

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

DimDate

	DateKey	Date	FullDateUK	FullDateUSA	DayOfMonth	DaySuffix	DayName	DayOfWeekUSA	DayOfWeekUK	DayOfWeekInMonth	DayOfWeekInYear	DayOfQuarter	DayOfYear
1	19900101	1990-01-01 00:00:00.000	01/01/1990	01/01/1990	1	1st	Monday	2	1	1	1	1	1
2	19900102	1990-01-02 00:00:00.000	02/01/1990	01/02/1990	2	2nd	Tuesday	3	2	1	1	1	2
3	19900103	1990-01-03 00:00:00.000	03/01/1990	01/03/1990	3	3rd	Wednesday	4	3	1	1	1	3
4	19900104	1990-01-04 00:00:00.000	04/01/1990	01/04/1990	4	4th	Thursday	5	4	1	1	1	4
5	19900105	1990-01-05 00:00:00.000	05/01/1990	01/05/1990	5	5th	Friday	6	5	1	1	1	5
6	19900106	1990-01-06 00:00:00.000	06/01/1990	01/06/1990	6	6th	Saturday	7	6	1	1	1	6
7	19900107	1990-01-07 00:00:00.000	07/01/1990	01/07/1990	7	7th	Sunday	1	7	1	1	1	7
8	19900108	1990-01-08 00:00:00.000	08/01/1990	01/08/1990	8	8th	Monday	2	1	2	2	2	8
9	19900109	1990-01-09 00:00:00.000	09/01/1990	01/09/1990	9	9th	Tuesday	3	2	2	2	2	9
10	19900110	1990-01-10 00:00:00.000	10/01/1990	01/10/1990	10	10th	Wednesday	4	3	2	2	2	10
11	19900111	1990-01-11 00:00:00.000	11/01/1990	01/11/1990	11	11th	Thursday	5	4	2	2	2	11
12	19900112	1990-01-12 00:00:00.000	12/01/1990	01/12/1990	12	12th	Friday	6	5	2	2	2	12
13	19900113	1990-01-13 00:00:00.000	13/01/1990	01/13/1990	13	13th	Saturday	7	6	2	2	2	13
14	19900114	1990-01-14 00:00:00.000	14/01/1990	01/14/1990	14	14th	Sunday	1	7	2	2	2	14
15	19900115	1990-01-15 00:00:00.000	15/01/1990	01/15/1990	15	15th	Monday	2	1	3	3	3	15

DimMovieActors

	actorSK	actor_AltID	actorName	ranking	StartDate	EndDate	InsertDate	ModifiedDate
1	1	28912	John J. Cahill	19	2022-05-11 18:43:12.000	NULL	2022-05-11 18:43:26.113	2022-05-11 18:43:26.113
2	2	28913	John P. Clark	23	2022-05-11 18:43:12.000	NULL	2022-05-11 18:43:26.113	2022-05-11 18:43:26.113
3	3	28914	Jonathan Avildsen	14	2022-05-11 18:43:12.000	NULL	2022-05-11 18:43:26.113	2022-05-11 18:43:26.113
4	4	28915	Julie Flavin	32	2022-05-11 18:43:12.000	NULL	2022-05-11 18:43:26.113	2022-05-11 18:43:26.113
5	5	28916	Katherine Margiotta	45	2022-05-11 18:43:12.000	NULL	2022-05-11 18:43:26.113	2022-05-11 18:43:26.113
6	6	28917	Kent T. Johnson	41	2022-05-11 18:43:12.000	NULL	2022-05-11 18:43:26.113	2022-05-11 18:43:26.113
7	7	28918	Lauren K. Woods	67	2022-05-11 18:43:12.000	NULL	2022-05-11 18:43:26.113	2022-05-11 18:43:26.113
8	8	28919	Meade Martin	46	2022-05-11 18:43:12.000	NULL	2022-05-11 18:43:26.113	2022-05-11 18:43:26.113
9	9	28920	Paul Cain	20	2022-05-11 18:43:12.000	NULL	2022-05-11 18:43:26.113	2022-05-11 18:43:26.113
10	10	28921	Robert Seltzer	58	2022-05-11 18:43:12.000	NULL	2022-05-11 18:43:26.113	2022-05-11 18:43:26.113
11	11	28922	Stan Ward	65	2022-05-11 18:43:12.000	NULL	2022-05-11 18:43:26.113	2022-05-11 18:43:26.113
12	12	28923	Stanley R. Hochman	38	2022-05-11 18:43:12.000	NULL	2022-05-11 18:43:26.113	2022-05-11 18:43:26.113
13	13	28924	Susan Parsily	51	2022-05-11 18:43:12.000	NULL	2022-05-11 18:43:26.113	2022-05-11 18:43:26.113
14	14	28925	Thunder Wolf	66	2022-05-11 18:43:12.000	NULL	2022-05-11 18:43:26.113	2022-05-11 18:43:26.113
15	15	28926	Tommy Gunn	37	2022-05-11 18:43:12.000	NULL	2022-05-11 18:43:26.113	2022-05-11 18:43:26.113
16	16	28927	Tommy Morrison	6	2022-05-11 18:43:12.000	NULL	2022-05-11 18:43:26.113	2022-05-11 18:43:26.113
17	17	28928	Tommy Morrison	33	2022-05-11 18:43:12.000	NULL	2022-05-11 18:43:26.113	2022-05-11 18:43:26.113

DimMovies

Results Messages											
	movieSK	movie_AltID	title	imdbID	year	rottenTomatoesSK	country	state	location	InsertDate	ModifiedDate
1	1	1	Toy story	114709	1995	1	Canada	British Columbia	NULL	2022-05-11 02:58:48.840	2022-05-13 17:25:18.390
2	2	2	Jumanji	113497	1995	2	Canada	British Columbia	Delta	2022-05-11 02:58:48.850	2022-05-13 17:25:18.407
3	3	3	Grumpy Old Men	107050	1993	3	Canada	British Columbia	Maple Ridge	2022-05-11 02:58:48.850	2022-05-13 17:25:18.423
4	4	4	Waiting to Exhale	114885	1995	4	Canada	British Columbia	Vancouver	2022-05-11 02:58:48.850	2022-05-13 17:25:18.440
5	5	5	Father of the Bride Part II	113041	1995	5	USA	Maine	NULL	2022-05-11 02:58:48.850	2022-05-13 17:25:18.460
6	6	6	Heat	113277	1995	6	USA	Maine	Kennebunk	2022-05-11 02:58:48.850	2022-05-13 17:25:18.477
7	7	7	Sabrina	47437	1954	7	USA	Maine	North Berwick	2022-05-11 02:58:48.850	2022-05-13 17:25:18.490
8	8	8	Tom and Huck	112302	1995	8	USA	New Hampshire	NULL	2022-05-11 02:58:48.850	2022-05-13 17:25:18.503
9	9	9	Sudden Death	114576	1995	9	USA	New Hampshire	Keene	2022-05-11 02:58:48.853	2022-05-13 17:25:18.517
10	10	10	GoldenEye	113189	1995	10	USA	New Hampshire	Keene	2022-05-11 02:58:48.853	2022-05-13 17:25:18.530
11	11	11	The American President	112346	1995	11	USA	New Hampshire	Swanzey	2022-05-11 02:58:48.853	2022-05-13 17:25:18.540
12	12	12	Dracula: Dead and Loving It	112896	1995	12	USA	California	Burbank	2022-05-11 02:58:48.853	2022-05-13 17:25:18.553
13	13	13	Balto	112453	1995	13	USA	Minnesota	Center City	2022-05-11 02:58:48.853	2022-05-13 17:25:18.570
14	14	14	Nixon	113987	1995	14	USA	Minnesota	Chanhausen	2022-05-11 02:58:48.853	2022-05-13 17:25:18.580
15	15	15	Cutthroat Island	112760	1995	15	USA	Minnesota	Chanhausen	2022-05-11 02:58:48.853	2022-05-13 17:25:18.597
16	16	16	Casino	112641	1995	16	USA	Minnesota	Faribault	2022-05-11 02:58:48.853	2022-05-13 17:25:18.613
17	17	17	Seven and Seven	114300	1995	17	USA	Minnesota	Faribault	2022-05-11 02:58:48.853	2022-05-13 17:25:18.630

Query executed successfully. | LAPTOP-B183G8T7 (15.0 RTM) | LAPTOP-B183G8T7\Thiln... | HetRecMovies_DW | 00:00

DimMovieGenres

Results Messages					
	genreMovieSK	genreMovie_AltID	genre	InsertDate	ModifiedDate
1	1	1	Adventure	2022-05-11 10:41:32.290	2022-05-13 17:54:14.583
2	2	2	Animation	2022-05-11 10:41:32.313	2022-05-13 17:54:14.617
3	3	3	Children	2022-05-11 10:41:32.317	2022-05-13 17:54:14.630
4	4	4	Comedy	2022-05-11 10:41:32.317	2022-05-13 17:54:14.643
5	5	5	Fantasy	2022-05-11 10:41:32.320	2022-05-13 17:54:14.660
6	6	6	Adventure	2022-05-11 10:41:32.323	2022-05-13 17:54:14.673
7	7	7	Children	2022-05-11 10:41:32.327	2022-05-13 17:54:14.687
8	8	8	Fantasy	2022-05-11 10:41:32.327	2022-05-13 17:54:14.700
9	9	9	Comedy	2022-05-11 10:41:32.330	2022-05-13 17:54:14.717
10	10	10	Romance	2022-05-11 10:41:32.333	2022-05-13 17:54:14.730
11	11	11	Comedy	2022-05-11 10:41:32.333	2022-05-13 17:54:14.743
12	12	12	Drama	2022-05-11 10:41:32.337	2022-05-13 17:54:14.757
13	13	13	Romance	2022-05-11 10:41:32.340	2022-05-13 17:54:14.773
14	14	14	Comedy	2022-05-11 10:41:32.340	2022-05-13 17:54:14.787
15	15	15	Action	2022-05-11 10:41:32.343	2022-05-13 17:54:14.800
16	16	16	Crime	2022-05-11 10:41:32.347	2022-05-13 17:54:14.817
17	17	17	Thriller	2022-05-11 10:41:32.350	2022-05-13 17:54:14.830

