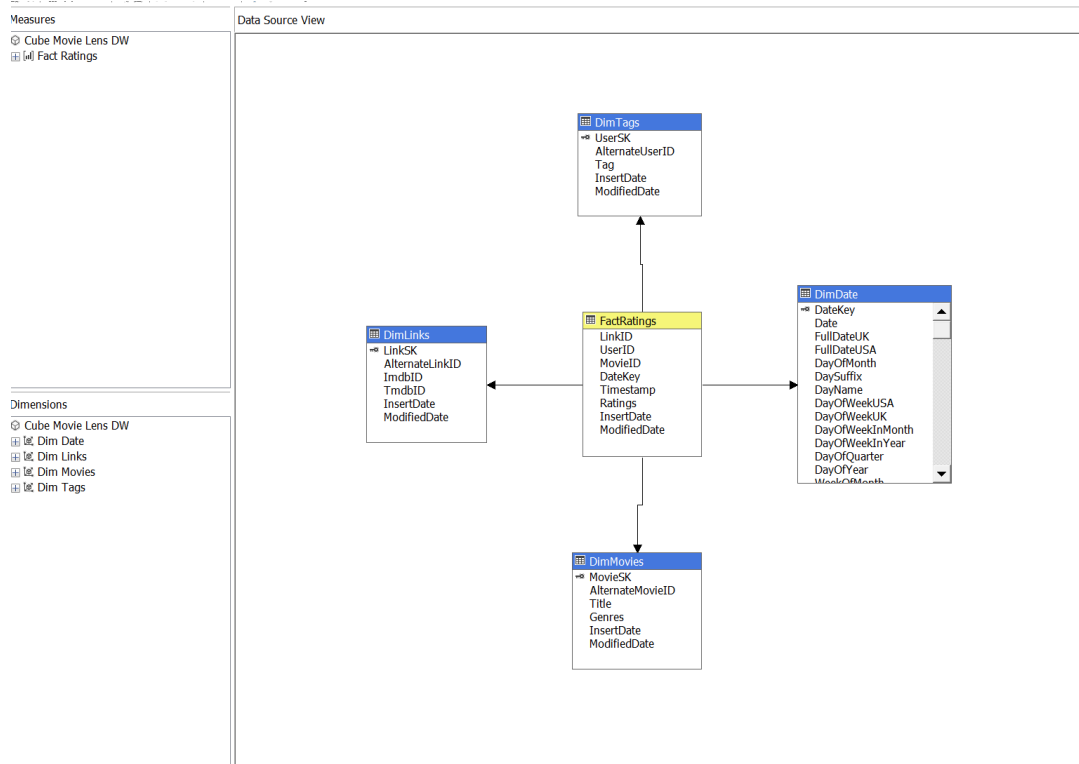
To begin the SSAS cube implementation, a new SSAS project named 'MovieLens SSAS' was established. The newly formed Data warehouse was first added as a new Data source and set up.



After adding the same warehouse, a new Data Source view was created. When creating the Data Source View, first choose the Fact table, then click Add Related Tables to add the relevant tables that are associated to the Fact table. The data source view that was generated is attached below.

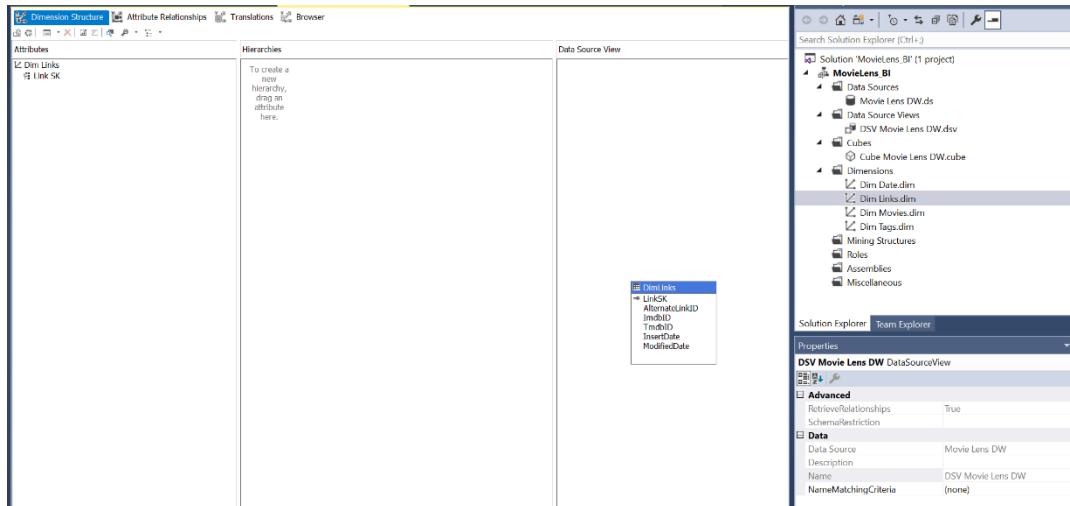


Next a cube was created by adding a new cube and selecting the fact table, measures, dimensions appropriately. The created cube is demonstrated below:

