COMP 309-005 Data Warehousing and Mining

Assignment 1: Building an OLAP cube

# Objectives

It is required that you research the benefits that a data warehouse brings to a business. This would be reflected in the objectives. Here you will list the anticipated benefits of the cube.

Each “time for action” section: Summarize the steps and provide the screen shots of the intermediate processes and summarize the results.

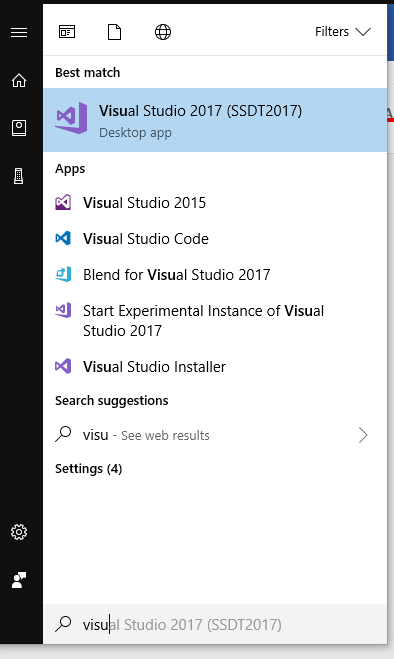
An OLAP cube is …

# Benefits and ???

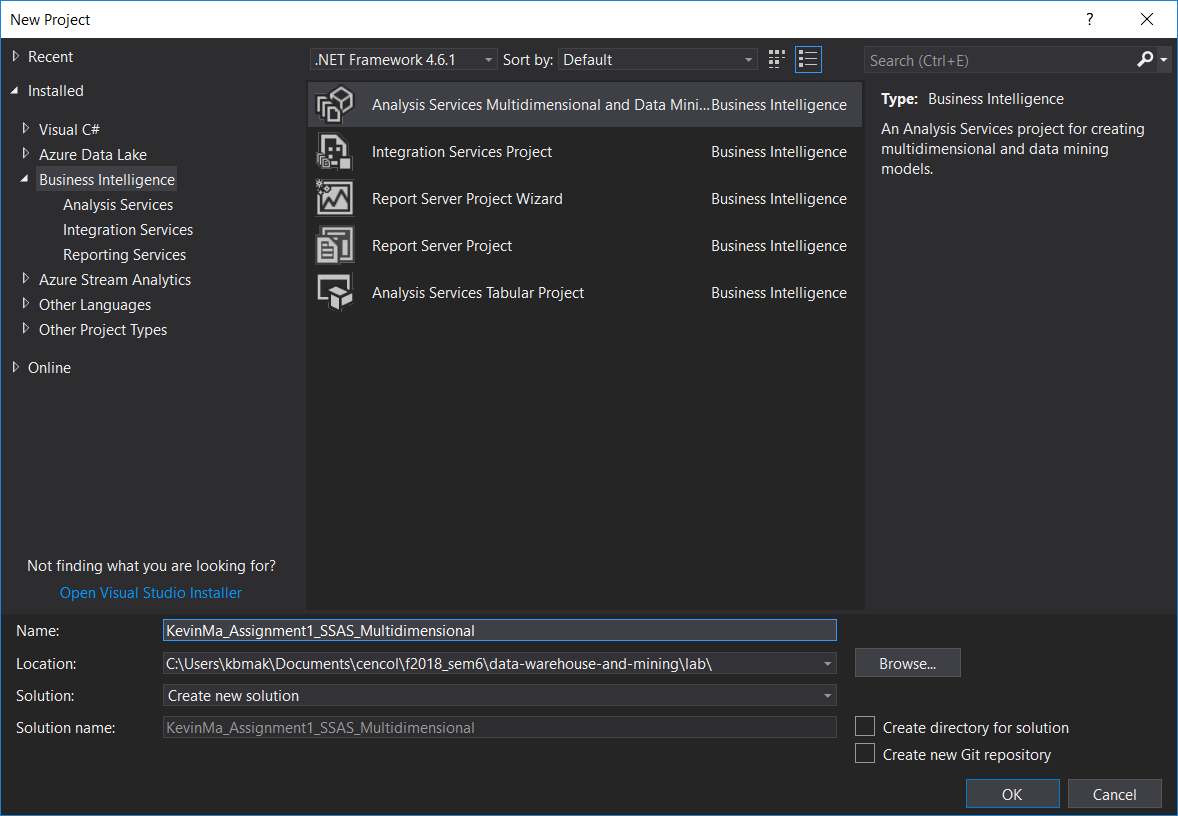
Developing

# Time for action – creating an Analysis Services Project

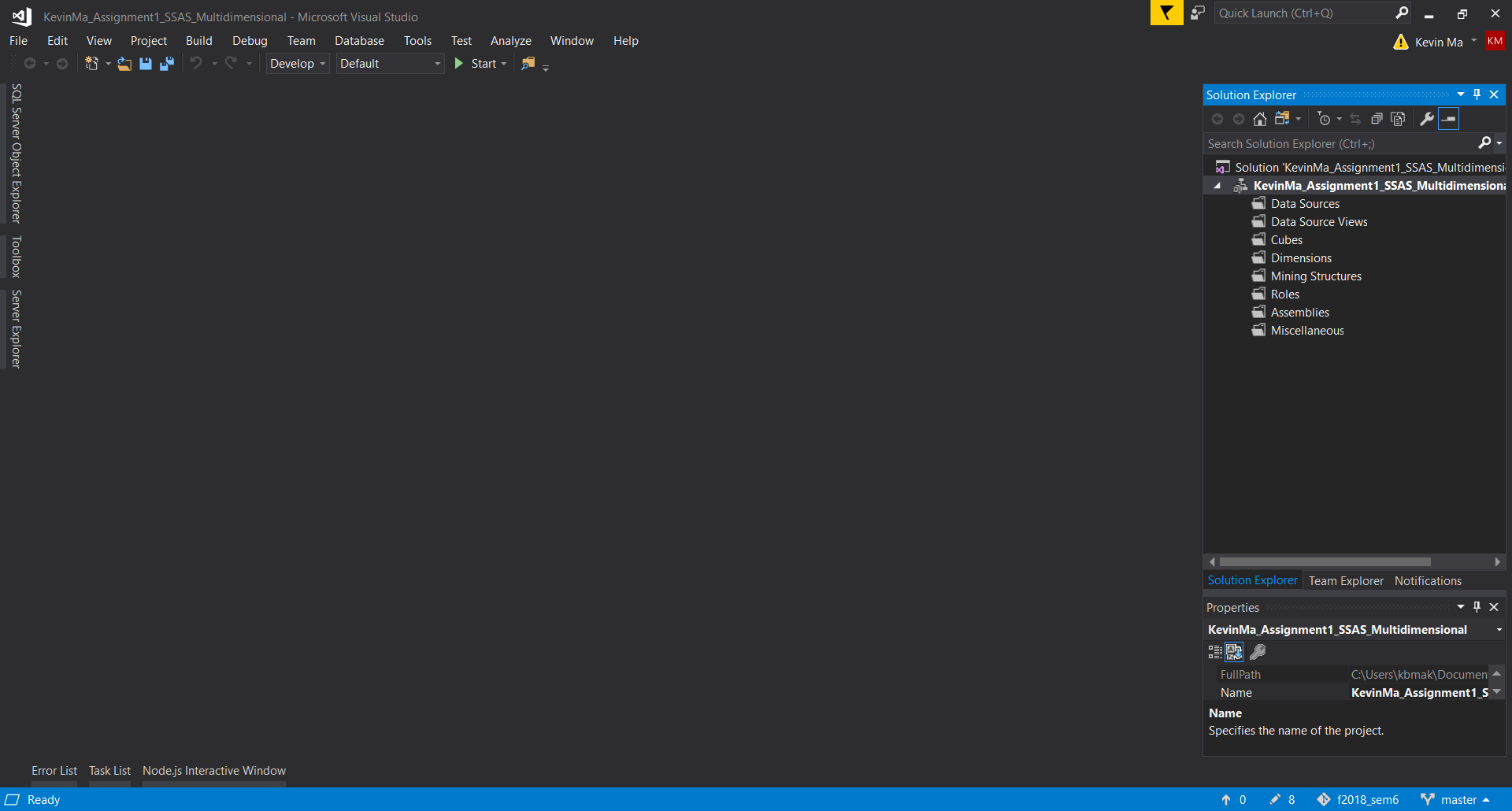
1. Open SQL Server Data Tools for Visual Studio:



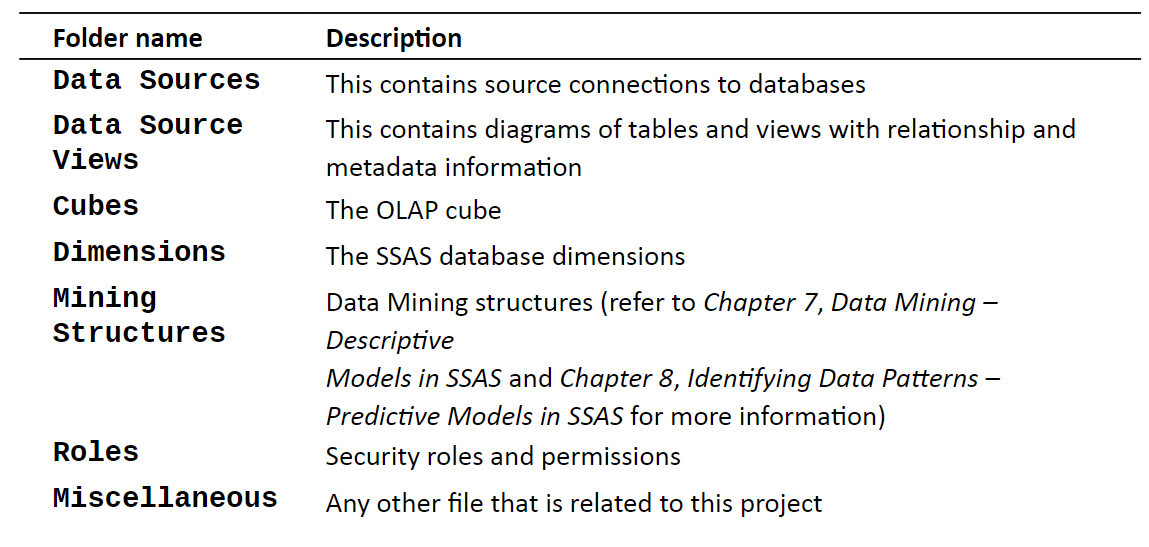
1. Create a new Analysis Services Multidimensional and Data Mining Project from the templates:



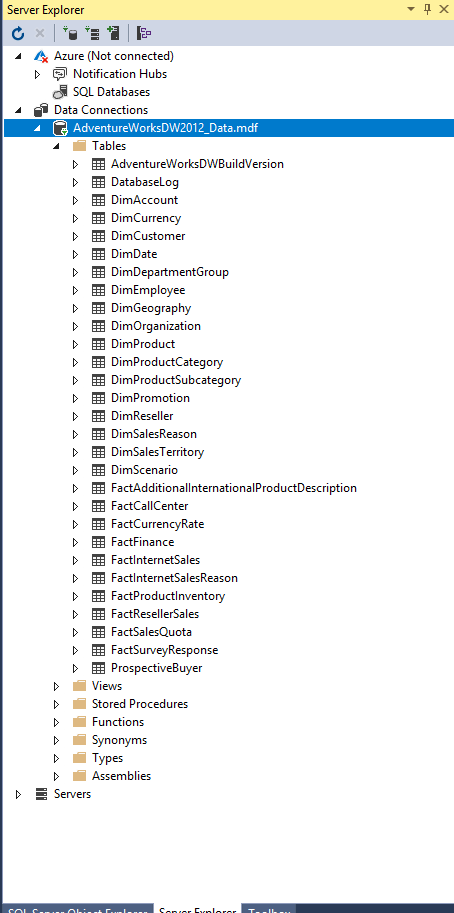
1. Results: A new project was created ☺!