Query executed successfully. | LAPTOP-B183

DimRottenTomatoes

ResultsMessages

	rottenTomatoesSK	rottenTomatoes_AltID	movieTitle	rtAllCriticsRating	rtAllCriticsNumReviews	rtTopCriticsRating	rtTopCriticsNumReviews	rtAudienceRating	rtAudienceNumRatings	Inse
1	1	1	toy_story	9.0	73	8.5	17	3.7	102338	202
2	2	2	1068044-jumanji	5.6	28	5.8	5	3.2	44587	202
3	3	3	grumpy_old_men	5.9	36	7.0	6	3.2	10489	202
4	4	4	waiting_to_exhale	5.6	25	5.5	11	3.3	5666	202
5	5	5	father_of_the_bride_part_ii	5.3	19	5.4	5	3.0	13761	202
6	6	6	1068182-heat	7.7	58	7.2	17	3.9	42785	202
7	7	7	1018047-sabrina	7.4	31	7.2	5	3.8	12812	202
8	8	8	tom_and_huck	4.2	8	0.0	2	2.7	2649	202
9	9	9	1068470-sudden_death	5.2	32	5.6	9	2.6	3626	202
10	10	10	goldeneye	6.8	41	6.2	11	3.4	28260	202
11	11	11	american_president	7.0	49	7.2	18	3.2	8320	202
12	12	12	dracula_dead_and_loving_it	3.0	35	3.7	10	2.8	10078	202
13	13	13	balto	5.8	12	0.0	4	3.2	9195	202
14	14	14	nixon	6.7	56	6.1	18	3.5	3256	202
15	15	15	cutthroat_island	4.4	31	4.7	6	2.6	3350	202
16	16	16	1067907	7.2	58	6.2	16	3.2	66463	202

Query executed successfully. LAPTOP-B183G8T7 (15.0 RTM) LAPTOP-B183G8T7\Thilin... HetRecMovies_DW 00:00:00 10,197 rows

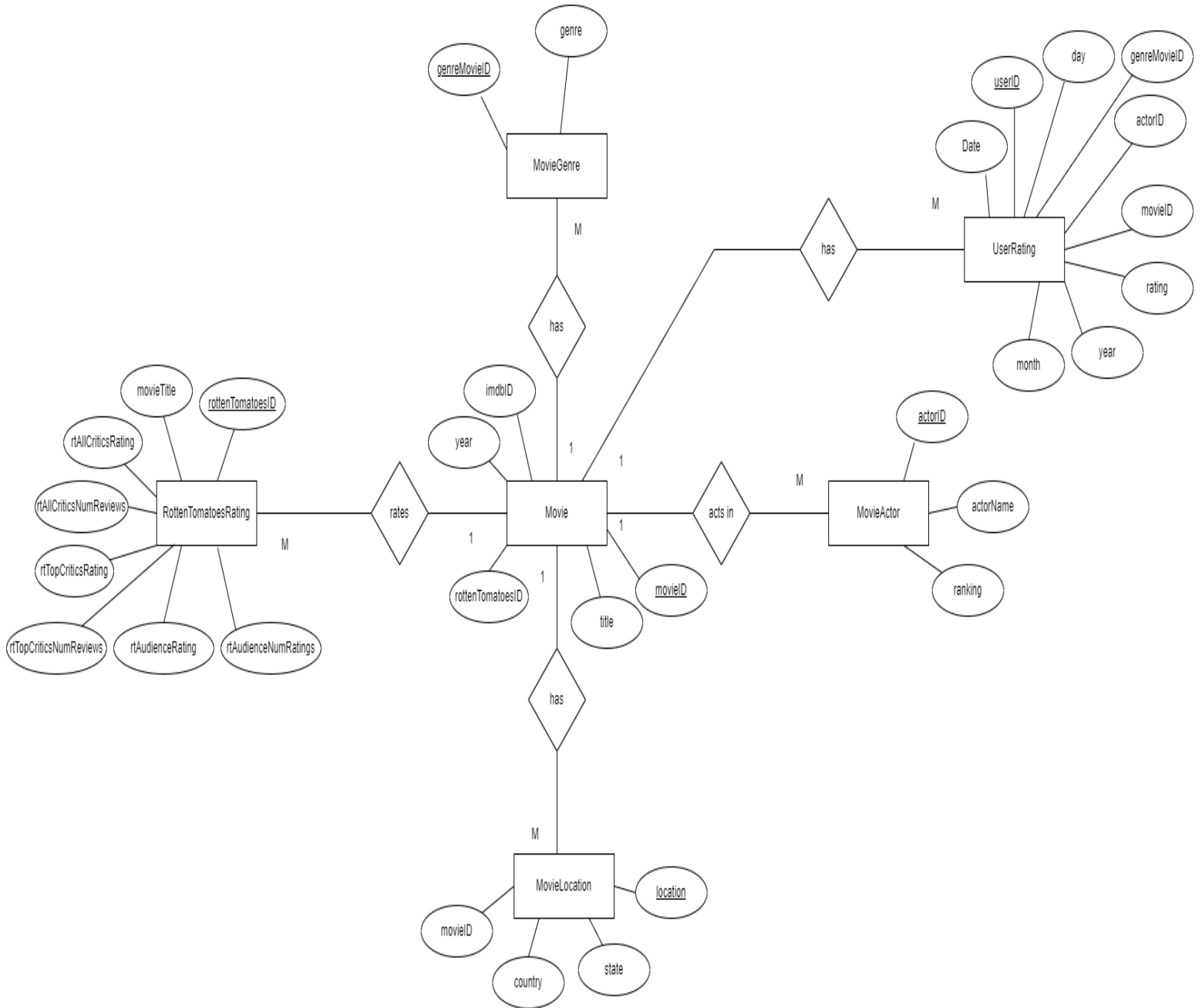
FactUserRatedMovies

ResultsMessages

	MovieKey	MovieActorKey	MovieGenreKey	UDate	userID	rating	Uyear	Umonth	Uday	accm_txn_create_time	accm_txn_complete_time	txn_process_time_hours	ModifiedDate
1	3	66326	1	20061029	1	1.0	2006	10	29	2022-05-14 17:00:37.253	2022-05-13 09:26:00.000	-32	2022-05-14 17:00:37.253
2	32	66327	2	20061029	2	4.5	2006	10	29	2022-05-14 17:00:37.253	2022-05-12 19:05:00.000	-46	2022-05-14 17:00:37.253
3	106	66328	3	20061029	3	4.0	2006	10	29	2022-05-14 17:00:37.253	2022-05-14 05:16:00.000	-12	2022-05-14 17:00:37.253
4	152	66329	4	20061029	4	2.0	2006	10	29	2022-05-14 17:00:37.253	2022-05-13 14:06:00.000	-27	2022-05-14 17:00:37.253
5	155	66330	5	20061029	5	4.0	2006	10	29	2022-05-14 17:00:37.253	2022-05-12 22:27:00.000	-43	2022-05-14 17:00:37.253
6	157	66331	6	20061029	6	4.5	2006	10	29	2022-05-14 17:00:37.253	2022-05-12 07:57:00.000	-58	2022-05-14 17:00:37.253
7	165	66332	7	20061029	7	3.5	2006	10	29	2022-05-14 17:00:37.253	2022-05-12 07:24:00.000	-58	2022-05-14 17:00:37.253
8	286	66333	8	20061029	8	5.0	2006	10	29	2022-05-14 17:00:37.253	2022-05-14 06:22:00.000	-11	2022-05-14 17:00:37.253
9	341	66334	9	20061029	9	3.5	2006	10	29	2022-05-14 17:00:37.253	2022-05-13 08:14:00.000	-33	2022-05-14 17:00:37.253
10	404	66335	10	20061029	10	2.0	2006	10	29	2022-05-14 17:00:37.253	2022-05-12 03:13:00.000	-62	2022-05-14 17:00:37.253
11	567	66336	11	20061029	11	4.0	2006	10	29	2022-05-14 17:00:37.253	2022-05-13 05:32:00.000	-36	2022-05-14 17:00:37.253
12	624	66337	12	20061029	12	3.0	2006	10	29	2022-05-14 17:00:37.253	2022-05-14 20:41:00.000	3	2022-05-14 17:00:37.253
13	767	66338	13	20061029	13	4.5	2006	10	29	2022-05-14 17:00:37.253	2022-05-13 21:27:00.000	-20	2022-05-14 17:00:37.253
14	840	66339	14	20061029	14	0.5	2006	10	29	2022-05-14 17:00:37.253	2022-05-12 16:19:00.000	-49	2022-05-14 17:00:37.253
15	910	66340	15	20061029	15	4.5	2006	10	29	2022-05-14 17:00:37.253	2022-05-14 04:10:00.000	-13	2022-05-14 17:00:37.253
16	950	66341	16	20061029	16	4.0	2006	10	29	2022-05-14 17:00:37.253	2022-05-13 02:31:00.000	-39	2022-05-14 17:00:37.253
17	1020	66342	17	20061029	17	3.5	2006	10	29	2022-05-14 17:00:37.253	2022-05-13 08:53:00.000	-67	2022-05-14 17:00:37.253

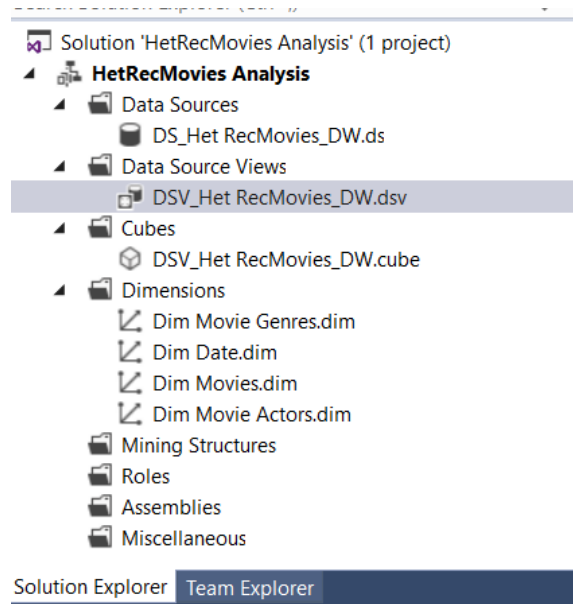
Query executed successfully. LAPTOP-B183G8T7 (15.0 RTM) LAPTOP-B183G8T7\Thilin... HetRecMovies_DW 00:00:03 29,570 rows

ER Diagram.

