Designing and Building a Data Mining Project with Cube and OLAP

Building a Business Analytic Data Mining Model using Microsoft BI Data Mining Tool and Data Warehouse and OLAP Cubes.

For this we should first install Microsoft BI Data Mining Tool and Adventure Works Data Warehouse

Now create new project in visual studio using BI and name it in the specified location.
Now create a new data source for the project and select the adventure Works data warehouse as data source for the project.
Select the database as adventure works
Completing the Wizard

Provide a name and then click Finish to create the new data source.

Data source name:

**Adventure Works2014**

Connection string:

Provider=SQLNCLI11.1;Data Source=DESKTOP-3DDFHCK;Integrated Security=SSPI;Initial Catalog=AdventureWorks2014
Creating a new data source view
Select the required tables needed for the project

- Location (ProductInventory) Table
- Product (ProductInventory) Table
- ProductCategory (ProductInventory) Table
- ProductCostHistory (ProductInventory) Table
- TransactionHistory (ProductInventory) Table
- ProductInventory Table
The data source view should show all the relationships between data as below.
1. Design a Cube with Dimensions

Create a data cube by selecting all the tables needed.
2. Deploy and process to build your Cube designed in Step 1

And then click on start to deploy it. If there are some errors just debug them and make sure deployment completes successfully.
3. Write MDX to find out the following three information to provide decision support facts to the upper management team that has to decide strategies for the company for next year's plan and budget.

To write an MDX query we have to connect to analysis services in the SQL Server and select Adventure Works and the project name, right click on project name select new query and then select MDX query among the list. Now we are all set to run MDX queries on the data.

**Q1. What is total sales amount by the countries?**

**Screenshot**