The folders created in the new project represent the following:

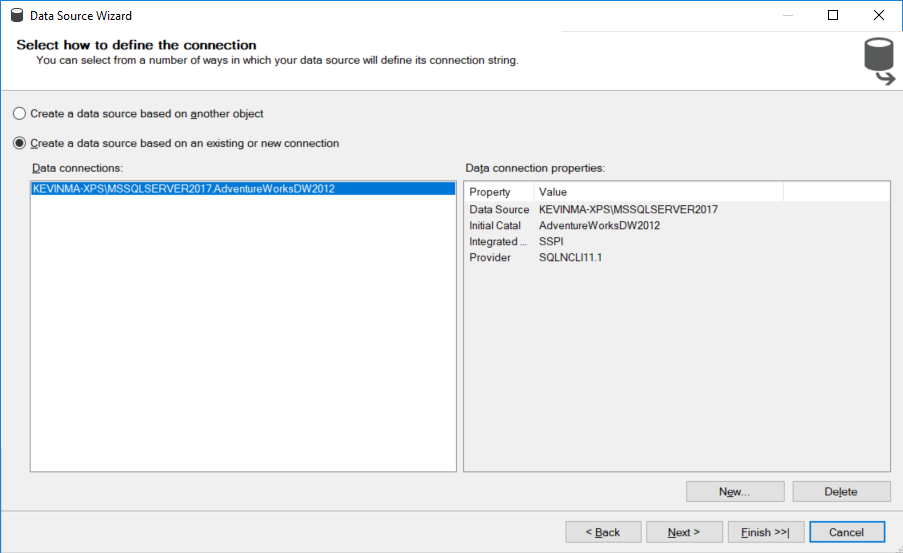


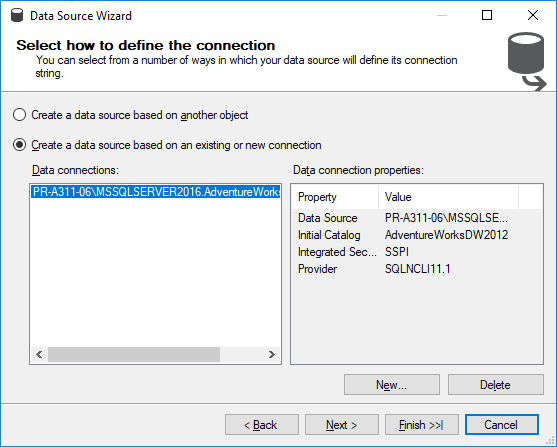
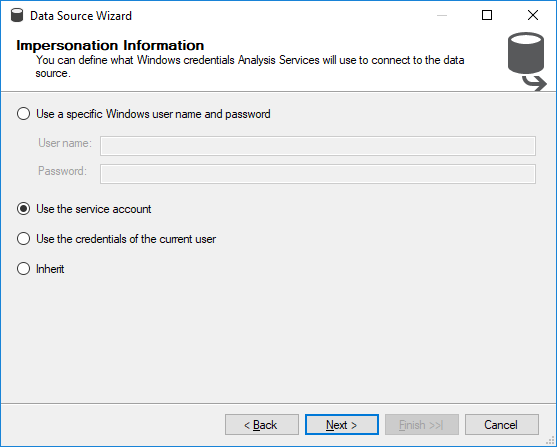
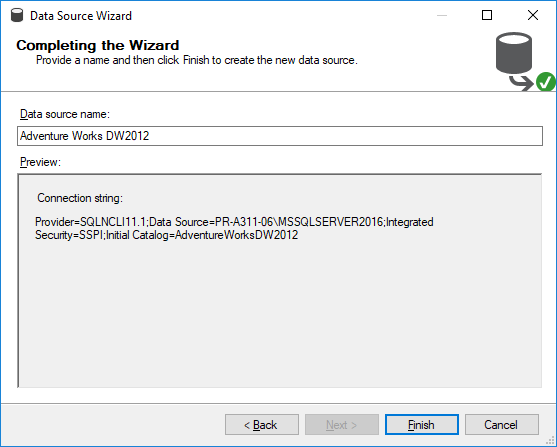
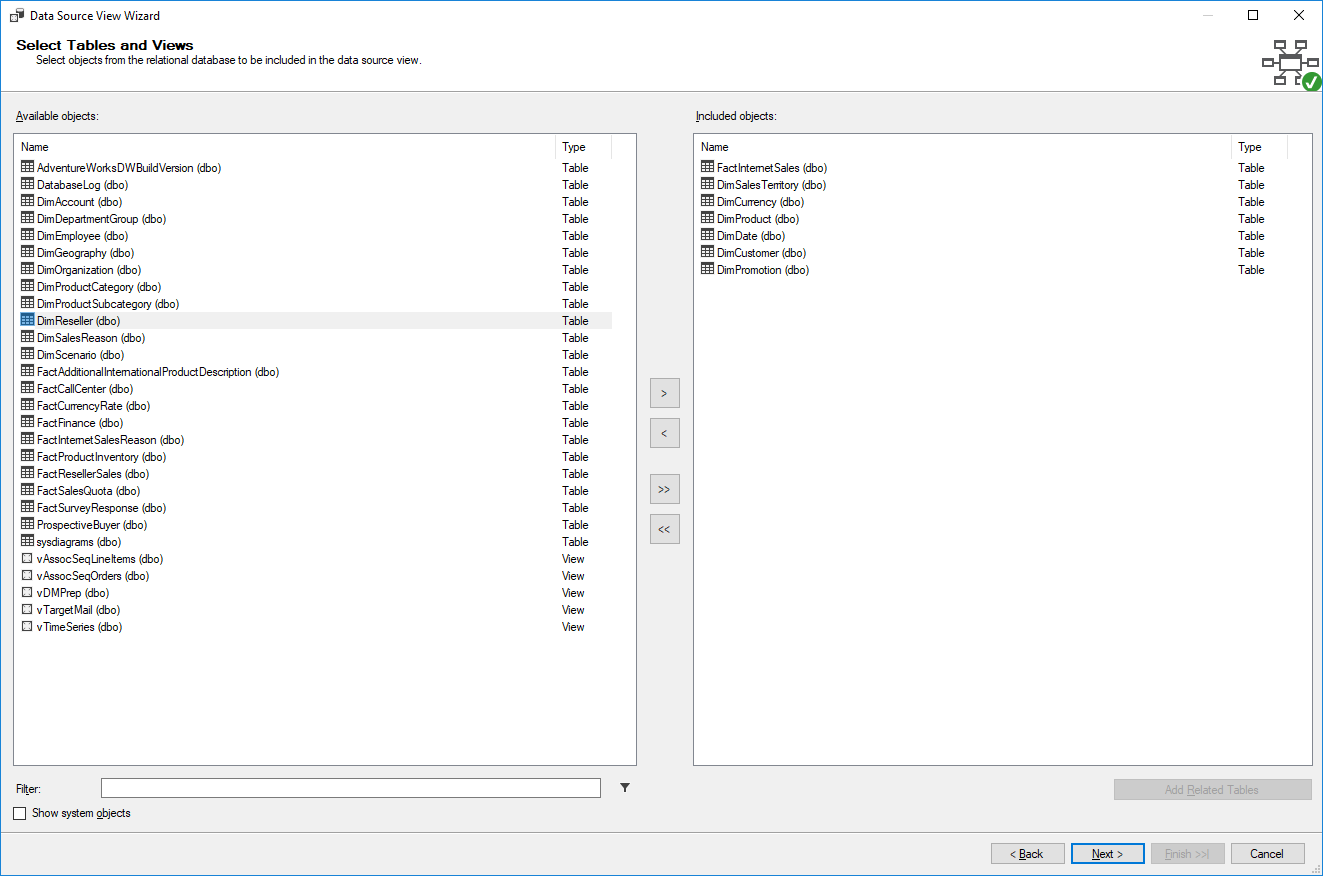
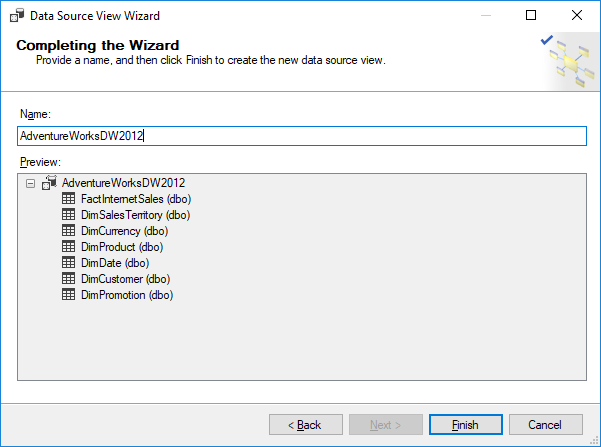
1. Add a Data Connection with the downloaded .mdf database file