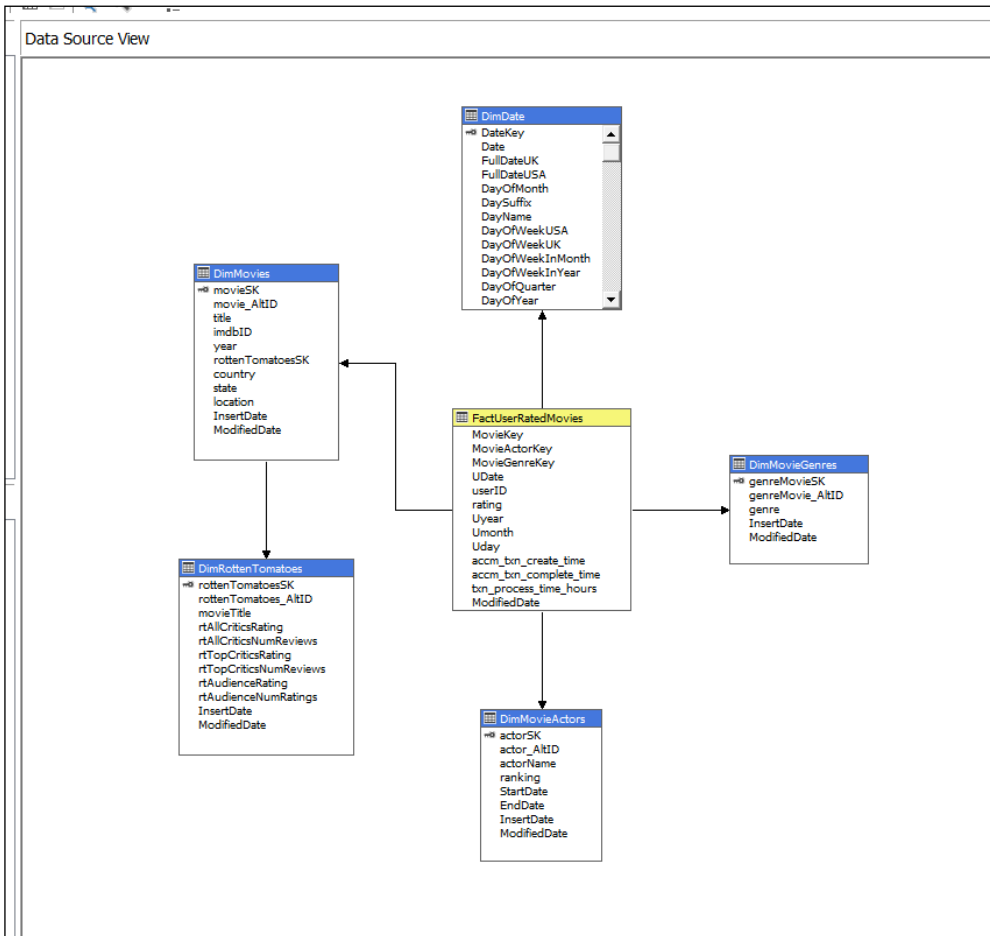


2)SSAS Cube Implementation.

- 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



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

The screenshot displays the SQL Server Enterprise Developer interface. The **Dimension Structure** task pane on the left shows the **Dim Movie Genres** dimension selected. The **Hierarchies** pane is empty, with a tooltip indicating how to create a new hierarchy. The **Data Source View** pane shows the **DimMovieGenres** dimension with its attributes: **genreMovieSK**, **genreMovie_AltID**, **genre**, **InsertDate**, and **ModifiedDate**. The **Solution Explorer** on the right shows the project structure, and the **Properties** window shows details for the **Dim Movie Genres** dimension.

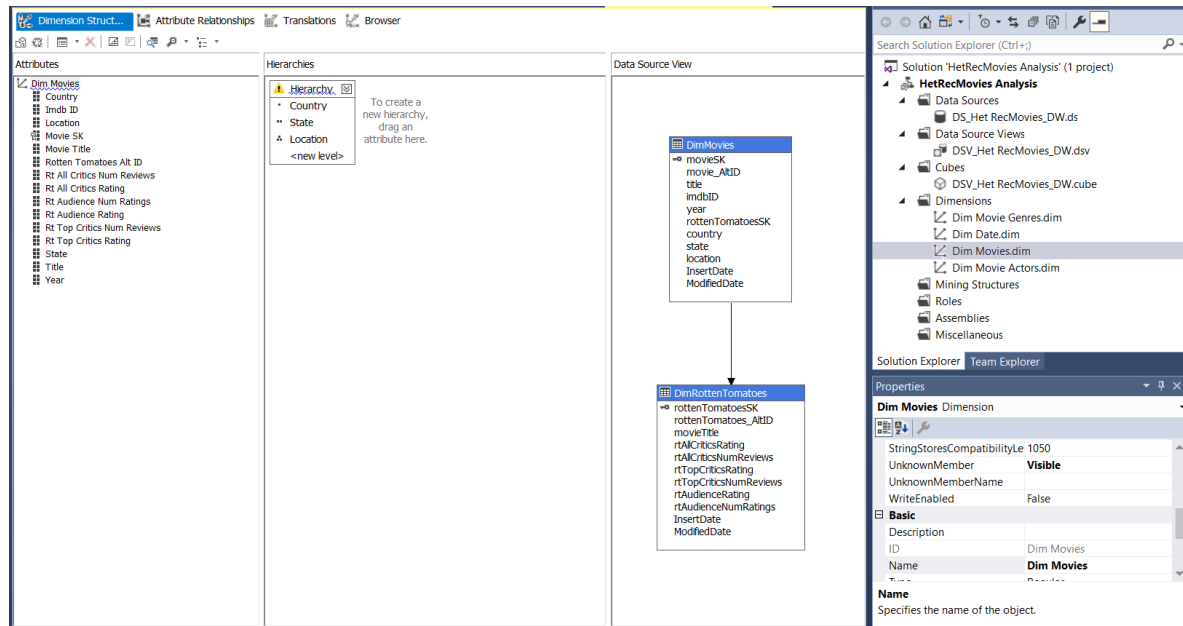
DimDate

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

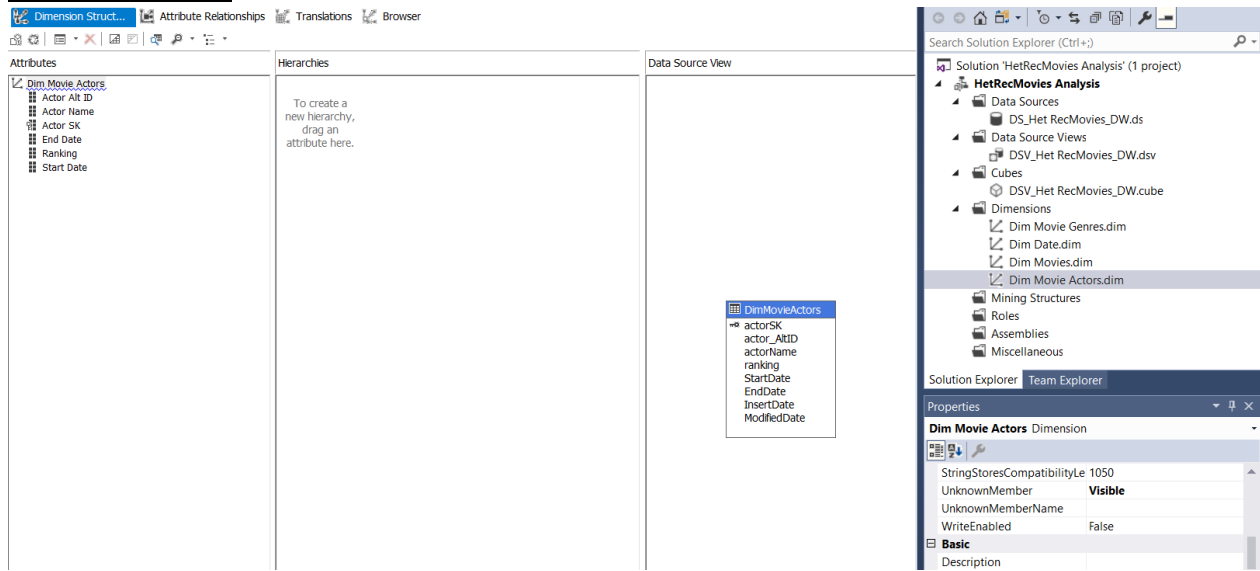
The screenshot displays the SQL Server Enterprise Developer interface. The **Dimension Structure** task pane on the left shows the **Dim Date** dimension selected. The **Hierarchies** pane shows a new hierarchy created for **DimDate** with attributes: **DateKey**, **Date**, **FullDateUK**, **FullDateUSA**, **DayOfMonth**, **DaySuffix**, **DayName**, **DayOfWeekUSA**, **DayOfWeekUK**, **DayOfWeekInMonth**, **DayOfWeekInYear**, **DayOfQuarter**, and **DayOfYear**. The **Data Source View** pane shows the **DimDate** dimension with its attributes. The **Solution Explorer** on the right shows the project structure, and the **Properties** window shows details for the **Dim Date** dimension.

DimMovie

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

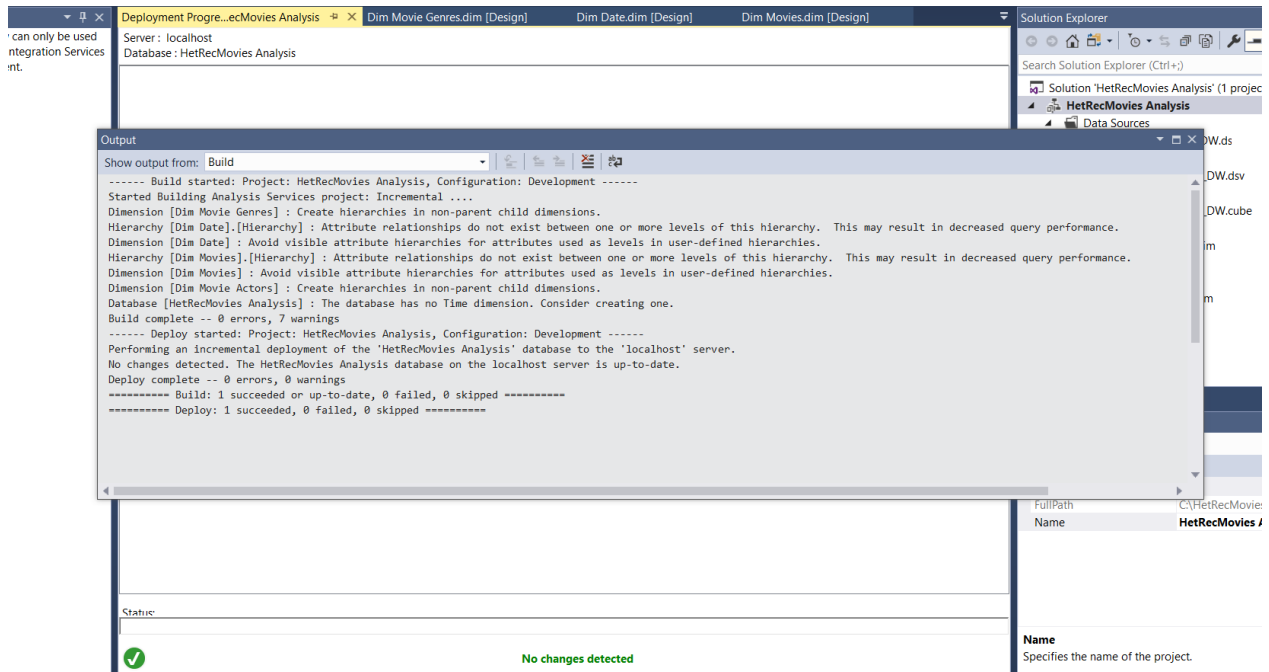


DimMovieActors



Deploy the project:

