



Data Warehousing & Business Intelligence

Assignment 2

2022

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1. Data Warehouse Introduction

The data source used here is the '**Health Violations**' (HV) which is the database which was created as the data warehouse earlier. The data warehouse mainly focuses on the violations that happened in restaurants within the range of 2018 to 2020. The original dataset is named as 'LA RESTAURANTS AND MARKET HEALTH DATA' which is hosted by the city of Los Angeles

In this Data Warehouse Owner has many facilities and owner is considered as a place where lot of facilities (Target, Subway etc.) are located. These facilities are rated by taking records on Violations and given a score and fine for the relevant facility.

This data source is used for analysis for reporting services and to implement dashboards.

Snowflake schema was used to design the Data warehouse design. There is one fact table as transactions and four dimensions including the Date dimension. Dimensional model of the Data warehouse can be found below

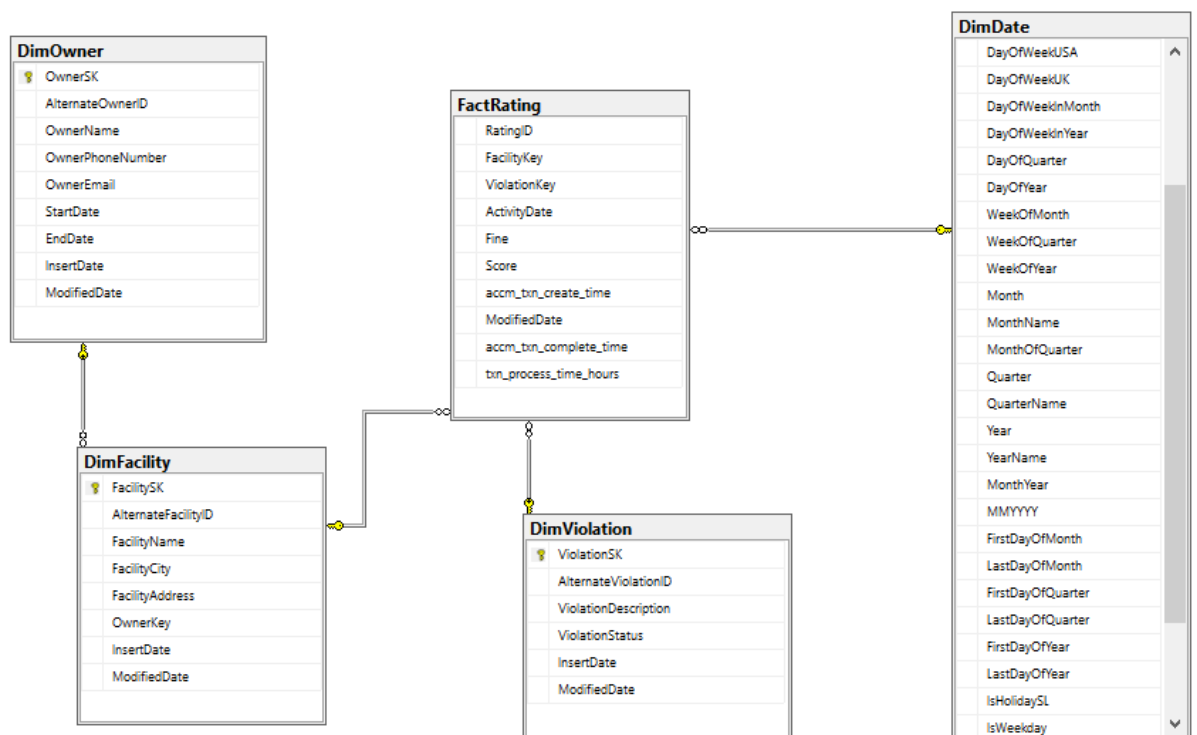
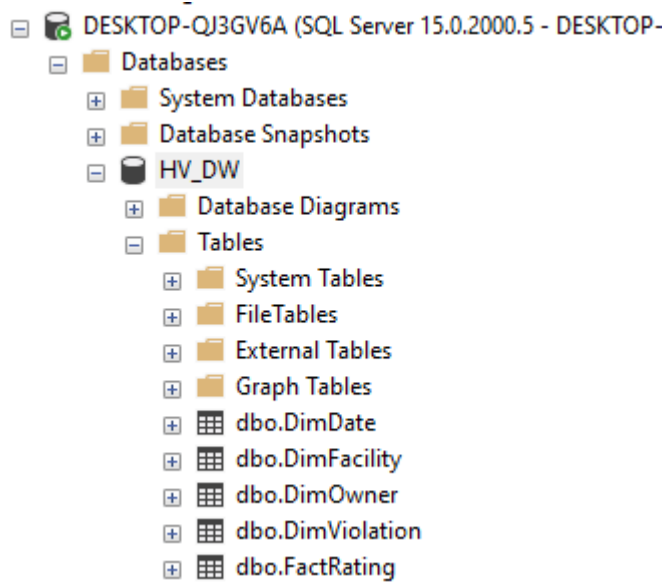


Figure 1 Snowflake Schema



This shows the Dimension tables and the Fact table of the HV_DW data warehouse which is already created.

2. Cube Implementation

A multidimensional data cube is a structure that holds data for analysis. Dimensions and measurements are the primary components of a cube. This is mostly made up of two facts:

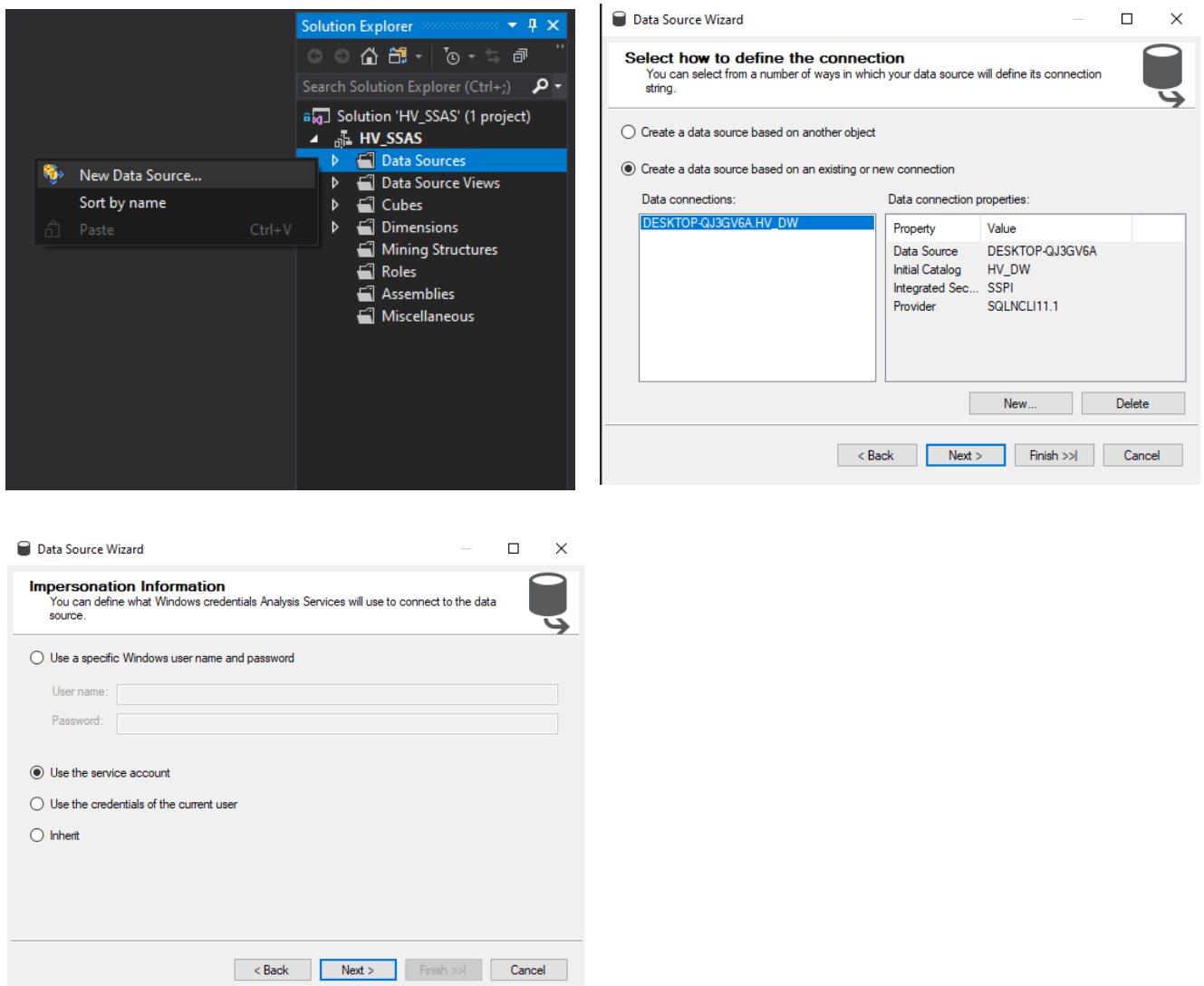
- Dimensions: Define the cube's structure for slicing and dicing.
- Measures: Provide the end user with aggregated numerical values.

SQL Server Data Tools were used for this procedure.