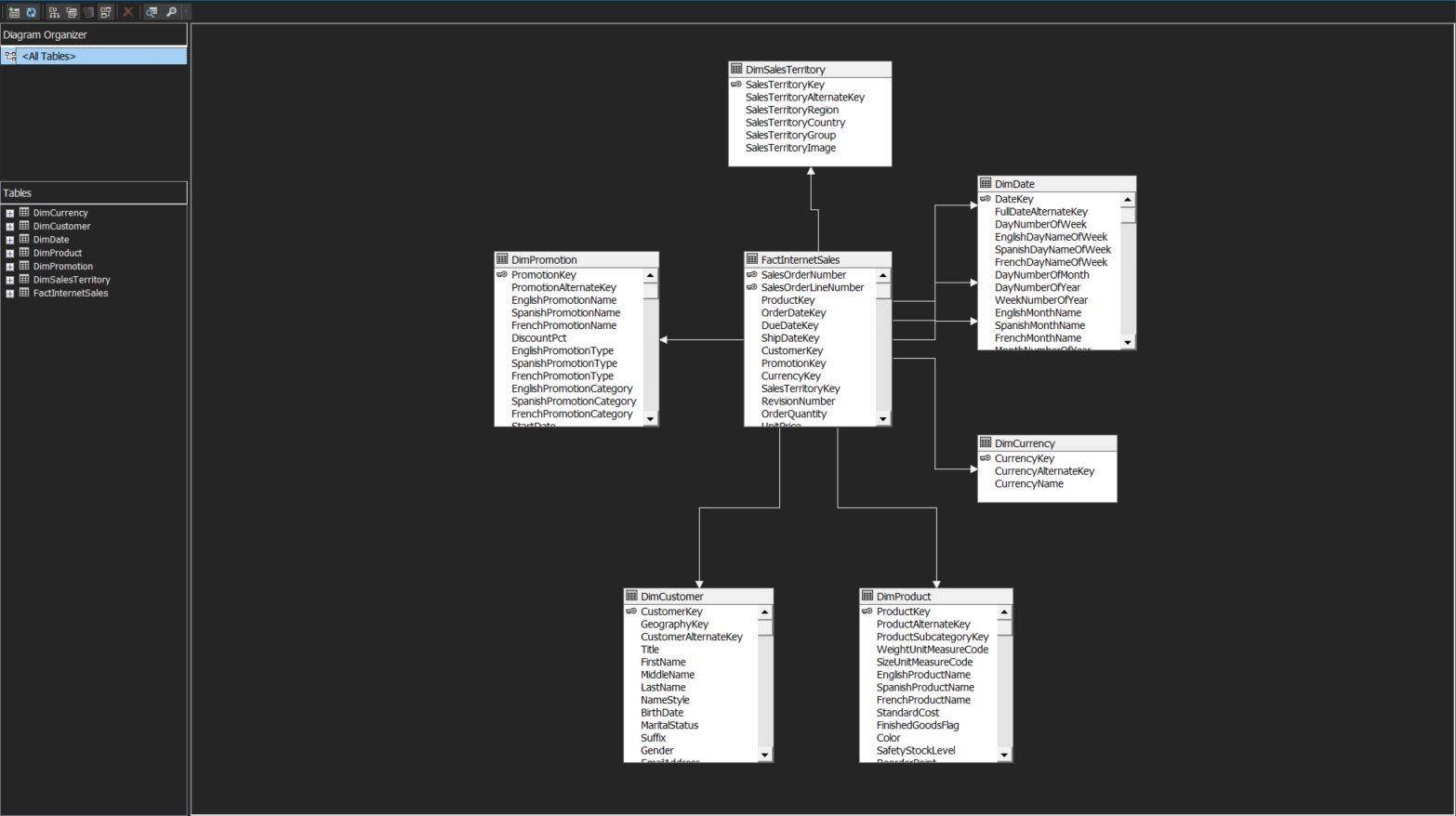


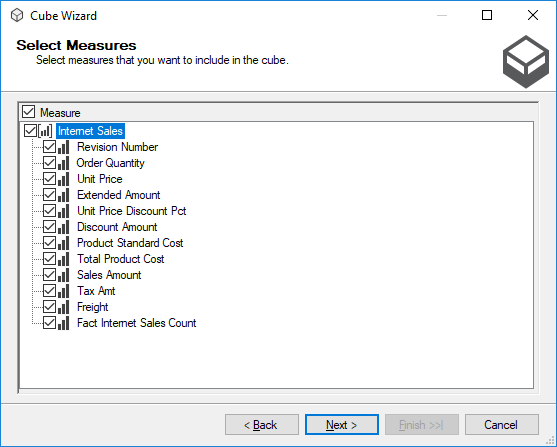
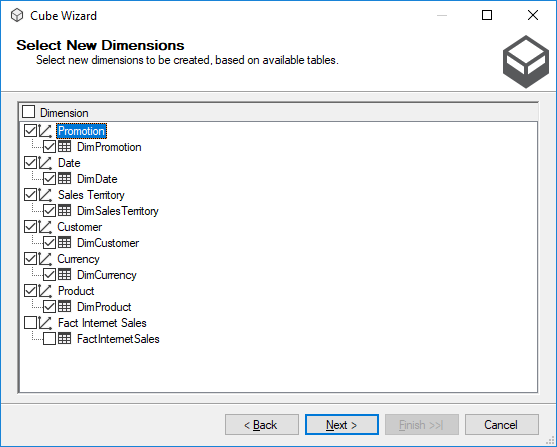