Right click on the SSAS project and click Deploy

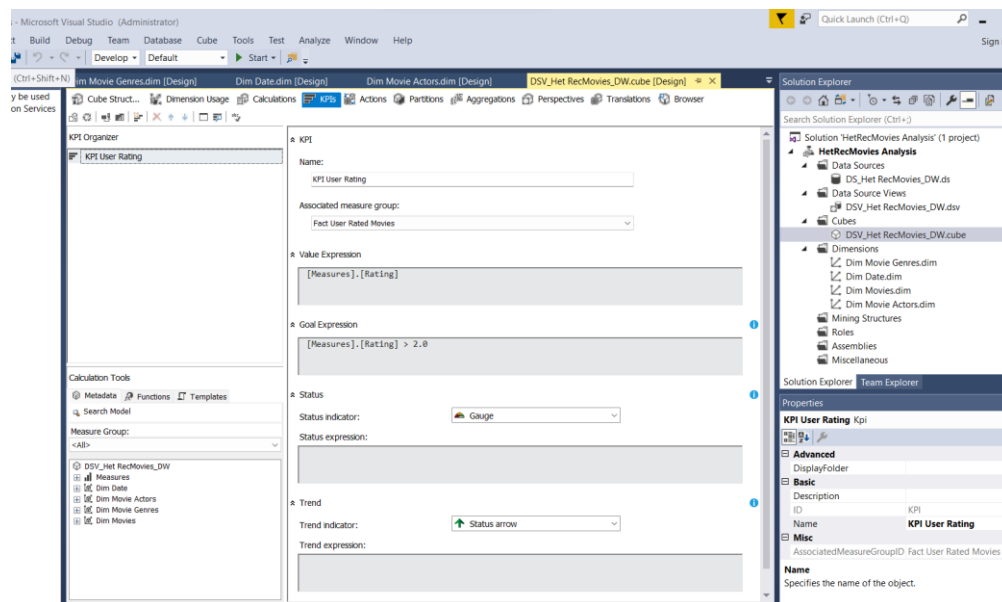


Then I deploy the cube. -cube successfully deployed

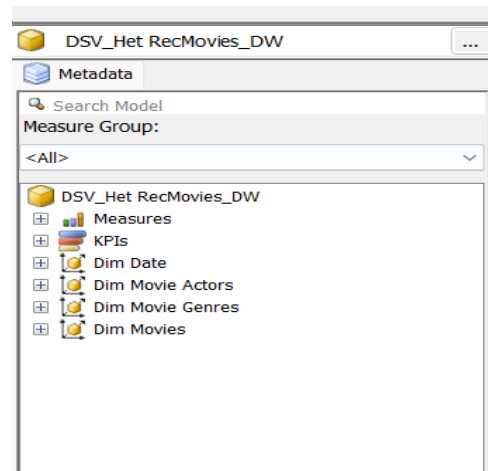
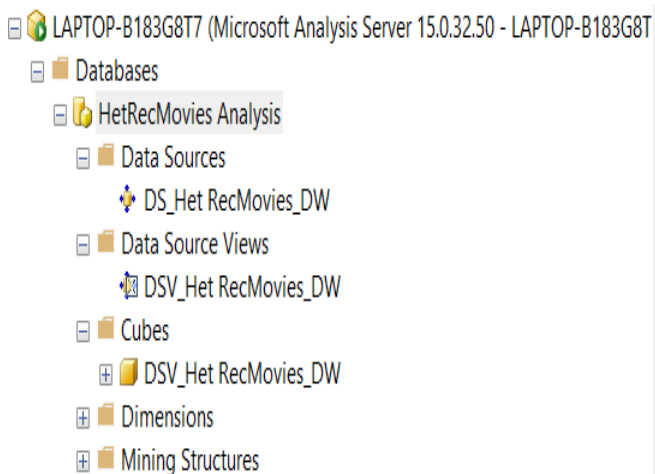
KPI

- 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 then expand “FactUserRatedMovies”. Drag and drop ‘rating’ attribute to Global Expression area and modify the expression as follows:

[Measures].[Rating] > 2.0



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



3. Demonstration of OLAP operations.

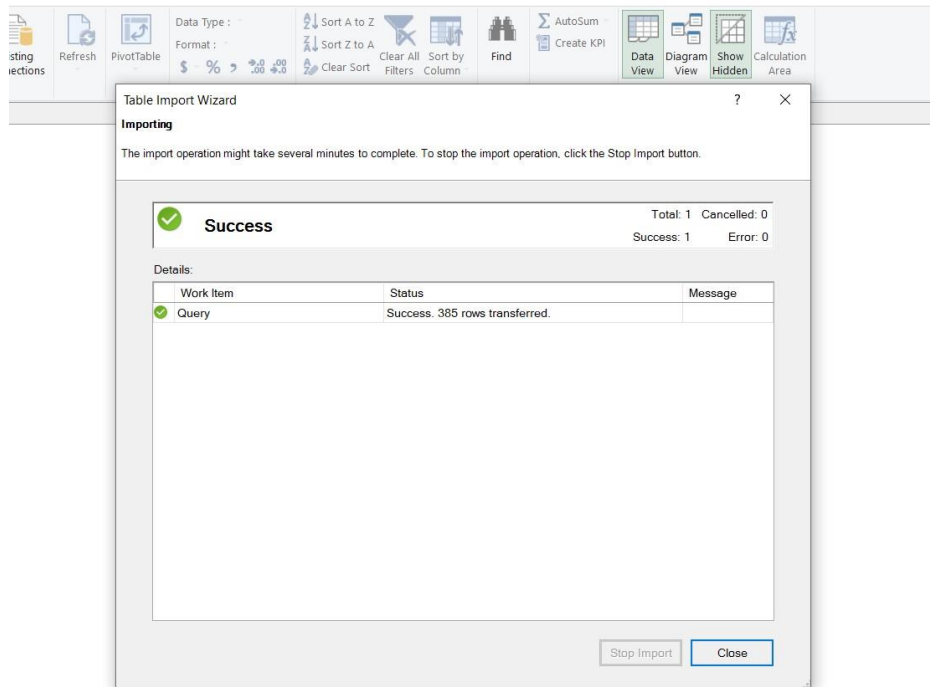
- First ,I generate the MDX query using the cube's browser.

Dimension	Hierarchy	Operator	Filter Expression
<Select dimension>			
Title		KPI User Rating Value	KPI User Rating Goal
"Iay, Carmela"		(null)	False
"10,000 BC"		6	True
"301, 302"		(null)	False
"4 luni, 3 saptamâni si 2 zile"		8	True
"A Cool, Dry Place"		(null)	False
"Abbott and Costello Meet the Killer, Boris Karloff"		(null)	False
"After Dark, My Sweet"		(null)	False
"Aguirre, der Zorn Gottes"		37	True
"Alphaville, une étrange aventure de Lemmy Caution"		(null)	False
"Angus, Thongs and Perfect Snogging"		(null)	False
"Atlantis, the Lost Continent"		(null)	False
"Blood, Guts, Bullets and Octane"		(null)	False
"Bodies, Rest & Motion"		(null)	False
"Bon Cop, Bad Cop"		(null)	False
"Bon Voyage, Charlie Brown (and Don't Come Back!!)"		(null)	False
"Bright Lights, Big City"		(null)	False
"Brutti, sporchi e cattivi"		(null)	False
"Buffalo Bill and the Indians, or Sitting Bull's History Lesson"		(null)	False
"Car 54, Where Are You?"		(null)	False
"Charlie, the Lonesome Cougar"		(null)	False
"Chi trova un amico, trova un tesoro"		(null)	False
"Come Back to the Five and Dime, Jimmy Dean, Jimmy Dean"		(null)	False
"Come Back, Little Sheba"		(null)	False
"Corrina, Corrina"		5	True

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

SELECT NON EMPTY ([Measures].[Fact User Rated Movies Count], [Measures].[Rating]) ON COLUMNS, NON EMPTY (([Dim Date].[Date].[Date].ALLMEMBERS * [Dim Movies].[Country].[Country].ALLMEMBERS * [Dim Movies].[Movie Title].[Movie Title].ALLMEMBERS * [Dim Movies].[State].[State].ALLMEMBERS * [Dim Movies].[Year].[Year].ALLMEMBERS * [Dim Movie Genres].[Genre].[Genre].ALLMEMBERS)) DIMENSION PROPERTIES MEMBER_CAPTION, MEMBER_UNIQUE, NAME ON ROWS FROM (DSV_HetRecMovies_DW) CELL PROPERTIES VALUE, BACK_COLOR, FORE_COLOR, FORMATTED_VALUE, FORMAT_STRING, FONT_NAME, FONT_SIZE, FONT_FLAGS							
Date	Country	Movie Title	State	Year	Genre	Fact User Rated Movies C...	Rating
199...	Albania	blue-sky	Trana	1994	Com...	2	8
199...	Australia	1091981...	Sout...	1997	Com...	2	2
199...	Mexico	1092277...	Coa...	1939	Myst...	2	10
199...	Portugal	ful_monty	Mafra	1997	Adve...	2	8
199...	UK	1072107...	Engl...	1996	Horror	2	10
199...	UK	1083436...	Engl...	1998	Action	2	10
199...	UK	drugstore...	Engl...	1989	Drama	2	10
199...	UK	lone_star...	Engl...	2002	Drama	2	10
199...	UK	pleasantville	Engl...	1998	Adve...	2	8
199...	USA	1032176...	New...	1990	Rom...	2	8
199...	USA	1065598...	Calif...	1995	Rom...	2	8
199...	USA	annie_hall	Calif...	1977	War	2	10
199...	USA	babe_pig...	Calif...	1998	Crime	2	10
199...	USA	big_lebo...	Ohio	1998	Docu...	2	10

- 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.