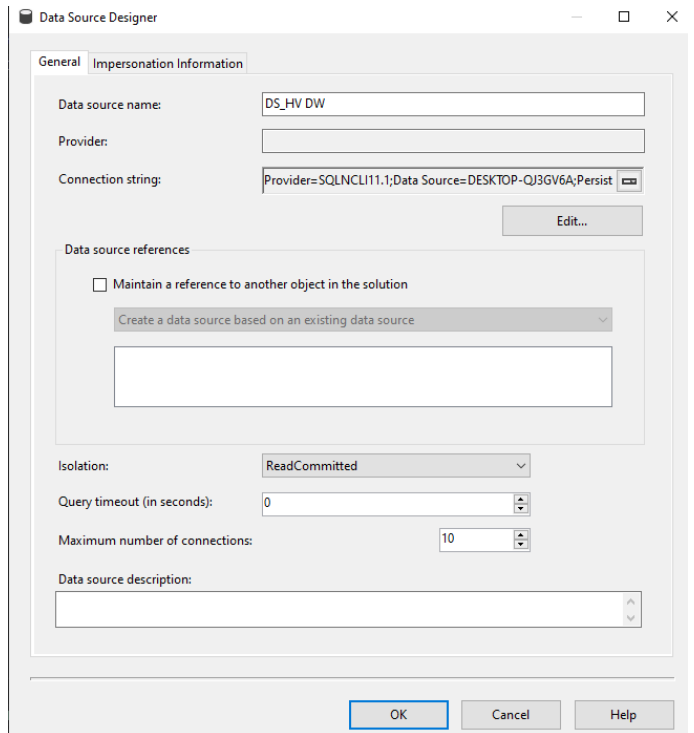
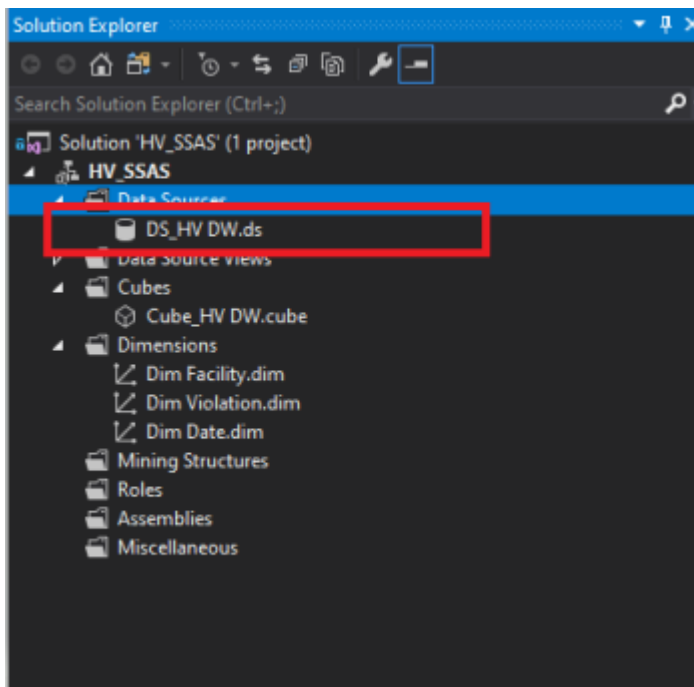
Procedure for cube Implementation

2.1 Step 1: Creating Data Source

The Data source was created by connecting to the '**Health Violations**' (HV) database through SQL server management studio. a new data source was added with a new connection and Service account was used to connect to the SQL Server management studio.



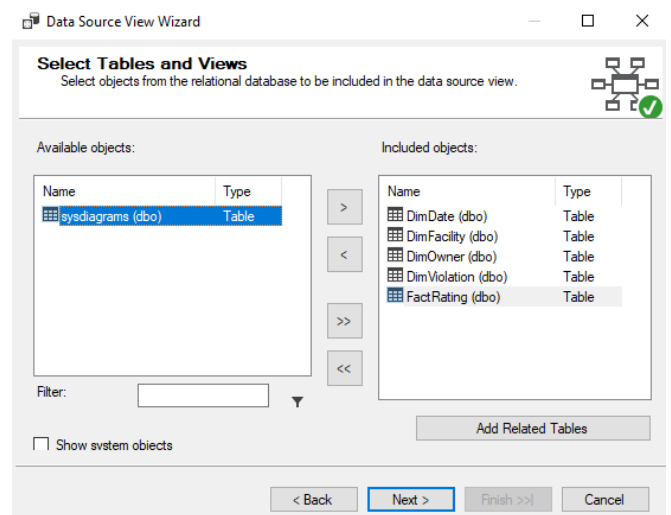
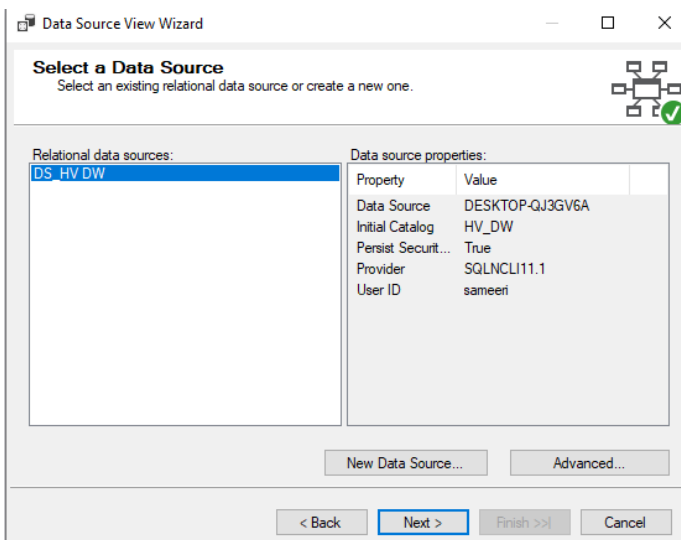
After Configuring the Data Source, the preview will be like this:



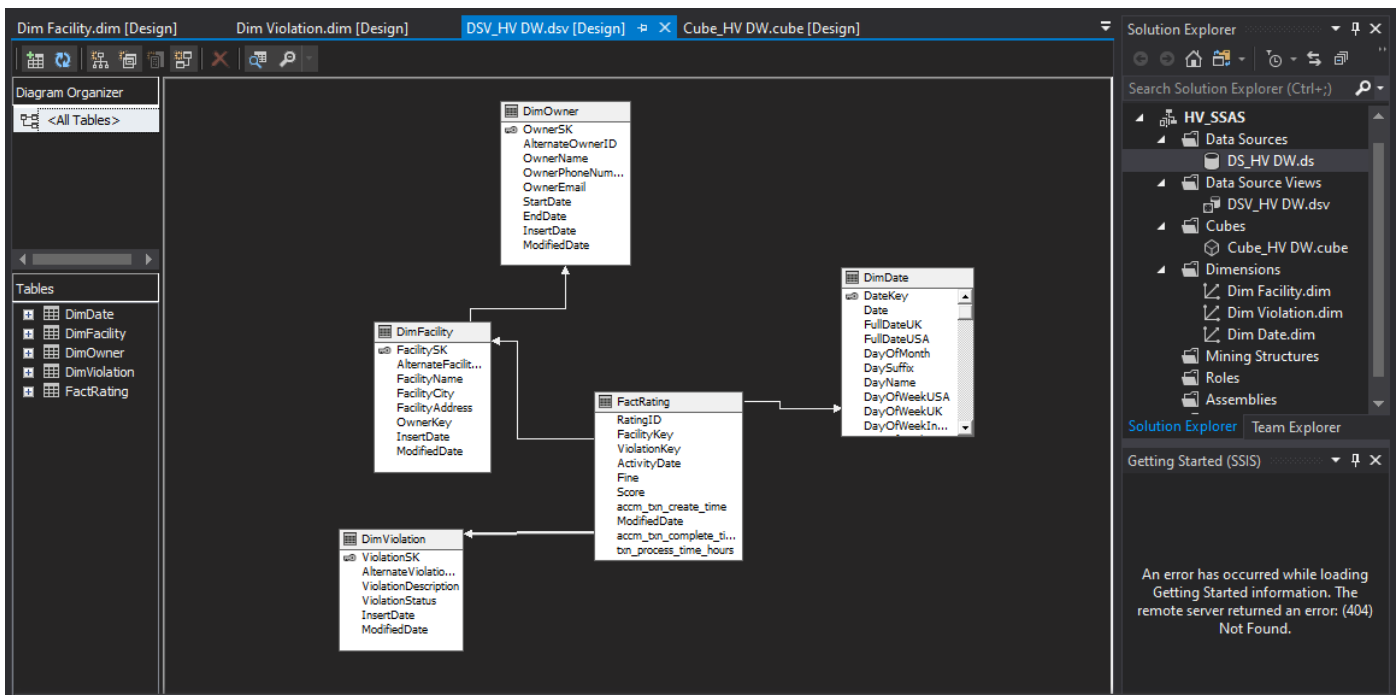
2.2 Step 2: Creating Data Source View

Because the analysis service only has access to the relations that are available in this data source view, this step comprises getting the relations and views of our dataset. As a result, the data source view is generated utilizing the data source that was defined in step 1.

After selecting the Data source, we can choose the tables needed in the Data source view



Data Source view



2.3 Step 3: Creating the Cube

This step includes creation of the cube using the data source view. When creating the method existing tables option was used, and all the tables were selected as measure groups, **FactRating** relation can be taken as the fact table as it contains all our measures required for the analysis process.

Cube Wizard

Select Creation Method
Cubes can be created by using existing tables, creating an empty cube, or generating tables in the data source.

How would you like to create the cube?

- ☒ Use existing tables
- ☐ Create an empty cube
- ☐ Generate tables in the data source

Template:
(None)

Description:
Create a cube based on one or more tables in a data source.