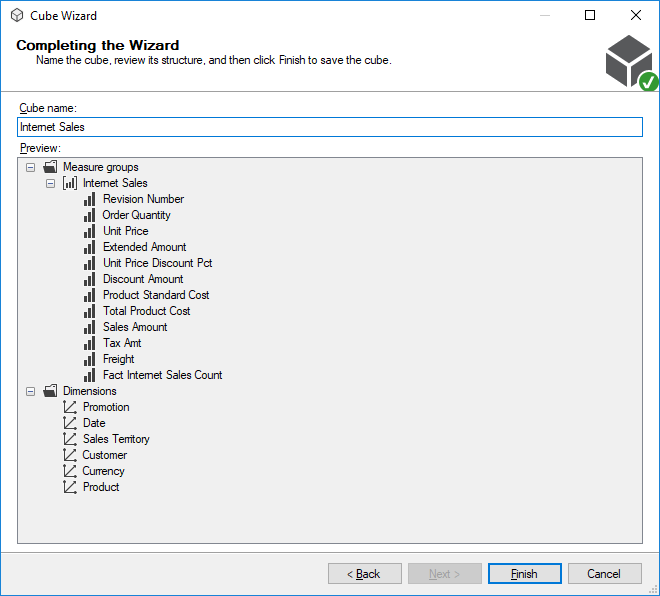
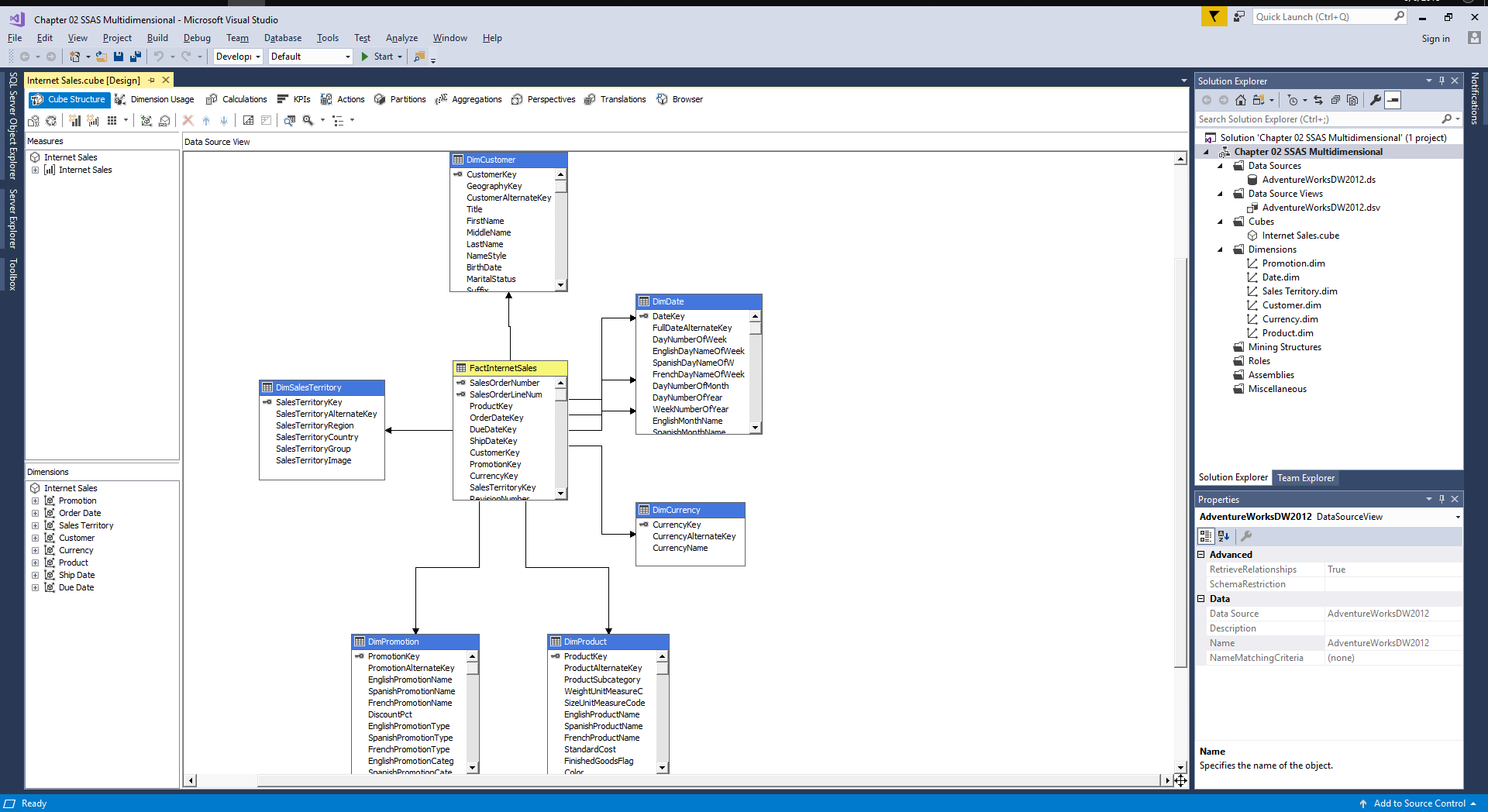
# Time for action – creating the first cube

