Contemporary Issues in DB Management Systems (../index.html)

Project 3: Creating A Data Cube

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Due Date

See the calendar (../calendar.html#currentWeek) for due date.

Objectives

1. To become familiar with OLAP data cube creation
2. To learn how to work with measures and measure groups
3. To learn how to create time dimension and hierarchy
4. To learn how to relate dimensions to measures in a data cube

Data Sources:

1. Your `MaxMinManufacturingDM-<yourInitials>` relational database located on your WBIxx server.

Directions

Complete the following Learn By Doing (LBD) sections:
Note:

- Always open SQL Server Data Tools 'as Administrator' on your virtual machine (by right clicking on the icon, selecting "More >", then "Run as administrator")
- Use `MaxMinManufacturingDM-<yourInitials>` instead of each reference to `MaxMinManufacturingDM`
- Use `Max Min Manufacturing DM-<yourInitials>` instead of each reference to `Max Min Manufacturing DM`

1. **Building a Multidimensional BI Semantic Model for the Manufacturing Data Mart (pp. 328-333)**
   Create an OLAP data cube `MaxMinManufacturingDM-<yourInitials>` on top of your `MaxMinManufacturingDM-<yourInitials>` data mart relational database
2. **Working with Measures and Measure Groups (pp. 342-345)**
   Add a measure and a measure group to the data cube and create calculated measures
3. **Cleaning Up the Dimensions in the `MaxMinManufacturingDM-<yourInitials>` cube (pp. 347-351)**
   Create a time dimension and Date, Material, Plant and Product hierarchies for the cube
4. **Relating Dimensions in the `MaxMinManufacturingDM-<yourInitials>` cube (pp. 351-352)**
   Relate cube dimensions to measure groups

Note: Grading will be performed on your assigned virtual machine.

Rubric:

Points	Item
	Building a Multidimensional BI Semantic Model
_____ / 10	Creating AS and DM project
_____ / 10	Creating data source view
_____ / 10	Creating data cube
	Working with Measures and Measure Groups
_____ / 15	Adding formatting to a measure, adding measure group
_____ / 10	Creating the calculated columns
	Cleaning Up the Dimensions in the MaxMinManufacturingDM-<yourInitials> Cube
_____ / 10	Creating time dimension
_____ / 15	Creating hierarchies
_____ / 5	Hiding unneeded attribute hierarchies
_____ / 10	Relating Dimensions in the MaxMinManufacturingDM-<yourInitials> Cube
_____ / 95	Total

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