< Back Next > Finish >> Cancel

Cube Wizard

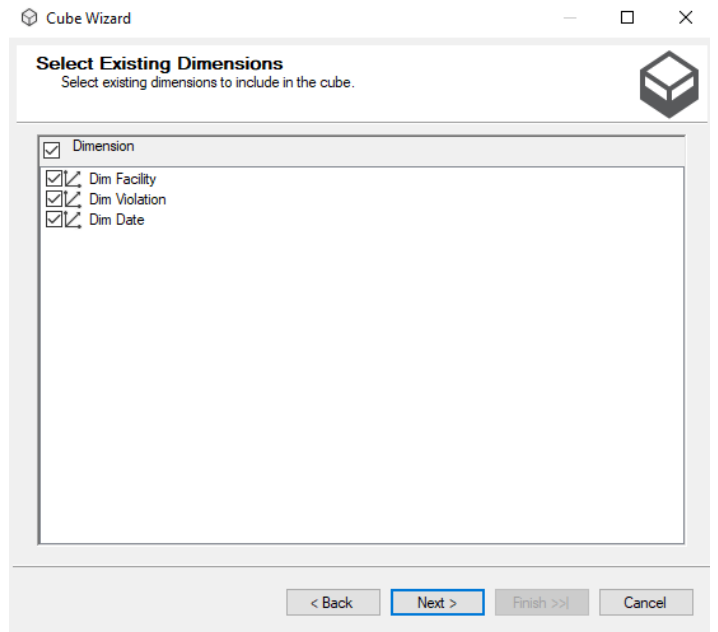
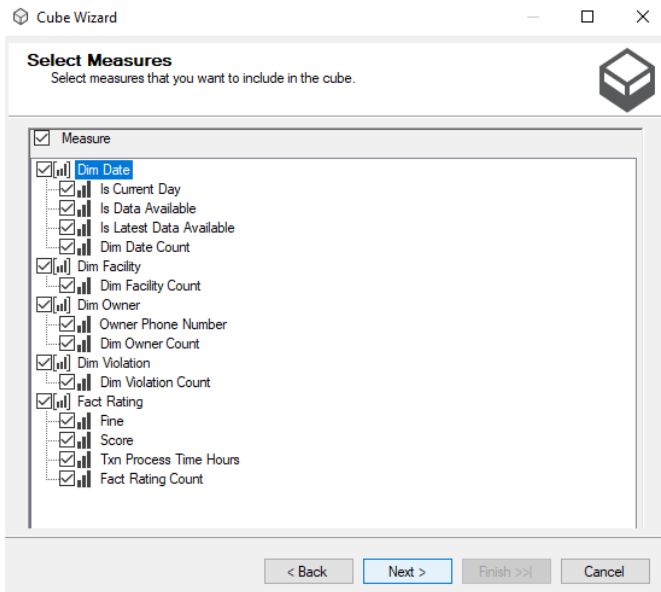
Select Measure Group Tables
Select a data source view or diagram and then select the tables that will be used for measure groups.

Data source view:
DSV_HV DW

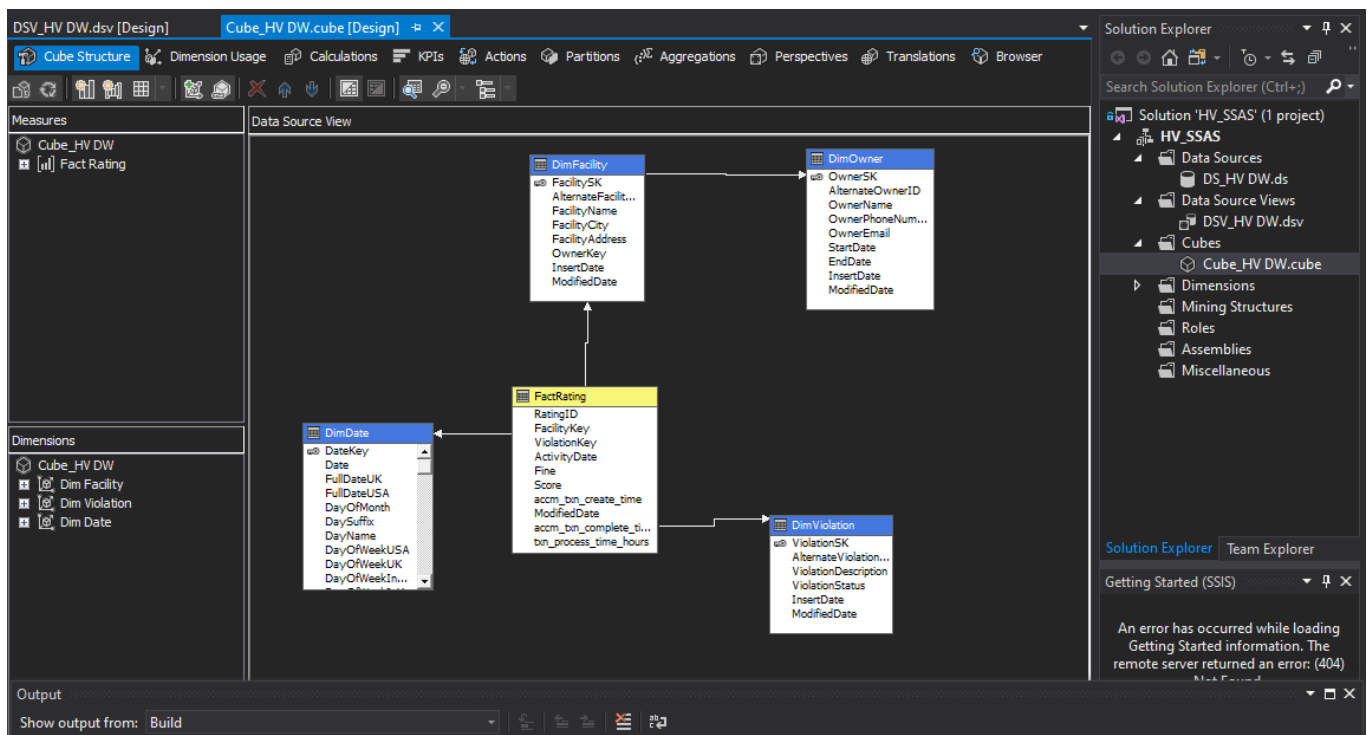
Measure group tables:
Suggest

- ☒ DimDate
- ☒ DimFacility
- ☒ DimOwner
- ☒ DimViolation
- ☒ FactRating

< Back Next > Finish >> Cancel



Implemented Cube:

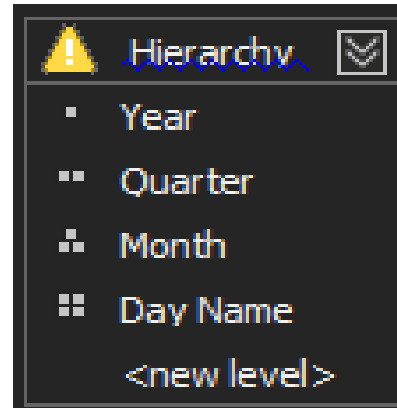
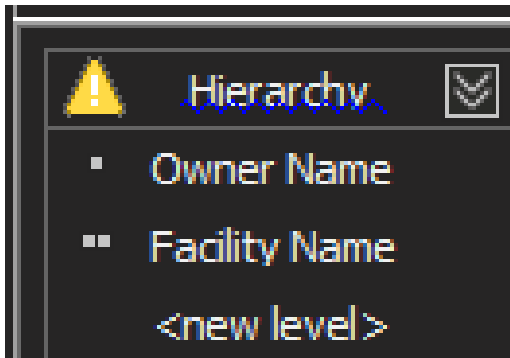


2.4 Step 4: Creating Hierarchies

In SSAS, hierarchies are useful tools for reducing attribute complexity and guiding users down a drill-down path.