1. Create a data source connection



1. 
2. 
3. 
4. A data source connection was created using the Data Source Wizard.
5. Create a New Data Source View
6. 
7. 
8. A data source view was created using the Data Source View Wizard

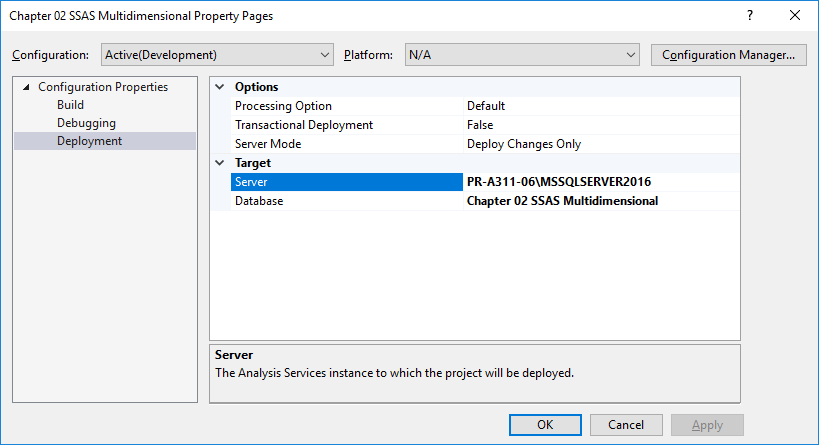


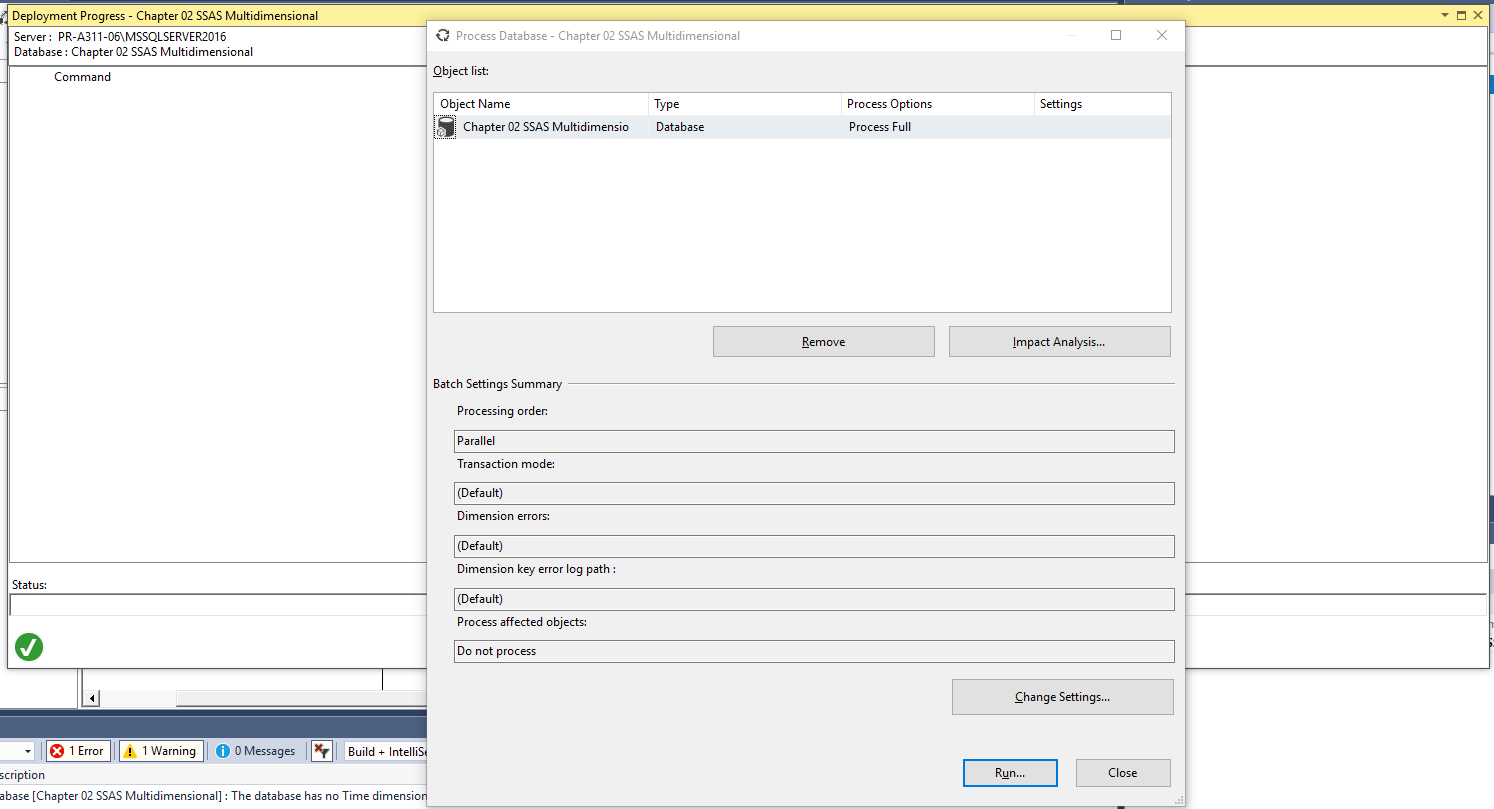
1. Create a Cube using the Cube Wizard
2. 
3. 
4. 
5. 
6. A cube has been created using the Cube Wizard ☺!