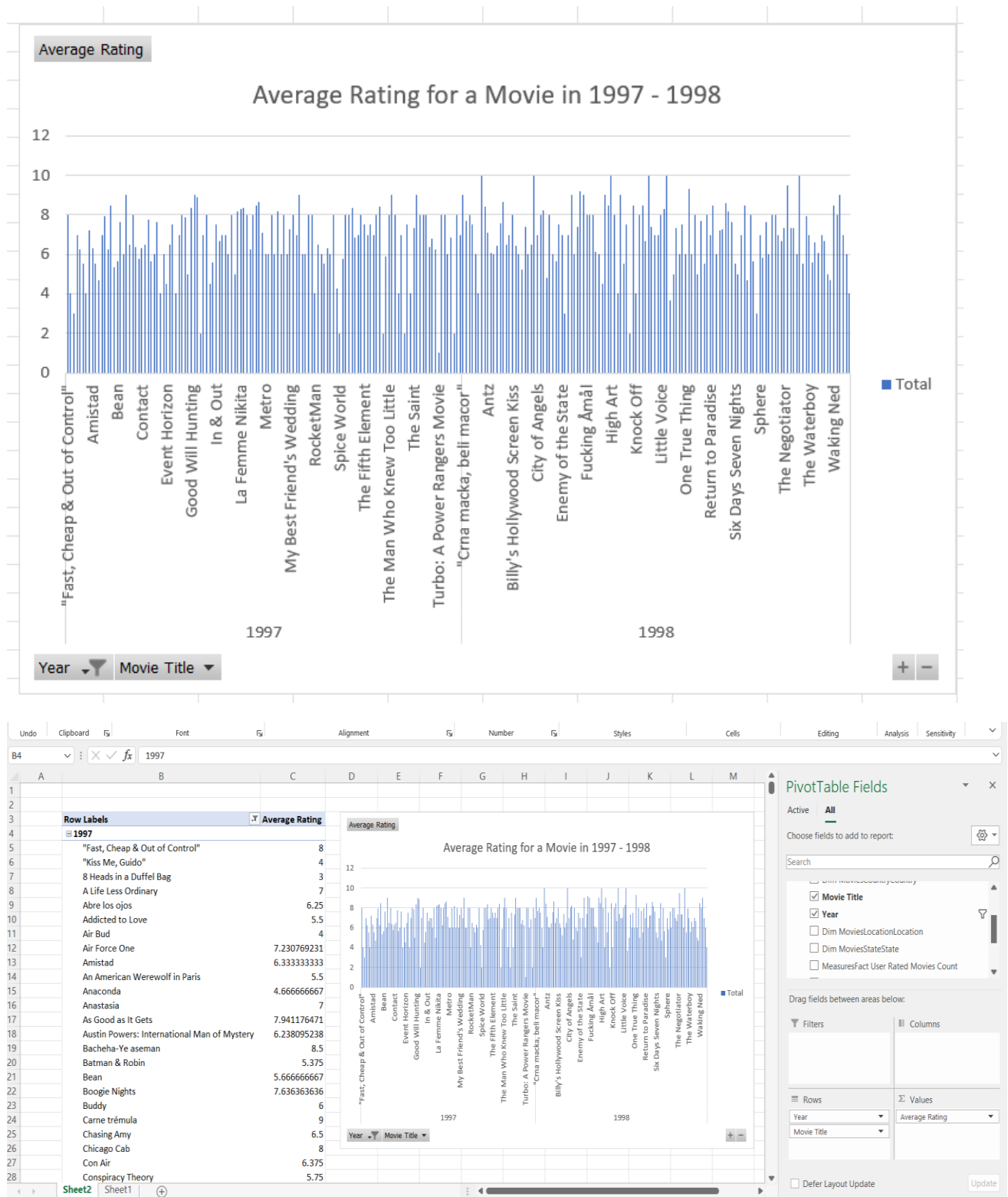
Initially I see this interface.

Dim MovieDate	Dim Movie ActorsActor NameActor Name	Dim Movie GenresGenreGenre	Dim MoviesCountryCountry	Dim MoviesTitleTitle	Dim MoviesYearYear	Dim MoviesLocationLocation	Dim MoviesState
1 2007-01-15 00:00:00...	Bhasker	Drama	USA	True Lies	1994	Los Angeles	California
2 2007-01-15 00:00:00...	Carl Sklover	Drama	USA	Citizen Kane	1941	Los Angeles	California
3 2007-01-15 00:00:00...	Paul Lukas	Drama	USA	Back to the Future Par...	1989	Los Angeles	California
4 2007-01-26 00:00:00...	Bonnie Oda Homsey	Drama	USA	Back to the Future Par...	1989	Los Angeles	California
5 2007-01-26 00:00:00...	Eve Brenner	Drama	USA	2001: A Space Odyssey	1968	Los Angeles	California
6 2007-01-26 00:00:00...	Natasha Richardson	Drama	USA	Sen to Chihiro no kami...	2001	Los Angeles	California
7 2007-01-26 00:00:00...	Stephen Brand	Drama	USA	Harry Potter and the ...	2005	Los Angeles	California
8 2007-02-13 00:00:00...	Jeannine Wagner	Drama	USA	Dumb & Dumber	1994	Los Angeles	California
9 2007-02-13 00:00:00...	Robin Menken	Drama	USA	Fight Club	1999	Los Angeles	California
10 2007-02-23 00:00:00...	Henry Yuk	Drama	USA	X-Men	2000	Los Angeles	California
11 2007-02-28 00:00:00...	Darren McGavin	Drama	USA	The Village	2004	Los Angeles	California
12 2007-03-02 00:00:00...	William Kunstler	Drama	USA	À bout de souffle	1960	Los Angeles	California
13 2007-03-07 00:00:00...	Fritz Sperberg	Drama	USA	Underworld: Evolution	2006	Los Angeles	California
14 2007-03-07 00:00:00...	Gian-Carlo Scandiuizi	Drama	USA	Stuart Little 2	2002	Los Angeles	California
15 2007-03-07 00:00:00...	Steven Schwartz-Hartley	Drama	USA	Freddy vs. Jason	2003	Los Angeles	California
16 2007-03-24 00:00:00...	Carl Saxe	Drama	USA	Gone with the Wind	1939	Los Angeles	California
17 2007-04-11 00:00:00...	Karen Malina White	Drama	USA	True Lies	1994	Los Angeles	California
18 2007-04-11 00:00:00...	Ron Rifkin	Drama	USA	2001: A Space Odyssey	1968	Los Angeles	California
19 2007-04-16 00:00:00...	Audrey Meadows	Drama	USA	The Quiet Earth	1985	Los Angeles	California
20 2007-05-15 00:00:00...	Frances Conroy	Drama	USA	Bob Roberts	1992	Los Angeles	California
21 2007-06-01 00:00:00...	Angel Caban	Drama	USA	Human Traffic	1999	Los Angeles	California

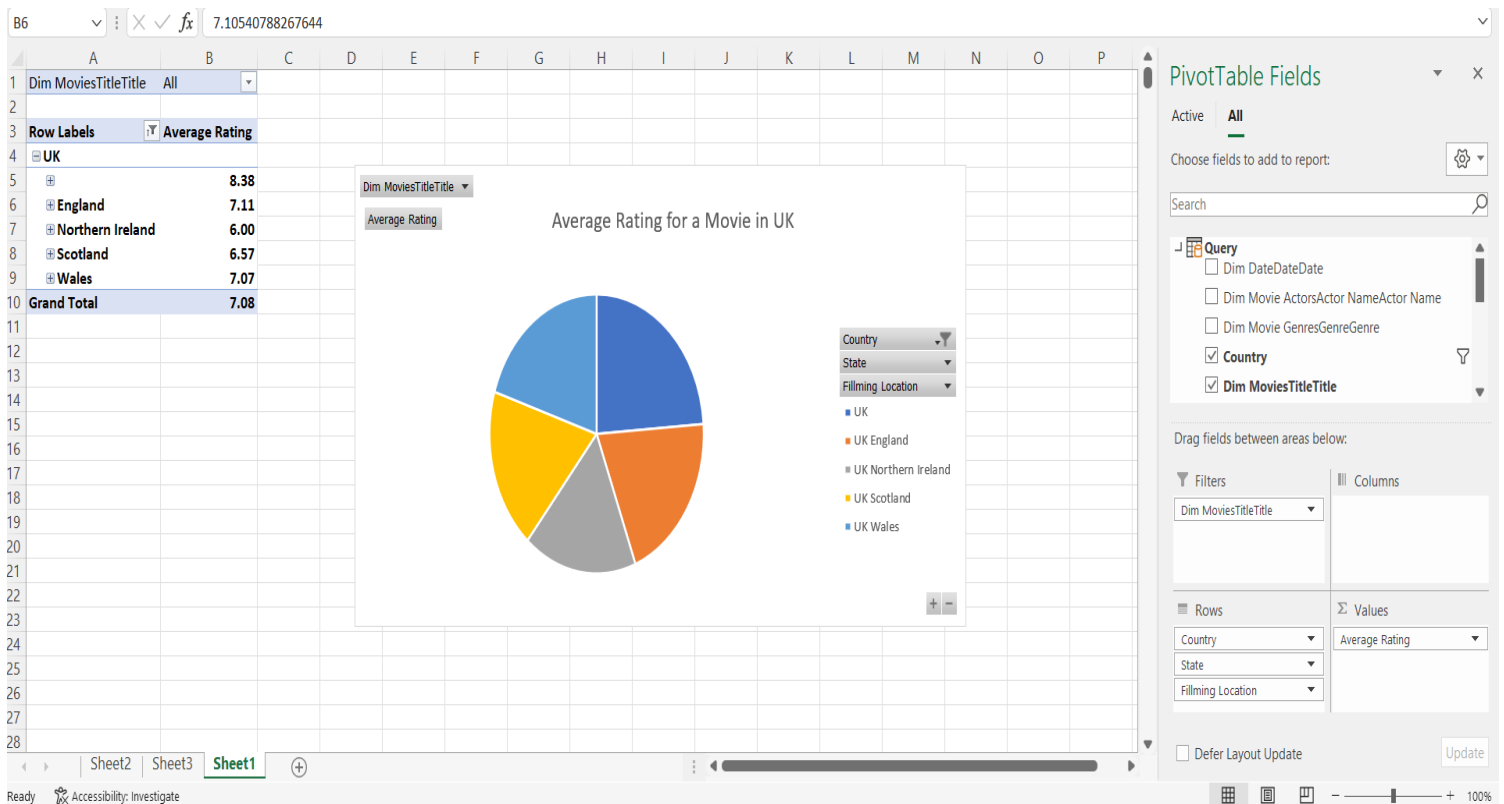
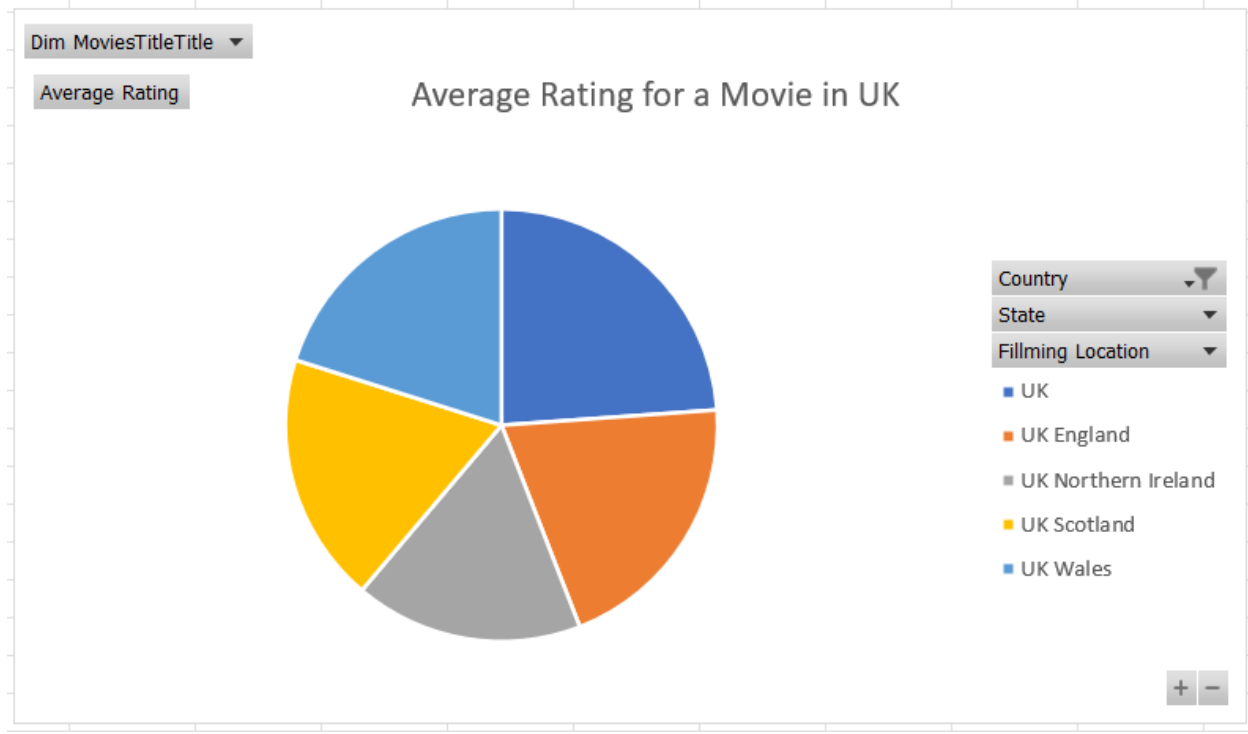
In the Excel,I can see all the fields I selected via the MDX Query.