In here, two hierarchies are mentioned,

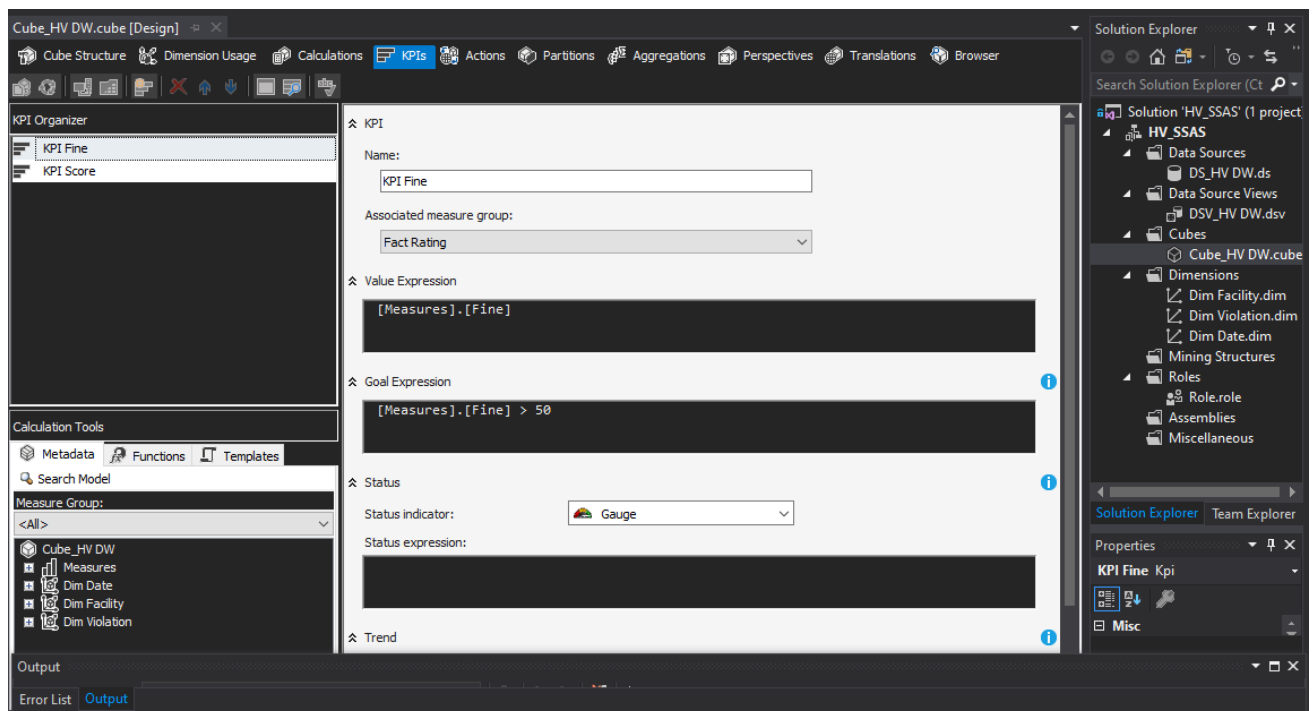
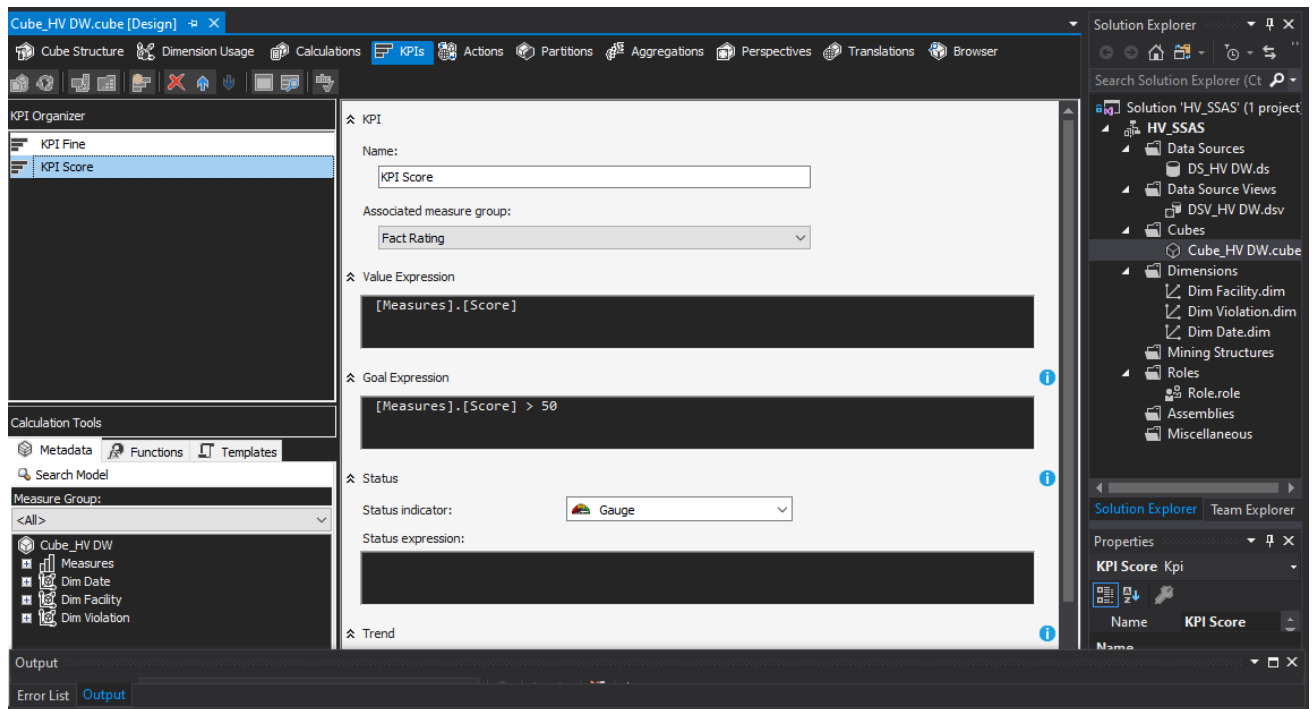
- .Facility Address and Facility City
- Date



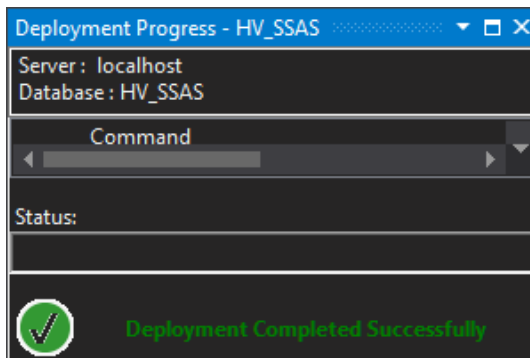
2.5 Step 5: Creating KPIs

KPIs are introduced to the database cube in SSAS to analyze business performance as represented in the cube data. A KPI is a collection of computations that is associated with a measure group.

Here, the KPI s created for the Score and the Fine.



2.6 Step 6: Deploying the Cube



Output

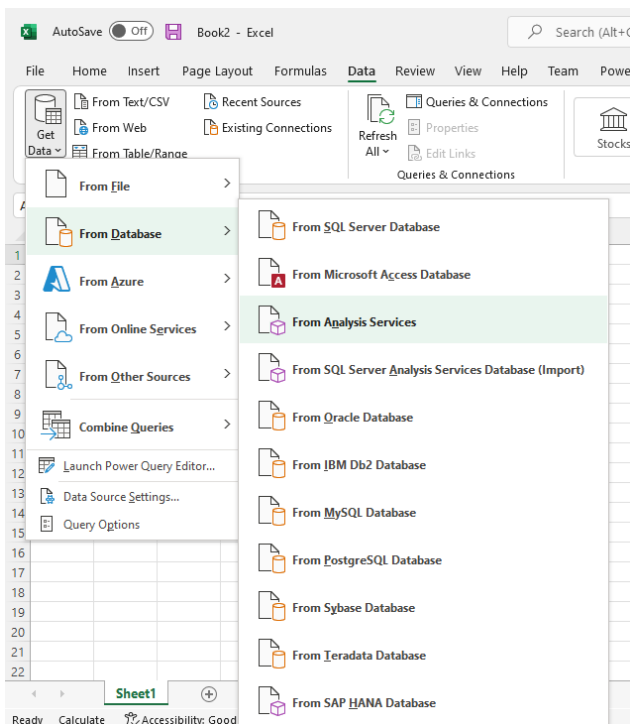
```
Show output from: Build
----- Build started: Project: HV_SSAS, Configuration: Development -----
Started Building Analysis Services project: Incremental ....
Dimension [Dim Facility] : Create hierarchies in non-parent child dimensions.
Dimension [Dim Violation] : Create hierarchies in non-parent child dimensions.
Dimension [Dim Date] : Create hierarchies in non-parent child dimensions.
Database [HV_SSAS] : The database has no Time dimension. Consider creating one.
Build complete -- 0 errors, 4 warnings
----- Deploy started: Project: HV_SSAS, Configuration: Development -----
Performing an incremental deployment of the 'HV_SSAS' database to the 'localhost' server.
Generating deployment script...
    Add Cube Cube_HV DW
    Process Database HV_SSAS
Done
Sending deployment script to the server...
Done
Deploy complete -- 0 errors, 0 warnings
===== Build: 1 succeeded or up-to-date, 0 failed, 0 skipped =====
===== Deploy: 1 succeeded, 0 failed, 0 skipped =====
|
```

3. Demonstration of OLAP Operations

Both business users and IT teams benefit from a successful OLAP system. This is an important aspect of Business Intelligence, as it provides powerful data mining and trend analysis capabilities. OLAP allows users to quickly evaluate large amounts of data from several perspectives.

Instead of using MDX query, the data tab in the ribbon is used to access data from my SSAS Cube in this scenario.

3.1 Connection to the SSAS Cube



Data Connection Wizard

Connect to Database Server

Enter the information required to connect to the database server.

1. Server name: DESKTOP-QJ3GV6A

2. Log on credentials

☒ Use Windows Authentication

☐ Use the following User Name and Password

User Name:

Password:

Cancel < Back Next > Finish



Data Connection Wizard

Select Database and Table

Select the Database and Table/Cube which contains the data you want.

Select the database that contains the data you want:

HV_SSAS

☒ Connect to a specific cube or table:

Name	Description	Modified	Created	Type
Cube_HV DW		5/16/2022 5:58:34 PM		CUBE

< >

Cancel < Back Next > Finish

3.2 Excel Report for OLAP Operations Demonstrations

- Report 1 and 2 – Drill down and roll up Demo
- Report 3– Slice Demo
- Report 4– Dice Demo
- Report 5 – Pivot Demo

3.2.1 Drill down and rollup demonstration

- The Role Up operation aggregates a multidimensional data cube either by climbing up the hierarchy or by reducing the dimensions.
- The Drill Down procedure is performed by either descending a dimension's concept hierarchy or adding a new dimension. This allows for the deployment of very detailed data from a data cube.

- **Report 1 - Total Score and Fine for the Facilities Owned by Owners**

ROLL UP

Here the Facility Name has been rolled up according to the owner's name

Total Score and Fine for the Facilities Owned by Owners		
Row Labels	Fine	Score
+ "110 SUNSHINE SMOOTHIES, INC"	3554	1090
+ "168 UNCLE JOHN, INC"	3048	1110
+ "24 HOUR FITNESS, USA, INC."	4066	1109
+ "38 STACK, INC."	3126	1118
+ "4'J BROTHERS, INC."	2567	1020
+ "510 BRW , LLC"	3836	1127
+ "6201 HOLLYWOOD DONUTS, LLC"	3485	1115
+ "6610 MELROSE MANAGMENT, LLC"	3191	1113
+ "9901 LA CIENEGA (LA) ESONG, LLC"	3066	1085
+ "A & B AZUSA, INC"	3750	1093
+ "ABDELKHIK, BEDAIR"	3263	1105
Grand Total	3596150	1104941

DRILL DOWN

Total Score and Fine for the Facilities Owned by Owners		
Row Labels	Fine	Score
+ "110 SUNSHINE SMOOTHIES, INC"	3554	1090
+ "168 UNCLE JOHN, INC"	3048	1110
- "24 HOUR FITNESS, USA, INC."		
7 STAR MARKET	439	94
A NUTRITION	151	87
AA CHINESE EXPRESS FAST FOOD	426	95
AN'S CHAN BANG	456	90
BIONICOS GENESIS	225	94
BOON ARUNEE THAI HOUSE	211	94
CARNIVAL DELIGHT	113	94
CELADON THAI KITCHEN	396	91
B B BARGAIN	363	91
CREPES SANS FRONTIERS	249	94
DELI ROBERT'S PIZZA	237	96
EASTSIDE MARKET INC	154	98
GIGI HOUSE	155	93
JACK IN THE BOX #229	347	94
LA POBLANA MEAT MARKET #2	101	95
OPPA JUICERY	426	91
TAQUERIA SANCHEZ	348	91