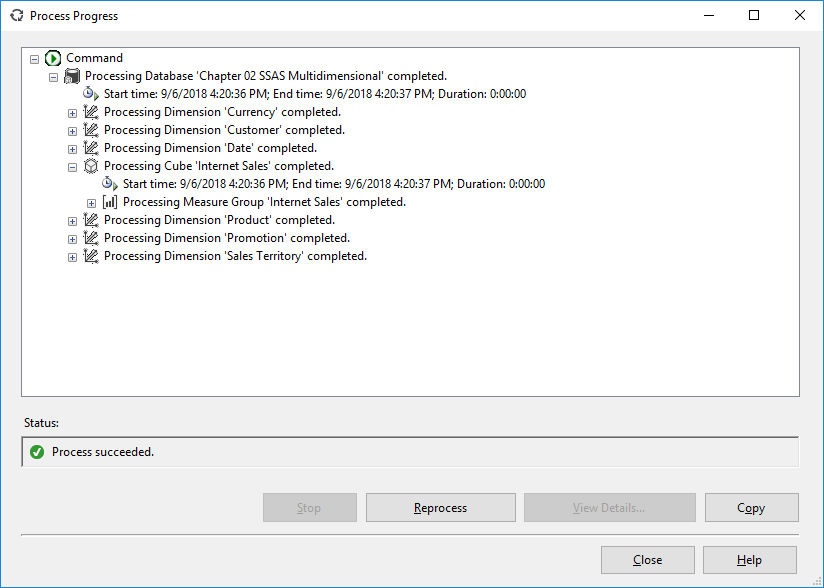
In this “Time for Action”, we created a connection to a data warehouse using the Data Source Wizard and provided credentials for SSAS (SQL Server Analysis Services) to connect to the underlying database. Following that, we created a data source view using the Data Source View Wizard and the data source we created previously. The data source view will be used to create the base structure for our cube. We then created a cube using the Cube Wizard. Measure groups and dimensions were defined to create the cube. Measure groups are similar to fact tables and each measure group can contain one or more facts. We selected FactInternetSales table as the measure group and it contains measures such as Sales Amount and Order Quantity. Finally, we defined the dimensions to create the cube. There are two different sets of Dimensions we see here. On the right side panel, the dimensions shown are the database dimensions. The dimensions on the left side panel are the cube dimensions. The difference between these two are that we may have some database dimensions that are not used within the cube. We can have multiple cubes within the same project! Or we can have the same database dimension re-used within multiple cubes. We even have dimensions which may be used multiple times within the same cube. We call these role-playing dimensions. For example, there is only one database dimension, Date, but there are three role-playing dimensions in the cube, which are named OrderDate, ShipDate, and DueDate.

# Time for action – viewing the cube in the browser

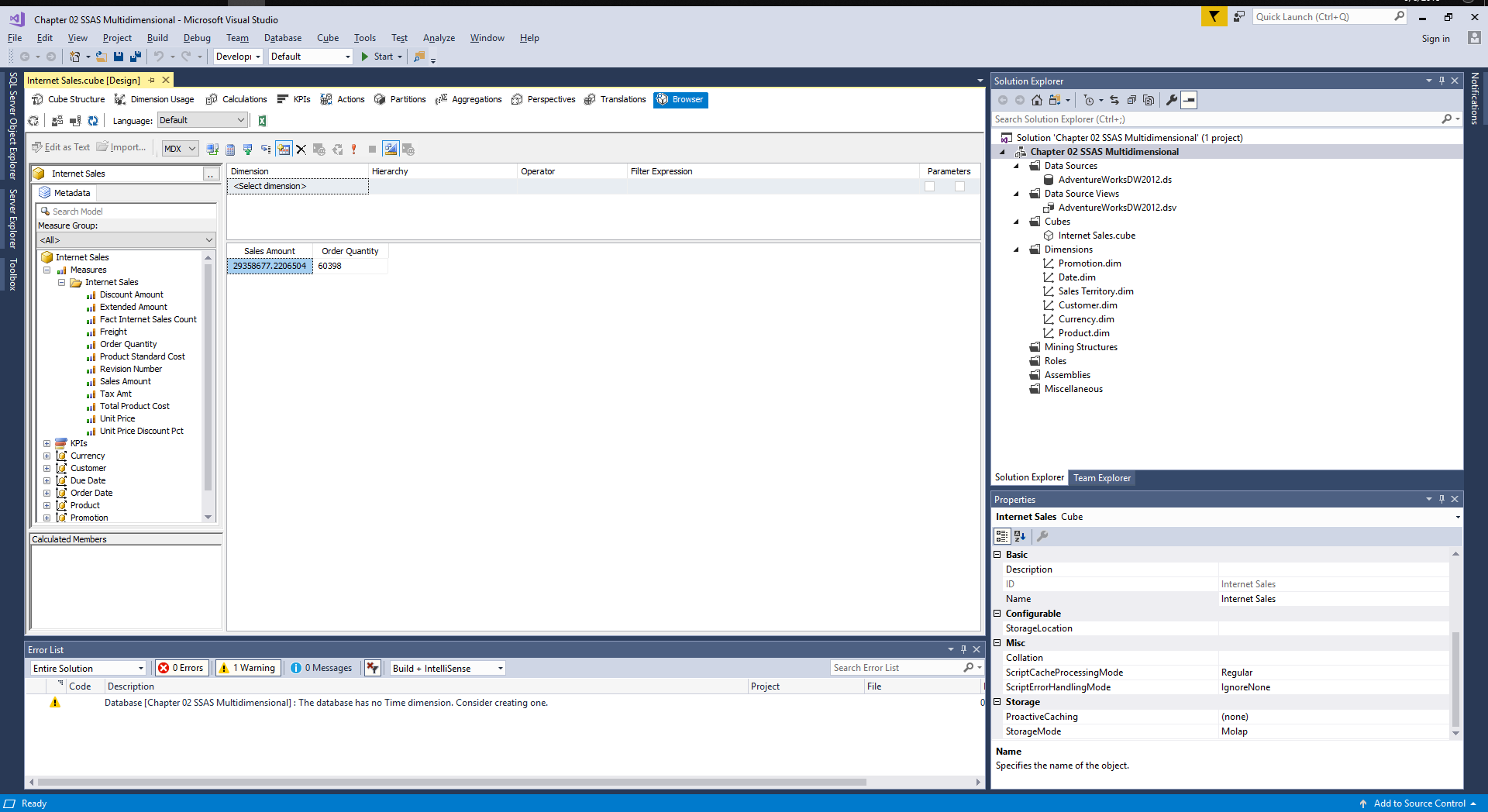
Change from localhost to ComputerName\MsSqlServerInstanceName