ROLL-UP OLAP OPERATION

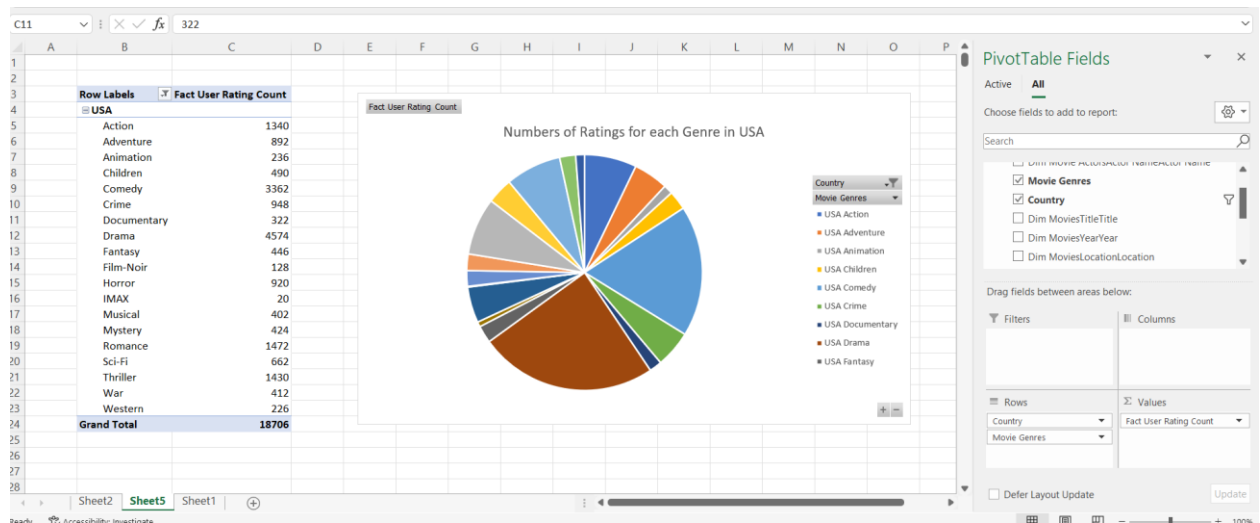
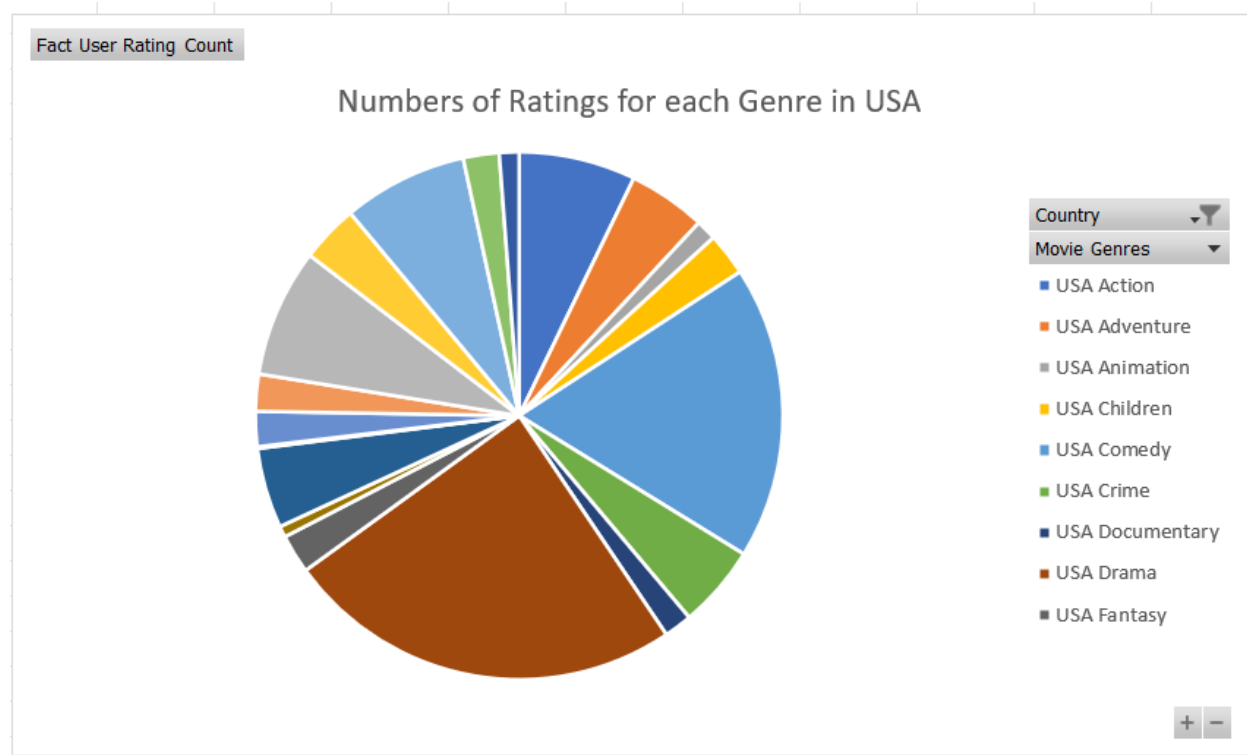
After OLAP Cube deployment, OLAP operations were demonstrated using Excel application



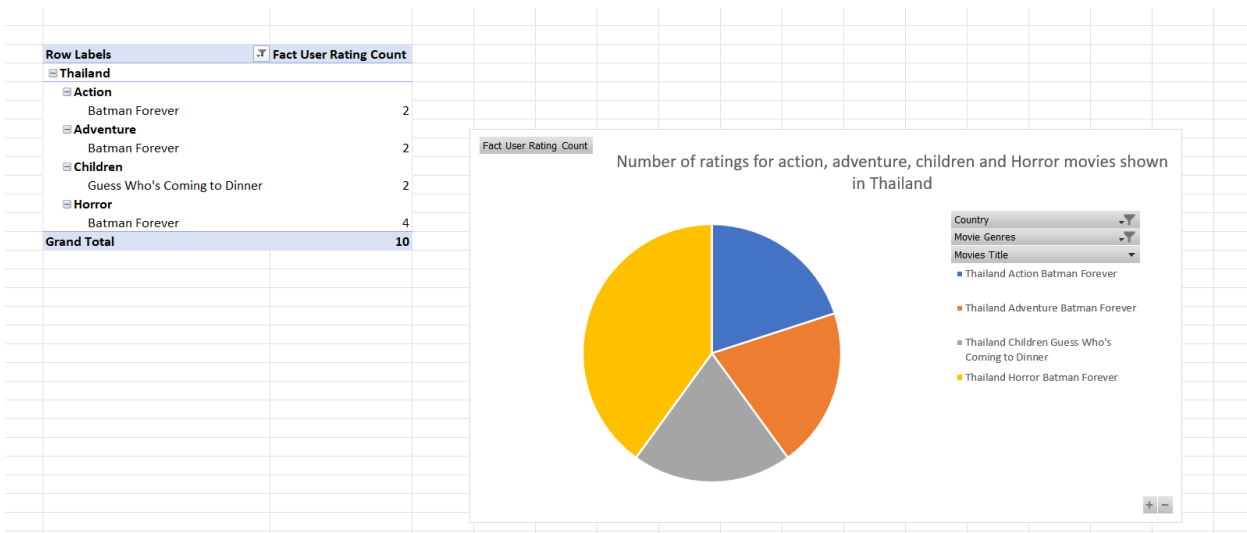
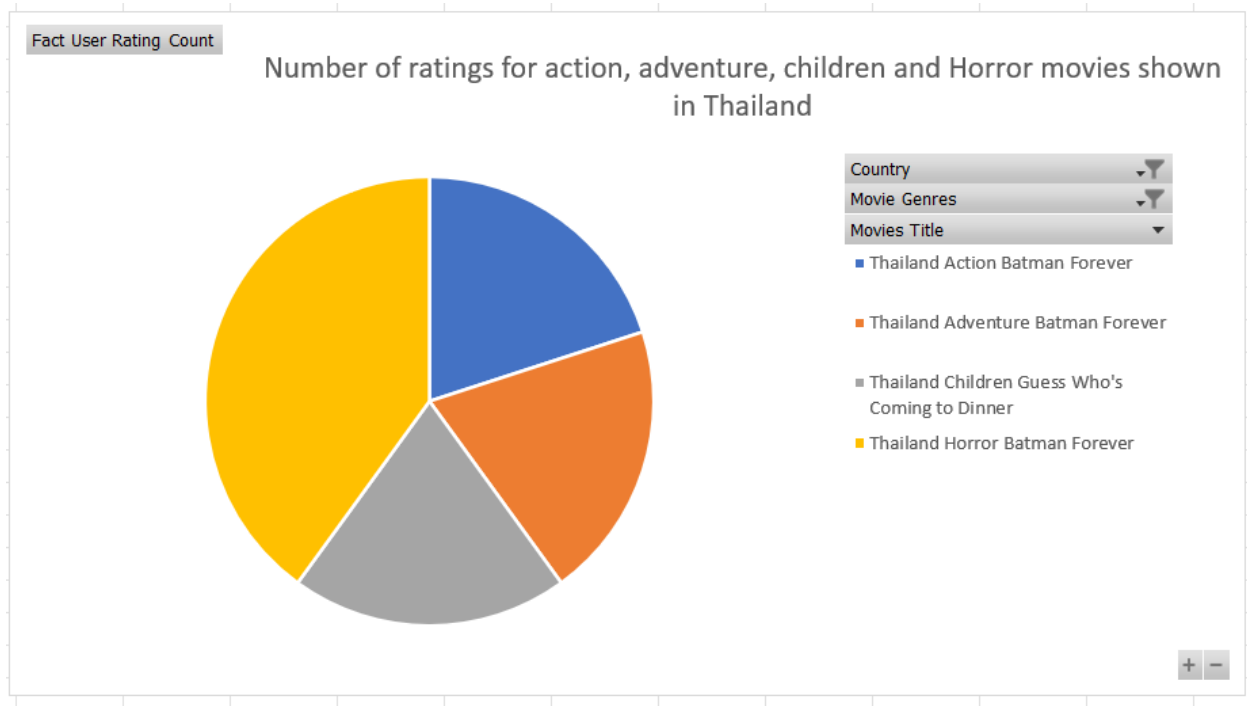
DRILL-DOWN OLAP OPERATION



SLICE OLAP OPERATION



DICE OLAP OPERATION



4.SSRS Reports.