- Report 2 - Total Score and Total Fine belongs to the Owner by Year

ROLL UP

Here the Owner Name has been rolled up according to the Year

1	Total Score and Total Fine belongs to Owner		
2	Row Labels	Fine	Score
3	+ 2018	1197038	368831
4	+ 2019	1211226	369057
5	+ 2020	1187886	367053
6	Grand Total	3596150	1104941

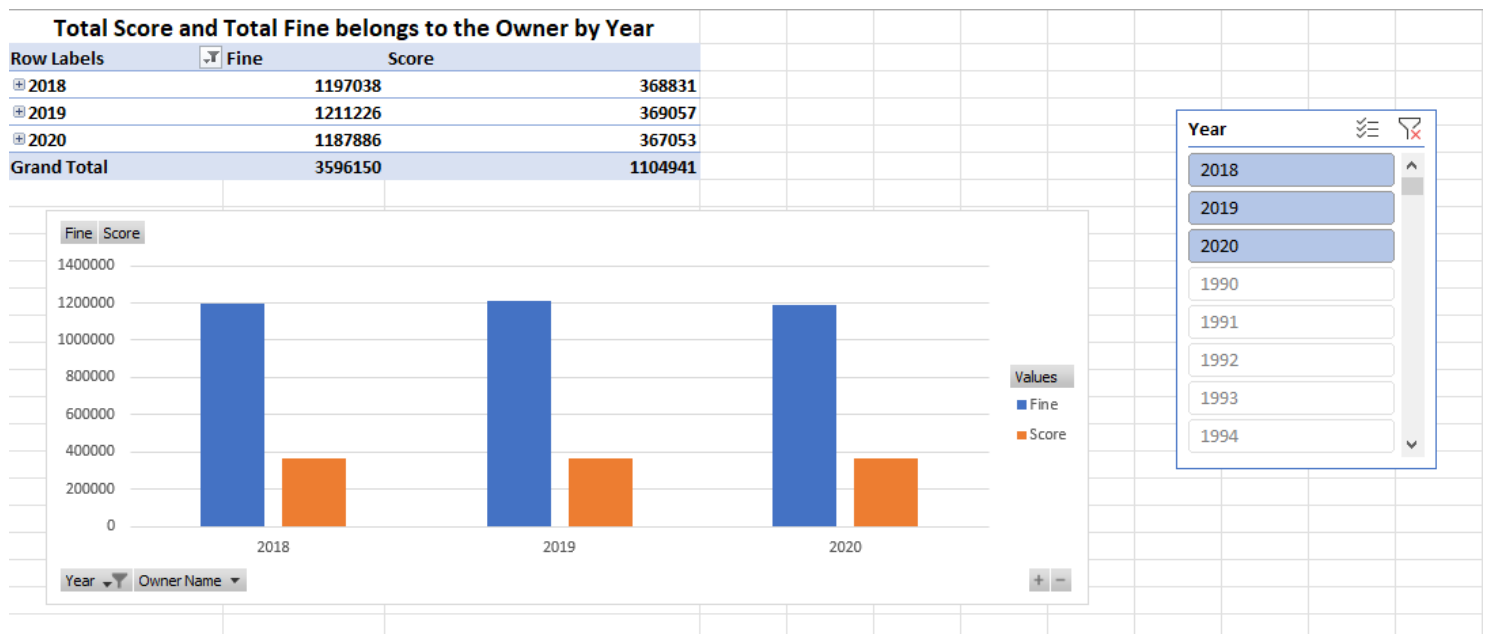
DRILL DOWN

1	Total Score and Total Fine belongs to Owner		
2	Row Labels	▼ Fine	Score
3	⊕ 2018	1197038	368831
4	⊕ 2019	1211226	369057
5	⊖ 2020		
6	"110 SUNSHINE SMOOTHIES, INC"	1542	457
7	"168 UNCLE JOHN, INC"	1410	453
8	"24 HOUR FITNESS, USA, INC."	436	188
9	"38 STACK, INC."	727	283
10	"4'J BROTHERS, INC."	200	92
11	"510 BRW , LLC"	785	186
12	"6201 HOLLYWOOD DONUTS, LLC"	1695	470
13	"6610 MELROSE MANAGMENT, LLC"	1158	365
14	"9901 LA CIENEGA (LA) ESONG, LLC"	1406	560
15	"A & B AZUSA, INC"	1339	453
16	"ABDELKHIK, BEDAIR"	1475	552
17	"ACCESS EXPRESS, INC."	461	275
18	"ACOMERICA, INC."	1673	550
19	"ACUNA, ALMA"	395	185
20	"AGUILAR, NELSON R"	1134	362
21	"AJISEN, RAMEN INC./JRNOODLE,"	2344	746
22	"ALI, SYED"	1655	558
23	"AMADOR, MARIA GUADALUPE"	1254	364
24	"AMBREEN ENTERPRISES, INC."	2263	633
25	"AMERICAN GIRL RETAIL, INC."	1246	435
26	"AMORNYOUT, MONTREE"	1193	367
27	"ANDREWS,ALEX DBA"	2082	558
28	"ANGSUTHUMPKIT, SATIT"	967	272
29	"APRICODE KDS, CORP"	1189	375
30	"AREAS SKYVIEW LAX JV, LLC"	1002	280
31	"AREAS USA LAX. LLC"	161	90

3.2.2 Slice Demonstration

- A Slice is a two-dimensional representation of an OLAP data cube that arranges data in a grid like a spreadsheet. A Slice function, like a report or a query, returns data in response to a request for what to view.

- **Report 3 - Total Score and Total Fine belong to the Owner by Year**

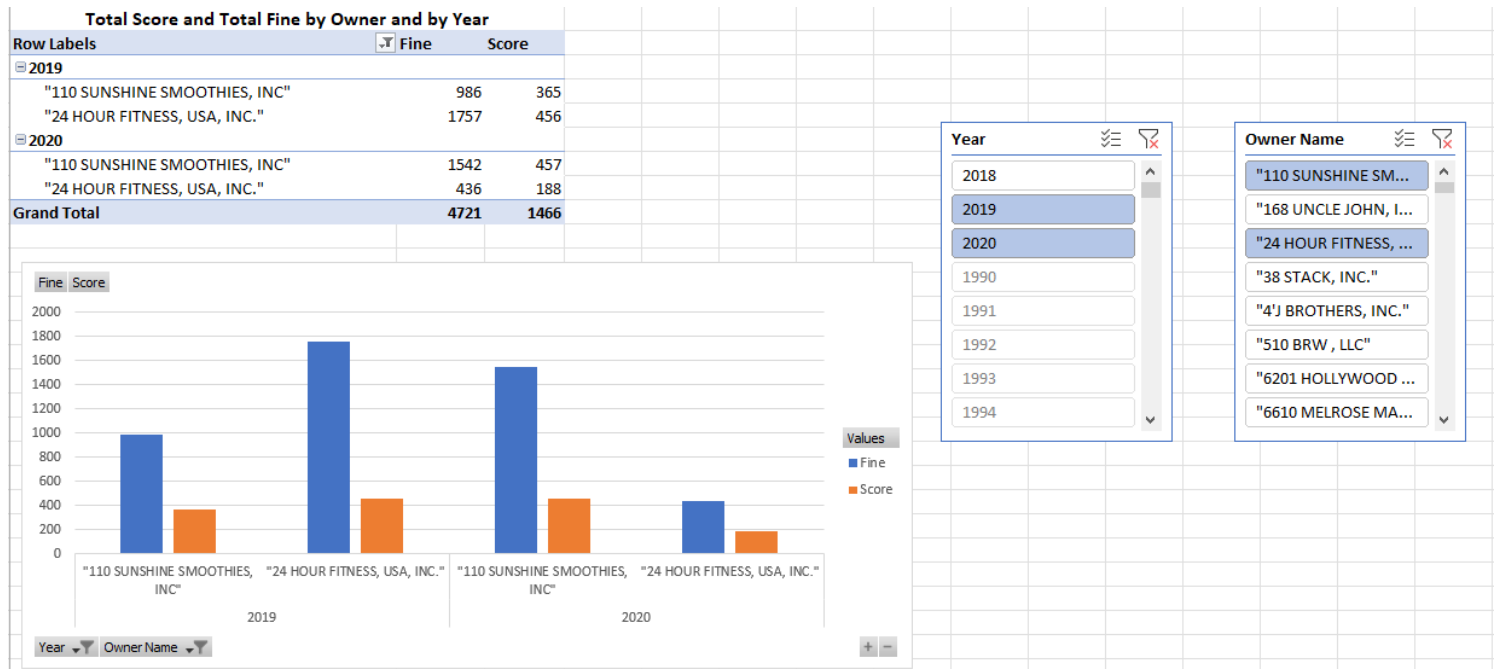


This displays the Total Score and the Total Fine of the owners by Year.

3.2.3 Dice Demonstration

- The operation of dice is identical to that of a slice. In dice, you choose two or more dimensions to create a sub-cube. Dicing, on the other hand, is a zoom feature that selects a subset of all dimensions for certain values of the dimension.