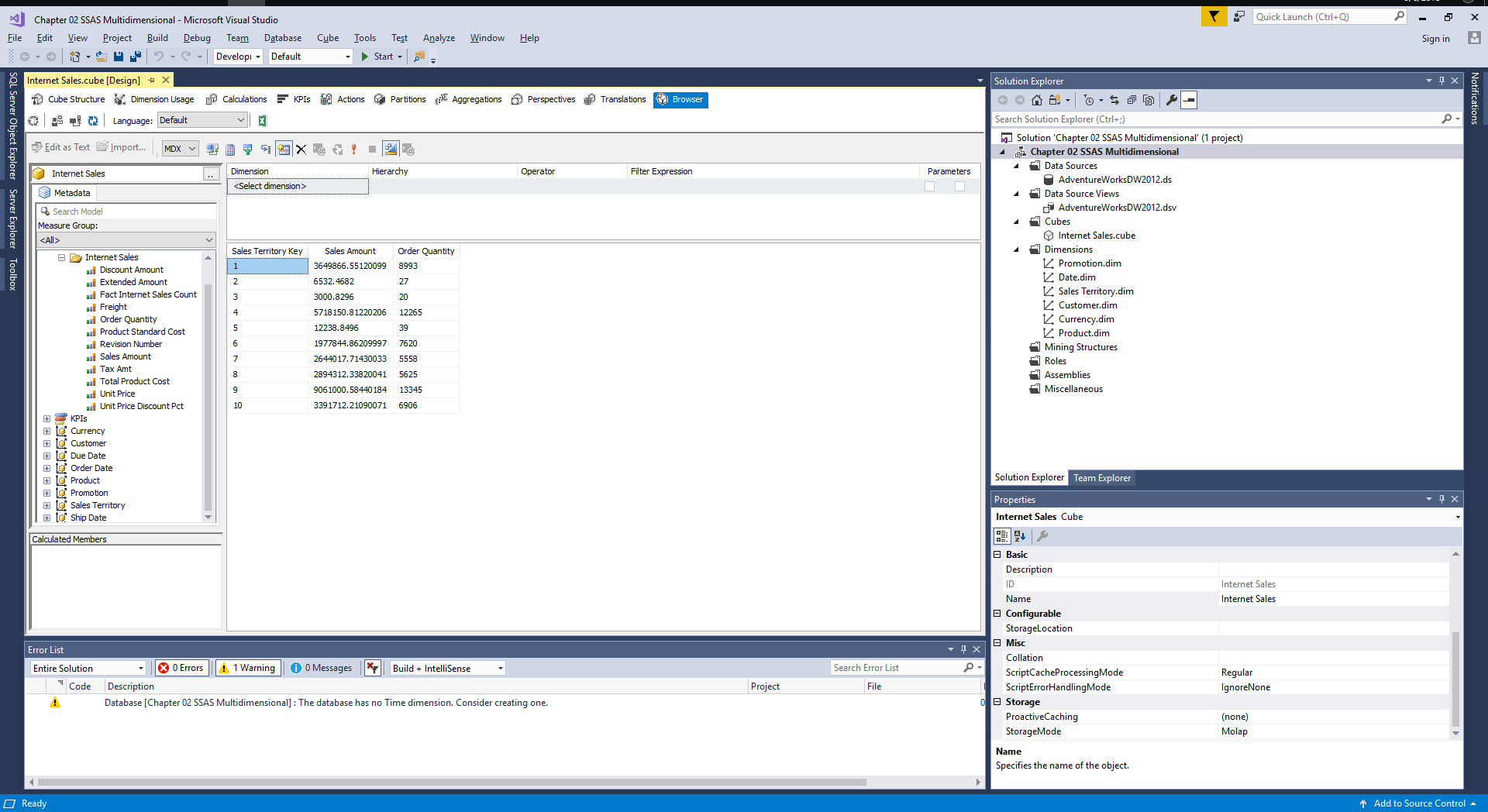






Grand Total





Document about four aspects of building a data warehouse , the advantages to a business, the resources it consumes, etc.

60-70 pages

Spend more time on obj. and conclusions.

Screenshots

Conclusions

Your conclusions would reflect your experience in building the cube. Provide screen shots of the final results, the aggregation of various hierarchies. Provide an overall assessment of the process of building a cube.