I use Report Builder to create my reports.

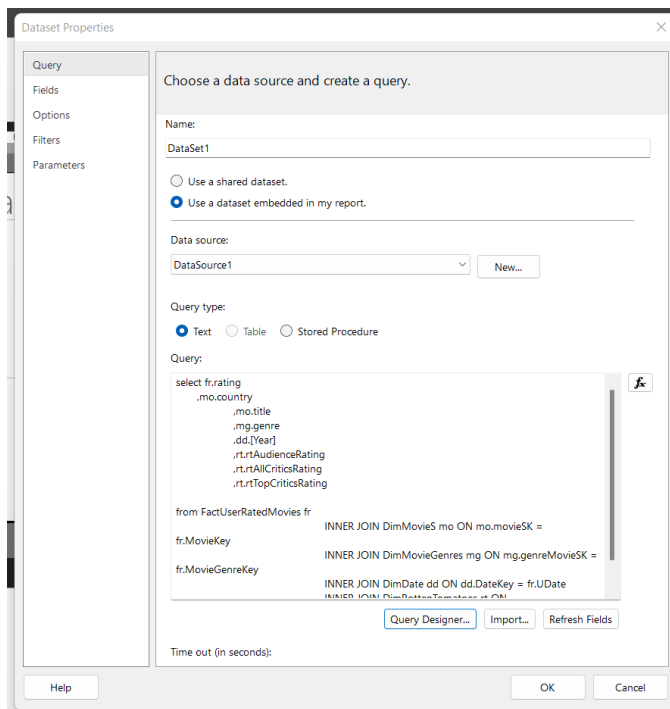
- First step to create Data Source. In order to create the data source, I add the my data source as data “DataSource1”.
- Next I create the data set. In order to create the data set right click on DataSet and open up Dataset properties window. In the query section, provide the dataset name as “Dataset1”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

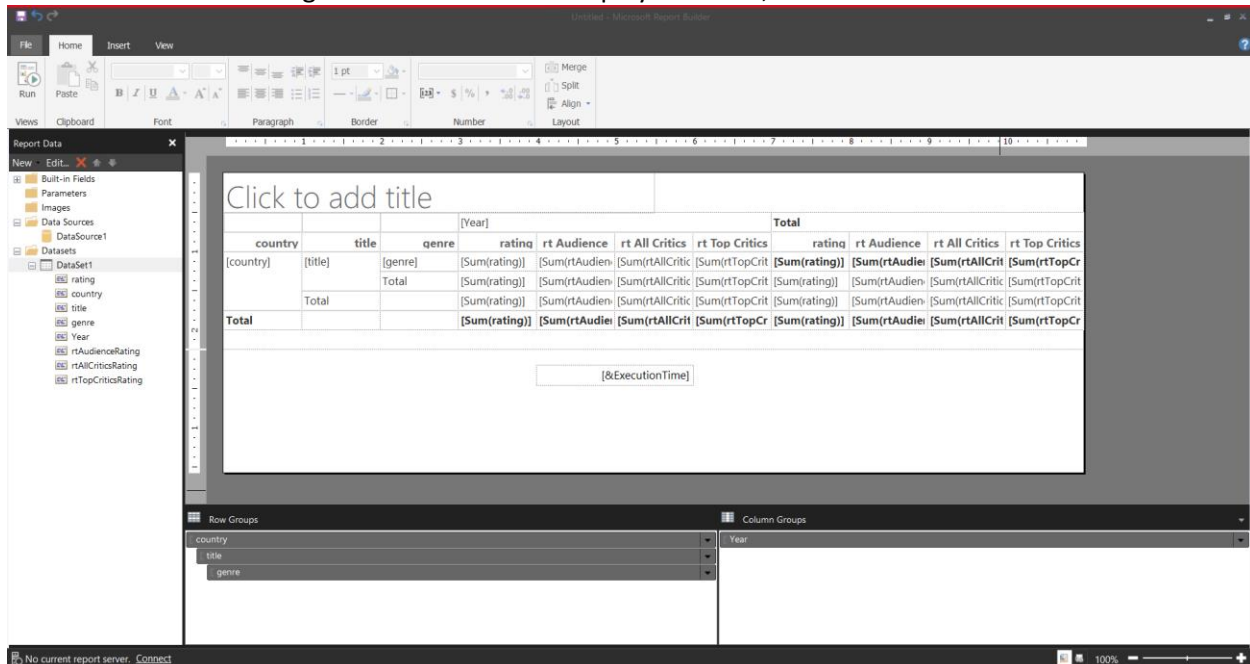
from FactUserRatedMovies fr
      INNER JOIN DimMovieS mo ON mo.movieSK = fr.MovieKey
      INNER JOIN DimMovieGenres mg ON mg.genreMovieSK = fr.MovieGenreKey
      INNER JOIN DimDate dd ON dd.DateKey = fr.UDate
      INNER JOIN DimRottenTomatoes rt ON rt.rottenTomatoesSK =
fr.MovieKeyExceute
```

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

1.Create the Materix report.



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



Then I run the matrix report ;

Microsoft Report Builder

			1999				2000				2001				2002				
country	title	genre	rating	rt Audience Rating	rt All Critics Rating	rt Top Critics Rating	rating	rt Audience Rating	rt All Critics Rating	rt Top Critics Rating	rating	rt Audience Rating	rt All Critics Rating	rt Top Critics Rating	rating	rt Audience Rating	rt All Critics Rating	rt Top Critics Rating	rating
Total							78.0	76.8	154.2	52.0	4.0	6.2	9.8	11.2					7
Albania	Blown	Total																	
	Blue Chips	Total																	
	Blue Sky	Total	8.0	6.4	12.6	0.0													
Total			8.0	6.4	12.6	0.0													
Algeria	Troop	Total																	
	Beverly Hill	Total																	
Arctic		Total																	
Argentina		Total																	
Australia		Total	2.0	8.6	16.4	0.0	60.0	57.2	115.4	96.6	6.0	6.2	11.2	0.0					5
Austria		Total					14.0	13.6	29.6	30.8									
Bahamas		Total																	
Baltic Sea		Total																	
Belgium		Total					14.0	18.2	36.2	14.2									
Bermuda		Total																	
Brazil		Total																	
Bulgaria		Total																	
Cambodia		Total																	
Canada		Total					240.0	217.2	426.2	338.0	20.0	16.8	29.6	19.6					10
Cayman		Total					8.0	6.2	13.4	0.0									

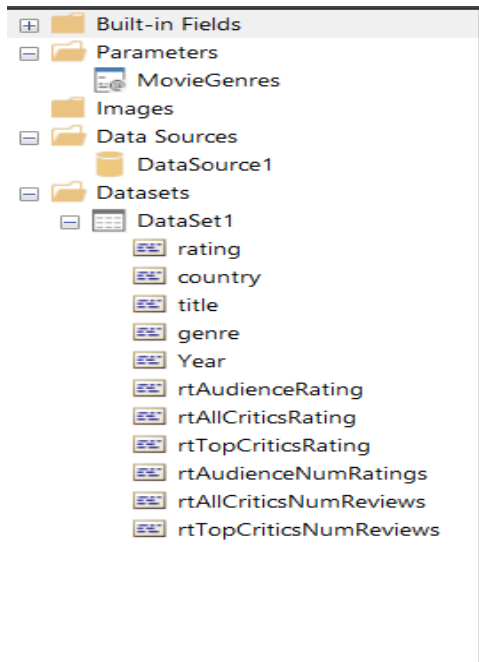
No current report server.

SQL Server Reporting Services

Home > Matrix Report

			1999				2000				2001				2002				
country	title	genre	rating	rt Audience Rating	rt All Critics Rating	rt Top Critics Rating	rating	rt Audience Rating	rt All Critics Rating	rt Top Critics Rating	rating	rt Audience Rating	rt All Critics Rating	rt Top Critics Rating	rating	rt Audience Rating	rt All Critics Rating	rt Top Critics Rating	rating
Total							78.0	76.8	154.2	52.0	4.0	6.2	9.8	11.2					7
Albania		Total	8.0	6.4	12.6	0.0													
Algeria		Total																	
Arctic		Total																	
Argentina		Total																	
Australia		Total	2.0	8.6	16.4	0.0	60.0	57.2	115.4	96.6	6.0	6.2	11.2	0.0					5
Austria		Total					14.0	13.6	29.6	30.8									
Bahamas		Total																	
Baltic Sea		Total																	
Belgium		Total					14.0	18.2	36.2	14.2									
Bermuda		Total																	
Brazil		Total																	
Bulgaria		Total																	
Cambodia		Total																	
Canada		Total					240.0	217.2	426.2	338.0	20.0	16.8	29.6	19.6					10
Cayman Islands		Total					8.0	6.2	13.4	0.0									
Channel		Total																	

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 = @MovieGenres
```

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

SQL Server Reporting Services

Home > Parameter Report

Movie Genres:

1 of 2 ? 100% Find | Next

Movie Wise Rotten Tomatoes Ratings Report

	2007						2008					
title	rt All Critics Rating	rt Top Critics Rating	rt Audience Rating	rt All Critics Num Reviews	rt Top Critics Num Reviews	rt Audience Num Ratings	rt All Critics Rating	rt Top Critics Rating	rt Audience Rating	rt All Critics Num Reviews	rt Top Critics Num Reviews	rt Audience Num Ratings
"10,000 BC"							6.4	6.2	6.0	278	58	182290
"Girl, Interrupted"							11.4	10.2	7.0	222	60	73628
"Honey, I Shrunk the Kids"							12.2	0.0	5.8	60	8	45288
"Lock, Stock and Two Smoking Barrels"	13.6	11.8	8.0	102	28	163392						
"O Brother, Where Art Thou?"							14.2	13.2	7.4	286	70	70244
rt All Critics Rating	11.8	11.8	6.6	68	10	118033						