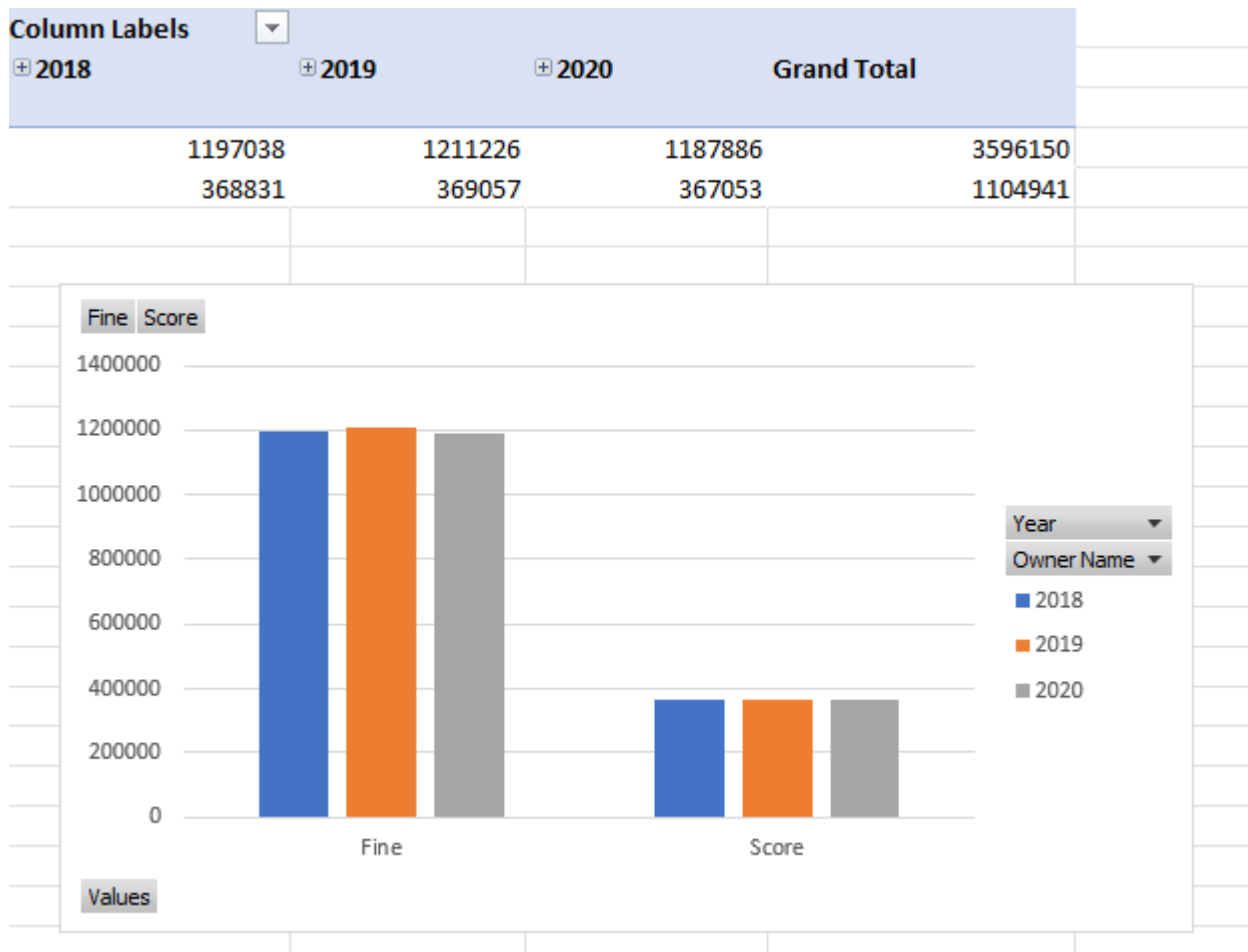
- **Report 4 – Total Score and Total Fine by Year and by Owner Name**



This displays the Total score and the Total Fine according to the Year and Owner Name.

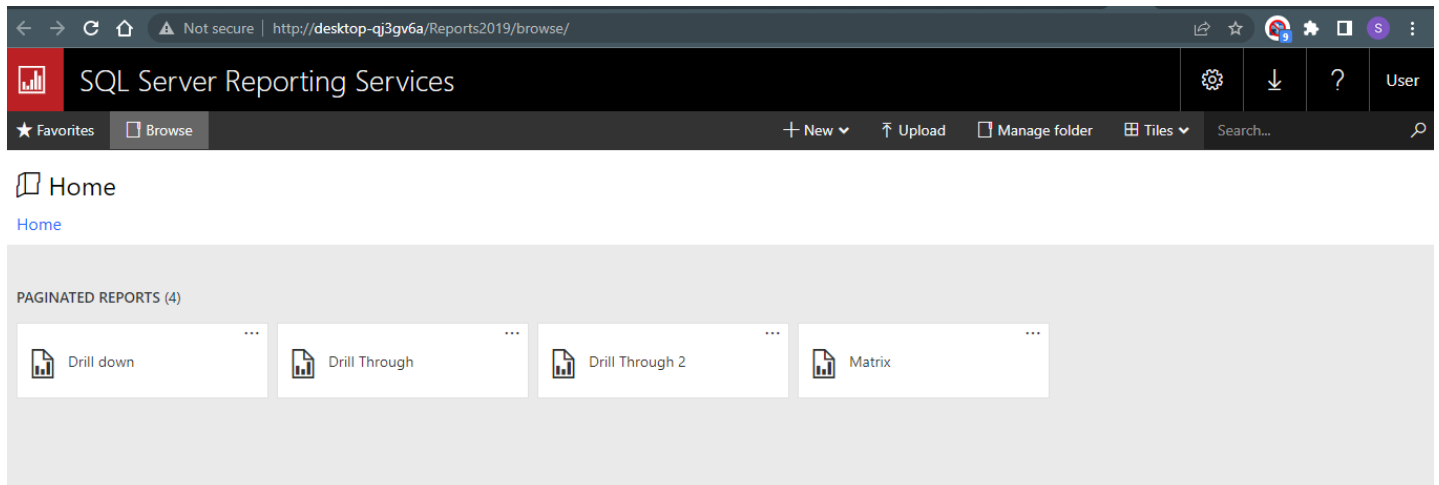
3.2.4 Pivot

- Report 5 - Total Fine and Total Score by Year and Owner Name



4. SQL Server Reporting Service (SSRS) Reports

SQL Server Reporting Service (SSRS) is a reporting tool that allows users to create structured reports using tables, pictures, graphs, and charts. These reports are stored on a server and can be run at any time by specifying parameters.



To generate following reports, report builder application was used.

4.1 Basic steps of Report builder

4.1.1 Step 1: Creating Data source

This step will link to the data warehouse that was previously constructed in assignment 1.

The image displays two side-by-side screenshots of SQL Server Reporting Services (SSRS) configuration windows.

Left Screenshot: Connection Properties

- Data source:** Microsoft SQL Server (SqlClient) [Change...]
- Server name:** DESKTOP-QJ3GV6A [Refresh]
- Log on to the server:**
 - ☒ Use Windows Authentication
 - ☐ Use SQL Server Authentication
 - User name: []
 - Password: []
 - ☐ Save my password
- Connect to a database:**
 - ☒ Select or enter a database name: HV_DW
 - ☐ Attach a database file: [] [Browse...]
 - Logical name: []
- [Advanced...]
- [Test Connection] [OK] [Cancel]

Right Screenshot: Data Source Properties

- General** | Credentials
- Change name, type, and connection options.
- Name:** DS_HV_DW
- ☐ Use a shared connection or report model
- ☒ Use a connection embedded in my report
- Select connection type:** Microsoft SQL Server
- Connection string:** Data Source=DESKTOP-QJ3GV6A;Initial Catalog=HV_DW [Build...] [fx]
- [Test Connection]
- ☐ Use single transaction when processing the queries
- [Help] [OK] [Cancel]

4.1.2 Step 2: Creating a dataset

In this stage, we'll import a necessary dataset into our report builder utilizing a query that will be manually assigned according to the needs.

Dataset Properties

Choose a data source and create a query.

Name: Dataset_Rating

☐ Use a shared dataset.
☒ Use a dataset embedded in my report.

Data source: DS_HV_DW New...

Query type: ☒ Text ☐ Table ☐ Stored Procedure

Query:

```
select dp.ViolationDescription, dp.ViolationStatus, dpc.FacilityName,
dpc.FacilityAddress,
dc.OwnerName, dc.AlternateOwnerID, dd.Month, dd.MonthName, dd.Year,
fs.Fine, fs.Score
from FactRating fs
inner join DimViolation dp on fs.ViolationKey= dp.ViolationSK
inner join DimFacility dpc on fs.FacilityKey= dpc.FacilitySK
inner join DimOwner dc
on dpc.OwnerKey = dc.OwnerSK
inner join DimDate dd
on fs.ActivityDate = dd.DateKey
```

Query Designer... Import... Refresh Fields

Time out (in seconds): 0

Help OK Cancel

This is the query used when creating the data set

```
select dp.ViolationDescription, dp.ViolationStatus, dpc.FacilityName, dpc.FacilityAddress,
dc.OwnerName, dc.AlternateOwnerID, dd.Month, dd.MonthName, dd.Year, fs.Fine, fs.Score
from FactRating fs
inner join DimViolation dp on fs.ViolationKey= dp.ViolationSK
inner join DimFacility dpc on fs.FacilityKey= dpc.FacilitySK
inner join DimOwner dc
on dpc.OwnerKey = dc.OwnerSK
inner join DimDate dd
on fs.ActivityDate = dd.DateKey
```

4.1.3 Step 3: Creating a Matrix or a Table

Using the imported dataset, we will create a matrix or a table according to our requirements

New Table or Matrix



Arrange fields

Arrange fields to group data in rows, columns, or both, and choose values to display. Data expands across the page in column groups and down the page in row groups. Use functions such as Sum, Avg, and Co...

