

CIS 570 - BI Project – Part 1

Note: You should have completed the Data Cubing exercises before starting on this project. This project is similar to the cubing exercises, except it uses a different data mart – MaxMinSalesDataMart. If you are unsure about how to complete a particular step, refer back to the more detailed instructions provided for the cubing exercises.

For this project, you can choose Option A or B

Option A

1. Log on to elab using your eID credentials.
2. Start VS 2017. Click File → Open → Analysis Services Database. In the Connect To Database dialog box, enter **busciissql\cisbi** in the Server textbox and select **your BI Project analysis services database (e.g., if your last name is Smith, your analysis services database will be called SmithBIP)** from the Database drop-down list. Click on the Browse button and select the folder where you would like the solution file to be stored (this can be your class folder for CIS 570 (i.e., “S: drive”)).
3. Create a new Data Source to the MaxMinSalesDataMart on BUSCISSQL\CISBI (similar to Data Cubing Part 1 – Session 1: Steps to Create the Project and Data Source (6-10)).
4. Create a new Data Source View for the Data Source you created in step 2 (similar to Data Cubing Part 1 – Session 1: Steps to create the Data Source View (1-7)).
5. Create a new cube with SalesInformationFact table as the Measure Group table, and the rest of the tables (i.e., all the Dim prefixed tables) as dimension tables.
6. Open the Customer Dimension. Add City and State to the Attributes. Create a Customer Hierarchy – State → City → PK Customer. Change the AttributeHierarchyVisible property of the three attributes to False. Set the NameColumn property of PK Customer to CustomerName. Set the KeyColumns property of City to both City and State. Set the NameColumn property of City to City. Make sure that the Attribute Relationships are defined correctly (i.e., PK Customer → City → State), and the Relationship Types are set to Rigid.
7. Open the Promotion Dimension. Set the NameColumn property of PK Promotion to PromotionName.
8. Open the SalesPerson Dimension. Set the NameColumn property of PK Sales Person to SalesPersonName.
9. Open the Store Dimension. Add StoreType to the Attributes. Create a Store Hierarchy – Store Type → PK Store. Change the AttributeHierarchyVisible property of the two attributes to False. Set the NameColumn property of PK Store to StoreName. Make sure that the Attribute Relationship is defined correctly (i.e., PK Store → Store Type), and the Relationship Type is set to Rigid.
10. Open the Product Dimension. Create a Product Hierarchy – Product Type Code → Product Sub Type Code → PK Product. Change the AttributeHierarchyVisible property of the three attributes to False. Set the NameColumn property of PK Product to ProductName. Set the NameColumn property of Product Sub Type Code to ProductSubTypeName. Set the NameColumn property of Product Type Code to ProductTypeName. Make sure that the Attribute Relationships are defined correctly (i.e., PK Product → Product Sub Type Code → Product Type Code), and the Relationship Types are set to Rigid.

11. Open the Time Dimension. Add Month, Quarter and Year to the Attributes. Select Dim Time in the Attributes Pane. Set its Type property to Time. Select PK Date in the Attributes Pane. Set its Type property to Date (Date → Calendar → Date). Select Month in the Attributes Pane. Set its Type property to Months (Date → Calendar → Months). Select Quarter in the Attributes Pane. Set its Type property to Quarters (Date → Calendar → Quarters). Select Year in the Attributes Pane. Set its Type property to Years (Date → Calendar → Years). Create a Date Hierarchy – Year → Quarter → Month → PK Date. Change the AttributeHierarchyVisible property of the four attributes to False. Set the NameColumn property of PK Date to DateName. Set the NameColumn property of Month to MonthName. Set the OrderBy property of Month to Key. Set the NameColumn property of Quarter to QuarterName. Set the NameColumn property of Year to YearName. Make sure that the Attribute Relationships are defined correctly (i.e., PK Date → Month → Quarter → Year), and the Relationship Types are set to Rigid.
12. Open the Cube. Set the Sales in Dollars FormatString property to Currency. Set the Sales in Units FormatString property to Standard.
13. Process your cube.
14. Browse the cube using Excel (refer to Data Cubing Part 2 – Session V) to find answers to the following questions.
 - a) For the product, Bear and Cub, what was the total dollar sales amount for November 2017?
 - b) Which Product Subtype had the least number of units sold for the 2nd Quarter of 2015? How many units?
 - c) Excluding the “Unknown” promotion type, which promotion type(s) generated more than \$500,000 in Online sales for Mythic World products in 2016? What was/were the amount(s)?
 - d) What was the total number of units of RAF Pilots sold in Xavier, IL through retail outlets for March 2017?
 - e) Which salesperson(s) had dollar sales amount(s) greater than \$20,000 for the product, Manitowoc, WI Lighthouse, in the 1st quarter of 2015? What was/were the amount(s)?
15. Slice and dice the cube to find information (**minimum of three**) that is of interest to you. For example, you can discover the promotion type that is most effective for a specific product in a particular city.
16. Create any **two** Pivot Charts with your choice of categories, series and filters. Add suitable titles and labels and format the charts as you see fit. Copy and paste the charts into a document (e.g., Word) file. For each chart, provide a short (two to five sentences) narrative that describes the purpose of the graph and the insight(s) that could be gained from it.
17. Submit the answers for steps 14, 15 and 16 as a DOC/DOCX, PDF or TXT attachment.

Option B

1. Design a data mart (DM) of your choice. Create the tables for this DM in your SalesDM datamart on busciissql\cisbi. You should have a minimum of four dimension tables and one fact table. The fact table should have a minimum of two measures.
2. Populate the dimension and fact tables with data. There should be a minimum of 10,000 records in the fact table.
3. Build a cube based on your DM. The cube should be created in your BI Project analysis services database (e.g., if your last name is Smith, your analysis services database will be called SmithBIP). The cube should have a minimum three dimensions, two hierarchies and two measures.
4. Browse the cube using Excel. Slice and dice the cube to find information (minimum of six) that is of interest to you.
5. Create any **two** Pivot Charts with your choice of categories, series and filters. Add suitable titles and labels and format the charts as you see fit. Copy and paste the charts into a document (e.g., Word) file. For each chart, provide a short (two to five sentences) narrative that describes the purpose of the graph and the insight(s) that could be gained from it.
6. Submit as a DOC/DOCX, PDF or TXT attachment
 - a) the answers for step 4
 - b) the charts and narratives for step 5
 - c) a brief description of your DM and cube
 - d) a brief statement about why you chose this particular project
 - e) a list of your DM tables, the number of rows in each table, and the source(s) of data for the tables.