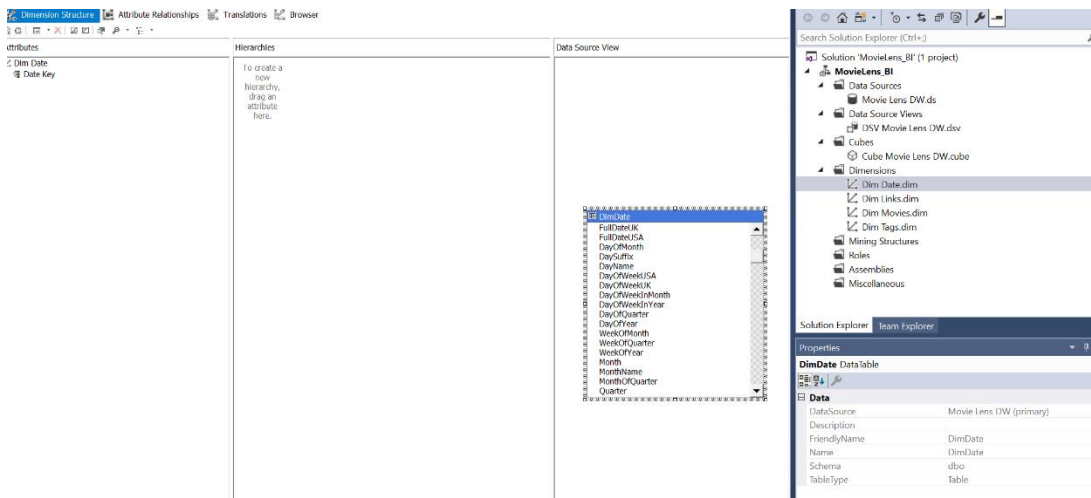


Next attributes were added to the relevant dimensions.

## Link Dimension



**Date Dimension** – Date dimension includes hierarchy with year, month and date attributes.



## Movie Dimension

The screenshot displays the SQL Server Enterprise Developer interface. The **Dimension Structure** window shows the **Attributes** pane with **Dim Movies** and **Movie SK**. The **Hierarchies** pane contains a note: "To create a new hierarchy, drag an attribute here." The **Data Source View** pane shows a list of attributes for **DimMovies**: **MovieSK**, **AlternateMovieID**, **Title**, **Genres**, **InsertDate**, and **ModifiedDate**.

The **Solution Explorer** window shows the project structure for **MovieLens\_BI**, including **Data Sources**, **Data Source Views**, **Cubes**, **Dimensions**, **Mining Structures**, **Roles**, **Assemblies**, and **Miscellaneous**. The **Dimensions** folder is expanded, showing **Dim Date.dim**, **Dim Links.dim**, **Dim Movies.dim** (selected), and **Dim Tags.dim**.

The **Properties** window for **Dim Movies Dimension** shows the following settings:

Property	Value
ProcessingState	Unprocessed
Source	DSV Movie Lens DW (Data source view)
StringStoresCompatibilityLevel	1050
UnknownMember	Visible
UnknownMemberName	
WriteEnabled	False
<b>Basic</b>	
Description	Dim Movies
ID	Dim Movies
Name	Dim Movies

## Tag Dimension

The screenshot displays the SQL Server Enterprise Developer interface. The **Dimension Structure** window shows the **Attributes** pane with **Dim Tags** and **User SK**. The **Hierarchies** pane contains a note: "To create a new hierarchy, drag an attribute here." The **Data Source View** pane shows a list of attributes for **DimTags**: **UserSK**, **AlternateUserID**, **Tag**, **InsertDate**, and **ModifiedDate**.

The **Solution Explorer** window shows the project structure for **MovieLens\_BI**, including **Data Sources**, **Data Source Views**, **Cubes**, **Dimensions**, **Mining Structures**, **Roles**, **Assemblies**, and **Miscellaneous**. The **Dimensions** folder is expanded, showing **Dim Date.dim**, **Dim Links.dim**, **Dim Movies.dim**, and **Dim Tags.dim** (selected).

The **Properties** window for **Dim Tags Dimension** shows the following settings:

Property	Value
ProcessingState	Unprocessed
Source	DSV Movie Lens DW (Data source view)
StringStoresCompatibilityLevel	1050
UnknownMember	Visible
UnknownMemberName	
WriteEnabled	False
<b>Basic</b>	
Description	Dim Tags
ID	Dim Tags
Name	Dim tags