Available fields

ViolationDescription
ViolationStatus
FacilityName
FacilityAddress
OwnerName
AlternateOwnerID
Month
MonthName
Year
Fine
Score

Column groups

Year

Row groups

OwnerName
FacilityName

Σ Values

Sum(Fine)
Sum(Score)

Help

< Back

Next >

Cancel

4.1.4 Step 4: Report Demonstration

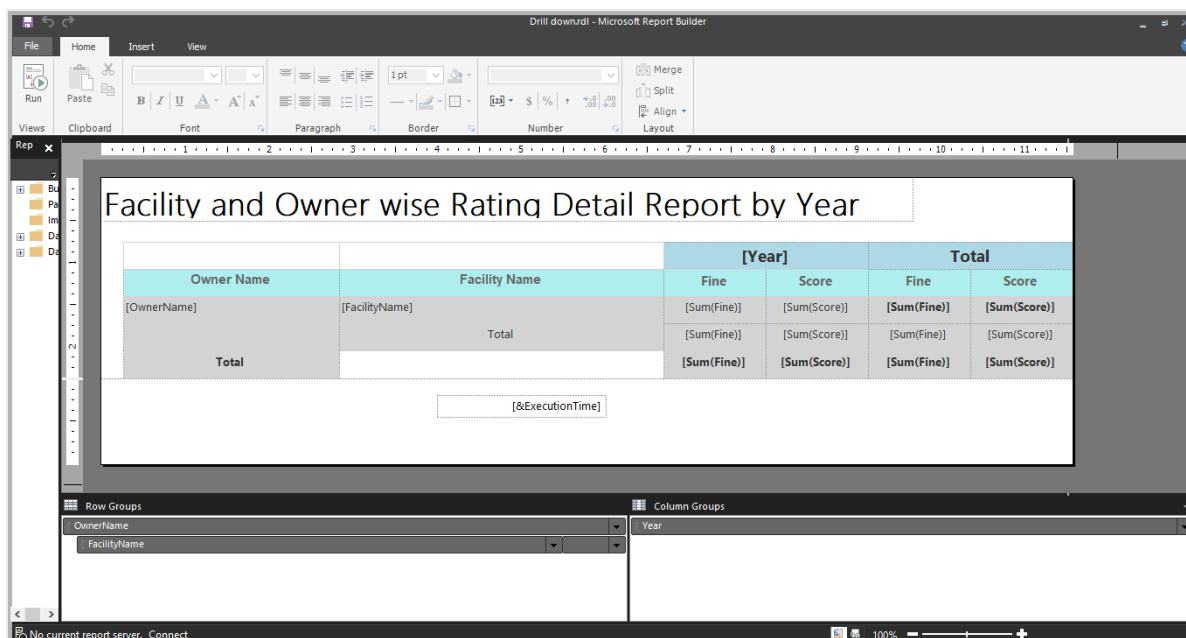
- **Report 1 – Matrix**
 - **Report 2 – Report with Multi-parameter**
 - **Report 3 – Drill down**
 - **Report 4 – Drill through**
-
- **Report 1 – Matrix –Owner-wise Rating Detail Report by Year**

In SSRS, a matrix is like a table, but it is set up to display data grouped by columns and rows, with aggregate data at the intersection.

Owner-wise Rating Detail Report by Year

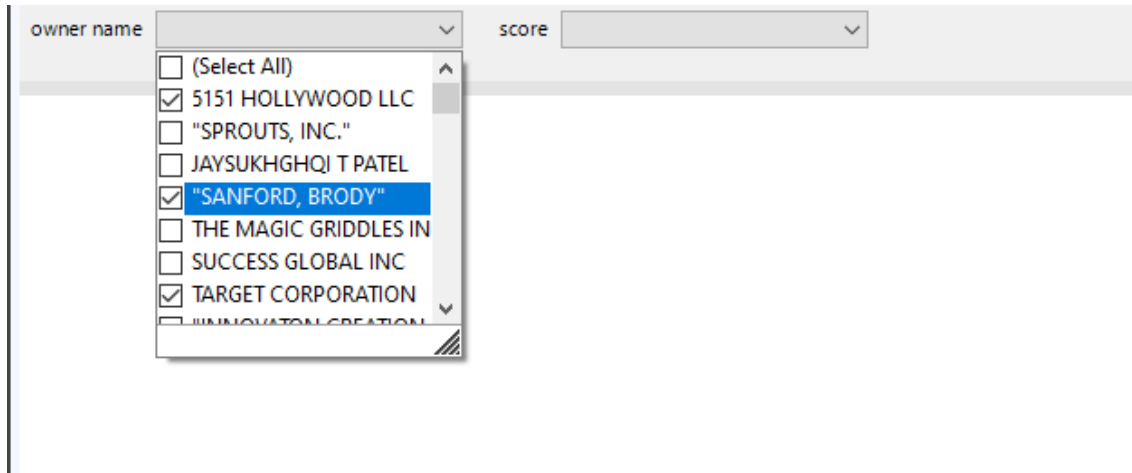
Owner Name	2018		2019		2020		Total	
	Fine	Score	Fine	Score	Fine	Score	Fine	Score
"110 SUNSHINE SMOOTHIES, INC"	1026	268	986	365	1542	457	3554	1090
"168 UNCLE JOHN, INC"	734	279	904	378	1410	453	3048	1110
"24 HOUR FITNESS, USA, INC."	1873	465	1757	456	436	188	4066	1109
"38 STACK, INC."	1056	372	1343	463	727	283	3126	1118
"4'J BROTHERS, INC."	1330	563	1037	365	200	92	2567	1020
"510 BRW , LLC"	2137	657	914	284	785	186	3836	1127
"6201 HOLLYWOOD DONUTS, LLC"	1409	479	381	166	1695	470	3485	1115
"6610 MELROSE MANAGMENT, LLC"	989	378	1044	370	1158	365	3191	1113
"9901 LA CIENEGA (LA) ESONG, LLC"	1552	433	108	92	1406	560	3066	1085
"A & B AZUSA, INC"			2411	640	1339	453	3750	1093
"ABDELKHIK, BEDAIR"	807	279	981	274	1475	552	3263	1105

Design View:



2 – Multi-Parameters – Total Rating Value (Score) by Owner

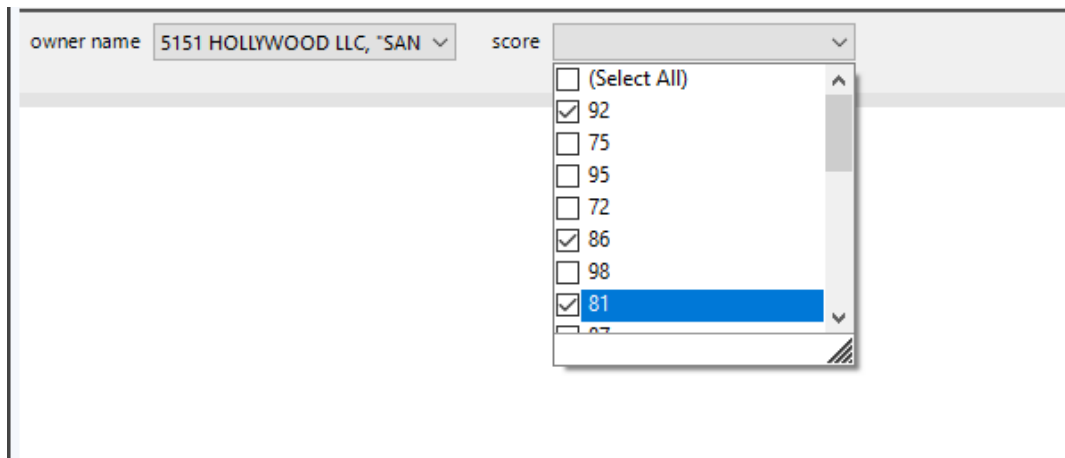
In SSRS using Multiparameter-values allows us to pass either one or more than the input value to the report. Also, it offers a “Select All” option that helps to select all parameter values.



A screenshot of a report parameter selection interface. The 'owner name' dropdown menu is open, displaying a list of options with checkboxes. The selected options are '5151 HOLLYWOOD LLC', '"SANFORD, BRODY"', and 'TARGET CORPORATION'. The 'score' dropdown menu is also visible but not open.

owner name	score
<input type="checkbox"/> (Select All)	
<input checked="" type="checkbox"/> 5151 HOLLYWOOD LLC	
<input type="checkbox"/> "SPROUTS, INC."	
<input type="checkbox"/> JAYSUKHGHQI T PATEL	
<input checked="" type="checkbox"/> "SANFORD, BRODY"	
<input type="checkbox"/> THE MAGIC GRIDDLES IN	
<input type="checkbox"/> SUCCESS GLOBAL INC	
<input checked="" type="checkbox"/> TARGET CORPORATION	
<input type="checkbox"/> INNOVATION CREATION	

Selecting the Owner name



A screenshot of the same report parameter selection interface. The 'owner name' dropdown menu is now closed, and the 'score' dropdown menu is open. The selected options are '92', '86', '81', and '87'. The 'owner name' field now displays '5151 HOLLYWOOD LLC, "SAN'.

owner name	score
5151 HOLLYWOOD LLC, "SAN	<input type="checkbox"/> (Select All)
	<input checked="" type="checkbox"/> 92
	<input type="checkbox"/> 75
	<input type="checkbox"/> 95
	<input type="checkbox"/> 72
	<input checked="" type="checkbox"/> 86
	<input type="checkbox"/> 98
	<input checked="" type="checkbox"/> 81
	<input checked="" type="checkbox"/> 87

Selecting the Score According to the Owner name

owner name 5151 HOLLYWOOD LLC, "SAN" score 92, 86, 81

Owner-wise Rating Detail Report by Year

Owner Name	Score	2018	2019	2020	Total
☐ "SANFORD, BRODY"	Total	178	410		588
☐ 5151 HOLLYWOOD LLC	Total		251	409	660
☐ TARGET CORPORATION	Total	491		455	946
Total		669	661	864	2194

5/17/2022 7:33:04 PM

owner name 5151 HOLLYWOOD LLC, "SAN" score 92, 86, 81

Owner-wise Rating Detail Report by Year

Owner Name	Score	2018	2019	2020	Total
☐ "SANFORD, BRODY"	92	178	410		588
	Total	178	410		588
☐ 5151 HOLLYWOOD LLC	92		251	409	660
	Total		251	409	660
☐ TARGET CORPORATION	92	491		455	946
	Total	491		455	946
Total		669	661	864	2194

5/17/2022 7:33:04 PM

Design View

Report Data

New Edit...