3.Create More than One Parameter Report

Report Designer Tree View:

- Built-in Fields
- Parameters
 - YearParameter
 - CountryParameter
- Images
- Data Sources
 - DataSource1
- Datasets
 - DataSet1
 - rating
 - country
 - title
 - genre
 - Year
 - year
 - rtAudienceRating
 - rtAllCriticsRating
 - rtTopCriticsRating
 - DataSet2
 - year
 - movieSK
 - DataSet3
 - country
 - movieSK

. 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
```

YearParameter

Report Parameter Properties

General

Change name, data type, and other options.

Name: YearParameter

Prompt: Year

Data type: Integer

☐ Allow blank value ("")

☐ Allow null value

☐ Allow multiple values

Select parameter visibility:

☒ Visible

☐ Hidden

☐ Internal

Help OK Cancel

Report Parameter Properties

General

Available Values

Choose the available values for this parameter.

Select from one of the following options:

☐ None

☐ Specify values

☒ Get values from a query

Dataset: (Warning: Possible performance impact)

DataSet2

Value field: movieSK

Label field: year

Help OK Cancel

CountryParameter

Report Parameter Properties

General

Available Values

Default Values

Advanced

Change name, data type, and other options.

Name:
CountryParameter

Prompt:
Country

Data type:
Text

☒ Allow blank value ("")

☐ Allow null value

☐ Allow multiple values

Select parameter visibility:

☒ Visible

☐ Hidden

☐ Internal

Help OK Cancel

Report Parameter Properties

General

Available Values

Default Values

Advanced

Choose the available values for this parameter.

Select from one of the following options:

☐ None

☐ Specify values

☒ Get values from a query

Dataset: (Warning: Possible performance impact)
DataSet3

Value field:
country

Label field:
country

Help OK Cancel

SQL Server Reporting Services

Home > Parameter 2

Year: 2004 Country: UK View Report

1 of 1 Find | Next

Average Rating of Movies of Genre - in a Country in a given Year

Action	Adventure	Animation	Children	Comedy	Crime	Documentary	Drama	Fantasy	Film-Noir	Horror	IMAX	Musical
3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.7	3.4	

5/17/2022 4:01:51 PM

4.REPORT WITH DRILL Through

Query for create drill down:

SELECT

FactUserRatedMovies.rating
,DimMovieGenres.genre
,DimMovies.[year]

FROM

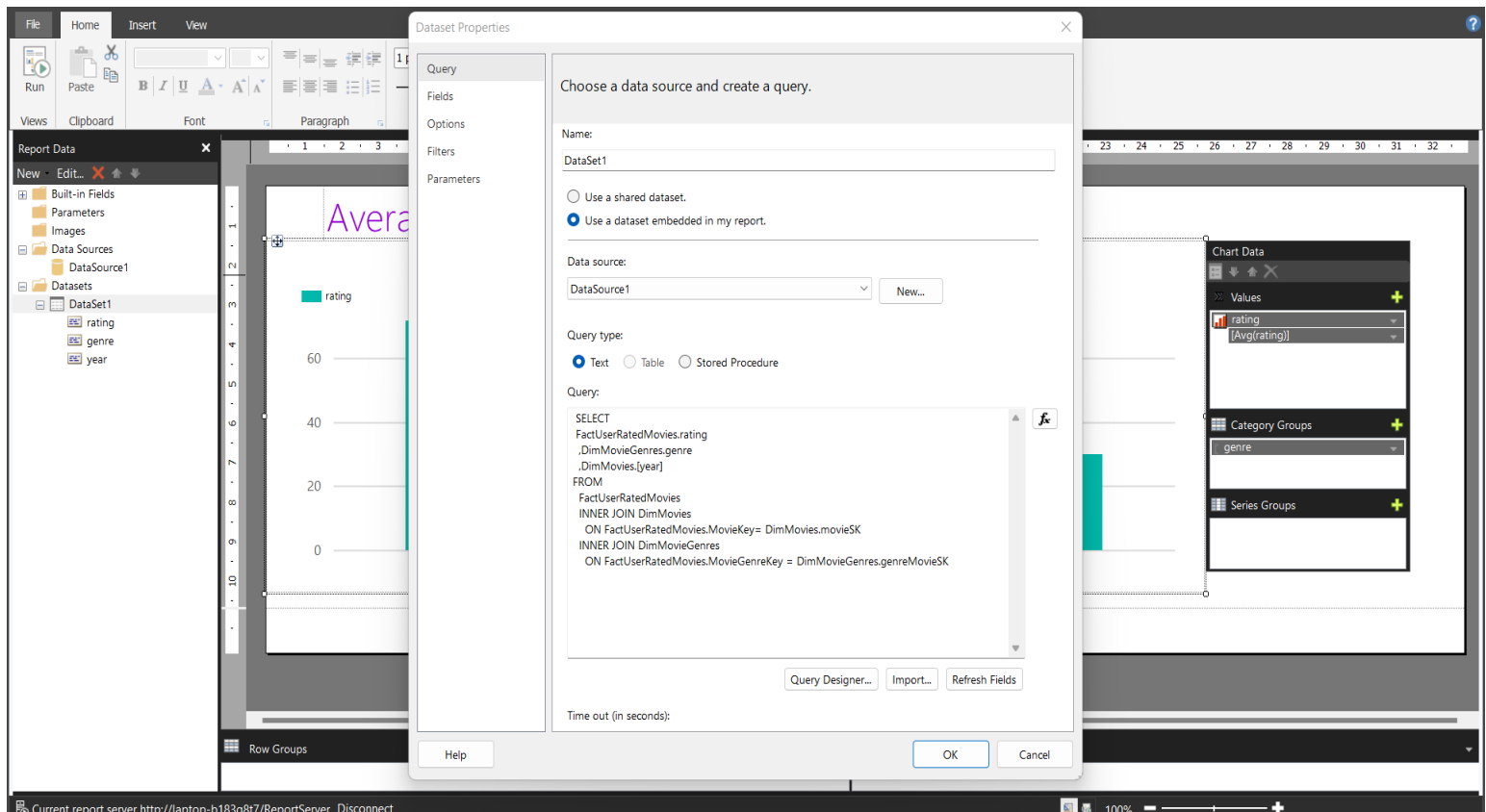
FactUserRatedMovies

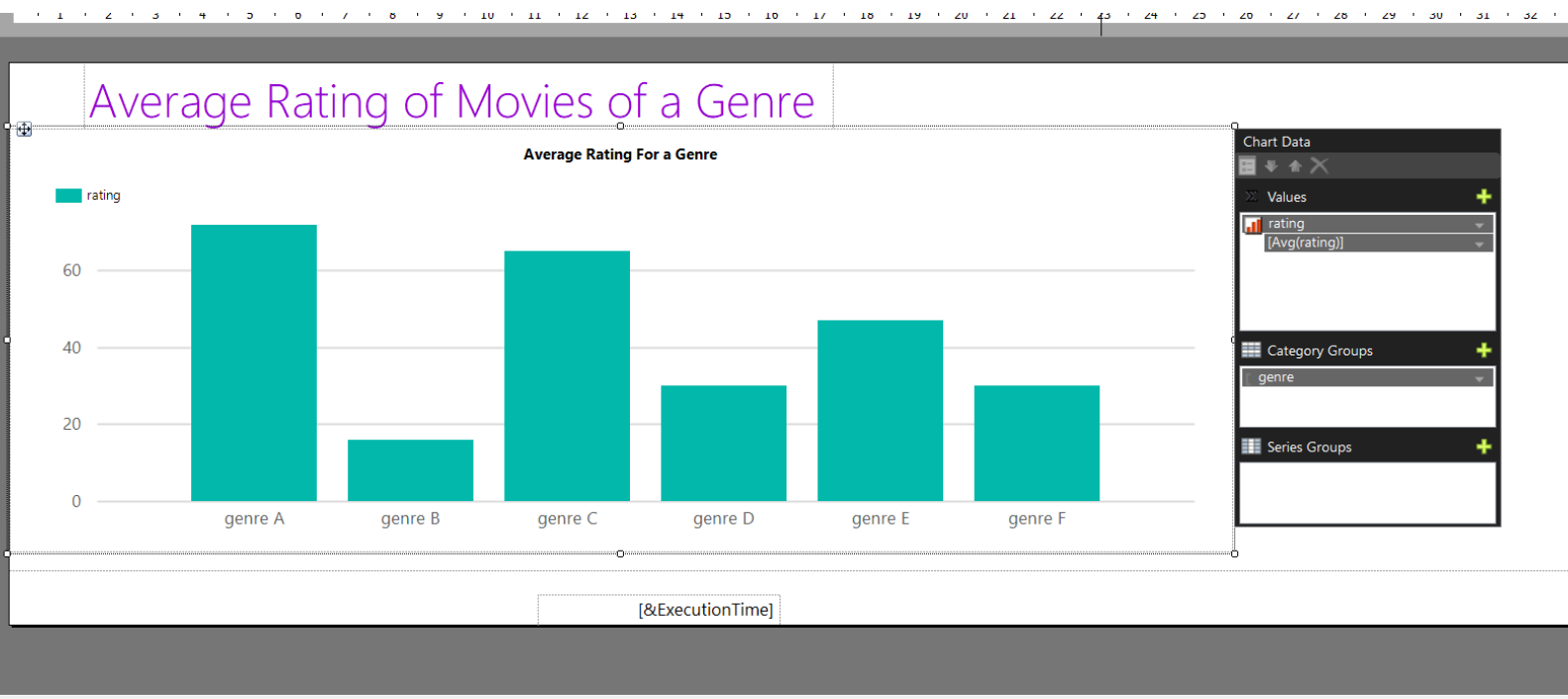
INNER JOIN DimMovies

ON FactUserRatedMovies.MovieKey= DimMovies.movieSK

INNER JOIN DimMovieGenres

ON FactUserRatedMovies.MovieGenreKey = DimMovieGenres.genreMovieSK





5.drill down

File Home Insert View

Run Paste Font Paragraph Border Number Layout Merge Split Align

Report Data

New Edit

- Built-in Fields
- Parameters
- Images
- Data Sources
 - DataSource1
- Datasets
 - DataSet1

Country Wise User Ratings Analysis

country	state	location	[year]	Total
[country]	[state]	[location]	[Sum(rtTopCritics)]	[Sum(rtAllCritics)]
		Total	[Sum(rtTopCritics)]	[Sum(rtAllCritics)]
Total			[Sum(rtTopCritics)]	[Sum(rtAllCritics)]

[&ExecutionTime]

Row Groups

country


Column Groups


year


 Home


[Home](#)


PAGINATED REPORTS (5)

 Drill Down Report ...

 Drill-Through Report ...

 Matrix Report ...

 Parameter 2 ...

 Parameter Report ...