- Built-in Fields
- Parameters
 - owner_name
 - score
- Images
- Data Sources
 - DS_HV_DW
- Datasets
 - DS_HV_DW_2
 - ViolationDescription
 - ViolationStatus
 - FacilityName
 - FacilityAddress
 - OwnerName
 - AlternateOwnerID
 - Month
 - MonthName
 - Year
 - Fine
 - Score
 - Owner_list
 - OwnerName
 - OwnerSK
 - AlternateOwnerID
 - Score_list
 - Score

Owner-wise Rating Detail Report by Year

Owner Name	Score	[Year]	Total
[OwnerName]	[Score]	[Sum(Fine)]	[Sum(Fine)]
	Total	[Sum(Fine)]	[Sum(Fine)]
Total		[Sum(Fine)]	[Sum(Fine)]

[&ExecutionTime]

Row Groups

- OwnerName
- Score

Column Groups

- Year

- Here we have created two parameters and three data sets as following.
 - DS_HV_DW_2: This data set contains the rating data which will be displayed in the report through the matrix.

Dataset Properties

Choose a data source and create a query.

Name: DS_HV_DW_2

☐ Use a shared dataset.
☒ Use a dataset embedded in my report.

Data source: DS_HV_DW New...

Query type:
☒ Text ☐ Table ☐ Stored Procedure

Query:

```
select dp.ViolationDescription, dp.ViolationStatus, dpc.FacilityName,
dpc.FacilityAddress,
dc.OwnerName, dc.AlternateOwnerID, dd.Month, dd.MonthName, dd.Year,
fs.Fine, fs.Score
from FactRating fs
inner join DimViolation dp on fs.ViolationKey= dp.ViolationSK
inner join DimFacility dpc on fs.FacilityKey= dpc.FacilitySK
inner join DimOwner dc
on dpc.OwnerKey = dc.OwnerSK
inner join DimDate dd
on fs.ActivityDate = dd.DateKey

where dc.OwnerName in (@owner_name) and fs.Score in (@score)
```

Query Designer... Import... Refresh Fields

Time out (in seconds): 0

Help OK Cancel

- Query:


```
select dp.ViolationDescription, dp.ViolationStatus, dpc.FacilityName, dpc.FacilityAddress,
dc.OwnerName, dc.AlternateOwnerID, dd.Month, dd.MonthName, dd.Year, fs.Fine, fs.Score
from FactRating fs
inner join DimViolation dp on fs.ViolationKey= dp.ViolationSK
inner join DimFacility dpc on fs.FacilityKey= dpc.FacilitySK
inner join DimOwner dc
on dpc.OwnerKey = dc.OwnerSK
inner join DimDate dd
on fs.ActivityDate = dd.DateKey

where dc.OwnerName in (@owner_name) and fs.Score in (@score)
```

- Owner_list: This data set contains the required owner names which is needed to be shown for selection as the 1st parameter.

Dataset Properties

Query

Choose a data source and create a query.

Name: Owner_list

☐ Use a shared dataset.
☒ Use a dataset embedded in my report.

Data source: DS_HV_DW New...

Query type: ☒ Text ☐ Table ☐ Stored Procedure

Query: Select OwnerName, OwnerSK, AlternateOwnerID from DimOwner

Query Designer... Import... Refresh Fields

Time out (in seconds): 0

Help OK Cancel

- Query:

Select OwnerName, OwnerSK, AlternateOwnerID from DimOwner

- Score_list: This contains the scores belongs to the selected owner. When the owner names are selected, they will be passed as a parameter and the relevant data will be retrieved from the database.

Dataset Properties

Query

Choose a data source and create a query.

Name: Score_list

☐ Use a shared dataset.
☒ Use a dataset embedded in my report.

Data source: DS_HV_DW New...

Query type: ☒ Text ☐ Table ☐ Stored Procedure

Query: select distinct (Score) from FactRating

Query Designer... Import... Refresh Fields

Time out (in seconds): 0

Help OK Cancel

- Query: select distinct (Score) from FactRating

- **Report 3 – Drill down – Facility and Owner-wise Rating Detail Report by Year**

Drilling down in SSRS refers to allowing users to view or conceal column data using plus and minus symbols on a textbox (In short, providing interactivity to the user).

Facility and Owner wise Rating Detail Report by Year

Owner Name	Facility Name	2018		2019		2020	
		Fine	Score	Fine	Score	Fine	Score
⊞ "110 SUNSHINE SMOOTHIES, INC"	Total	1026	268	986	365	1542	457
⊞ "168 UNCLE JOHN, INC"	Total	734	279	904	378	1410	453
⊞ "24 HOUR FITNESS, USA, INC."	Total	1873	465	1757	456	436	188
⊞ "38 STACK, INC."	Total	1056	372	1343	463	727	283
⊞ "4'J BROTHERS, INC."	Total	1330	563	1037	365	200	92
⊞ "510 BRW , LLC"	Total	2137	657	914	284	785	186
⊞ "6201 HOLLYWOOD DONUTS, LLC"	Total	1409	479	381	166	1695	470
⊞ "6610 MELROSE MANAGMENT, LLC"	Total	989	378	1044	370	1158	365
⊞ "9901 LA CIENEGA (LA) ESONG, LLC"	Total	1552	433	108	92	1406	560
⊞ "A & B AZUSA, INC"	Total			2411	640	1339	453
⊞ "ABDELKHIK, BEDAIR"	Total	807	279	981	274	1475	552
⊞ "ACCESS EXPRESS, INC."	Total	1247	369	1359	472	461	275
⊞ "ACOMERICA, INC."	Total	814	261	1040	278	1673	550

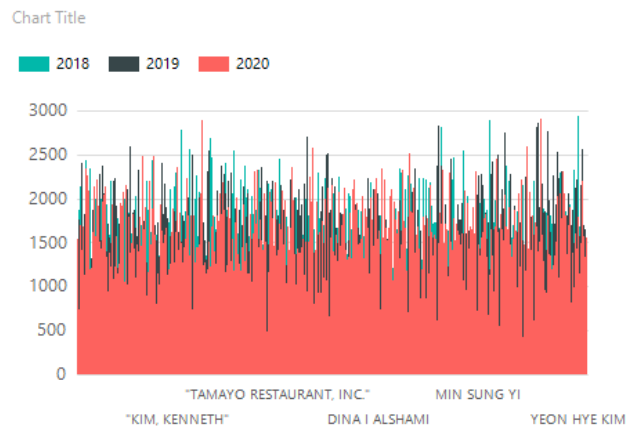
When you click on the plus mark in front of the Owner Name, it will display the details of Facility Names owned by that Owner.

Design View

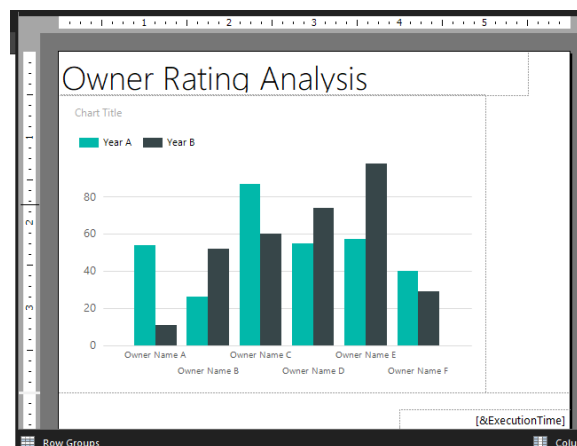
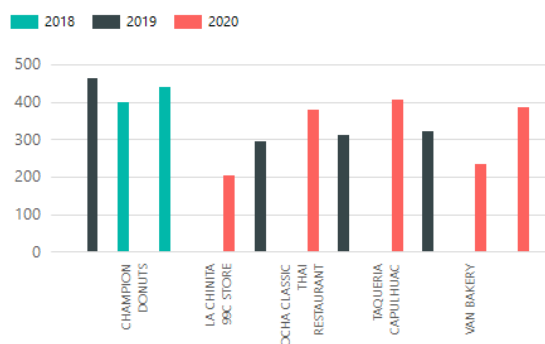
Facility and Owner wise Rating Detail Report by Year					
Owner Name	Facility Name	[Year]		Total	
		Fine	Score	Fine	Score
[OwnerName]	[FacilityName]	[Sum(Fine)]	[Sum(Score)]	[Sum(Fine)]	[Sum(Score)]
	Total	[Sum(Fine)]	[Sum(Score)]	[Sum(Fine)]	[Sum(Score)]
Total		[Sum(Fine)]	[Sum(Score)]	[Sum(Fine)]	[Sum(Score)]
[&ExecutionTime]					

- Report 4 – Drill through – Owner Rating Analysis

Owner Rating Analysis



This report displays owner ratings. To get the rating of a specific owner we have to click on the required owner name cell.



- After clicking on the owner name of the main report the sub report (Drill Through 2) with the bar graph will be displayed.
- Button click action has to be set for the main report (Drill Through) on required text box.
- Then a parameter named as owner_name is passed to the sub report which will use the parameter to get the required data according to the passed owner name.

Series Properties

Series Data
Visibility
Axes and Chart Area
Markers
Legend
Action
Fill
Border
Shadow

Change action options.

Enable as an action:

☐ None
☒ Go to report
☐ Go to bookmark
☐ Go to URL

Specify a report:

/Drill Through 2

Use these parameters to run the report:

Name	Value	Omit
owner_name	[OwnerName]	<input type="checkbox"/>