

# CPSC 304 - Tutorial 9 Data Warehousing

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## Exercise 1

Being able to drill down into a hierarchy allows for investigating datasets at both the high level, and the low level. You can focus in on specific areas of interest.

Being able to roll up, is also important in case someone goes too deep, or realizes they want to see related areas. For instance, someone interested in weekend sales may later realize that weekday sales provide an important reference.

## Exercise 2

**1) For this product, what is the grand total of unit sales?**

426 Unit Sales

**2)**

**(a) Which day has the highest number of sales for that product?**

Sunday has the highest number of sales with 91.

**(b) Are the sales evenly distributed? Explain.**

No, the sales are not evenly distributed. Some days have many more sales than others.

**3) Why would a business want to track the total number of unit sales on a particular day?**

It could be useful for businesses to know exactly how many are sold on each day to predict consumption numbers in the future and when to restock areas.

**4) Why would a business want to identify any outliers (anomalies)? Provide some examples of what a manager might do with this information.**

Identifying outliers can identify important trends. If there's always a high sale rate on Sunday, a manager could ensure that there's plenty of a certain item in stock.

## Exercise 3

MDX is a way of programmatically returning results that you would want from the Data Cube in Step 4. This allows you to get the same type of aggregation results across multiple rows and columns.

## Exercise 4

FoodMart 2008 - Microsoft Visual Studio

FILE EDIT VIEW PROJECT BUILD DEBUG TEAM SQL DATABASE CUBE TOOLS TEST ANALYZE WINDOW HELP

Start - Develop -

Sales and Employees.cube [Design]

Cube Structure Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Server Explorer

Toolbox

Measure Group: <All>

Unit Sales Profit

Unit Sales 557863 Store Cost 475264.365400003

Calculated Members

Output

Show output from: Build

Process Database FoodMart 2008\_q7w9a

Done

Sending deployment script to the server...

Deploy complete -- 0 errors, 0 warnings

\*\*\*\*\* Build: 1 succeeded or up-to-date, 0 failed, 0 skipped \*\*\*\*\*

\*\*\*\*\* Deploy: 1 succeeded, 0 failed, 0 skipped \*\*\*\*\*

Ready

Solution Explorer

Search Solution Explorer (Ctrl+)

Data Sources

FoodMart 2008.ds

Data Source Views

FoodMart 2008.dsv

Cubes

Budget.cube

HR.cube

Warehouse and Sales.cube

Sales and Employees.cube

Dimensions

Account.dim

Category.dim

Currency.dim

Customer.dim

Department.dim

Employee.dim

Product.dim

Promotion.dim

Store.dim

Time.dim

Warehouse.dim

Mining Structures

Roles

TestRole.role

Solution Explorer Team Explorer Class View

Deployment Progress - FoodMart 2008

Server: MAYNE\CSUGRADSQL

Database: FoodMart 2008\_q7w9a

Processing Measure Group 'Expense' completed.

Processing Measure Group 'Sales' completed.

Processing Dimension 'Category' completed.

Processing Dimension 'Currency' completed.

Processing Dimension 'Customer' completed.

Processing Dimension 'Department' completed.

Processing Dimension 'Employee' completed.

Processing Dimension 'Product' completed.

Processing Dimension 'Promotion' completed.

Processing Dimension 'Store' completed.

Processing Dimension 'Time' completed.

Processing Dimension 'Warehouse' completed.

Processing Cube 'HR' completed.

Start time: 2016-11-14 1:02:21 PM; End time: 2016-11-14 1:02:21 PM

Status:

Deployment Completed Successfully

Deployment Progress Properties

FoodMart 2008 - Microsoft Visual Studio

FILE EDIT VIEW PROJECT BUILD DEBUG TEAM SQL DATABASE CUBE TOOLS TEST ANALYZE WINDOW HELP

Start - Develop -

Sales and Employees.cube [Design]

Cube Structure Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Server Explorer

Toolbox

Measure Group: <All>

Unit Sales Profit

Unit Sales 71551 Store Cost 56975.90

Calculated Members

Output

Show output from: Build

Process Database FoodMart 2008\_q7w9a

Done

Sending deployment script to the server...

Deploy complete -- 0 errors, 0 warnings

\*\*\*\*\* Build: 1 succeeded or up-to-date, 0 failed, 0 skipped \*\*\*\*\*

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Processing Dimension 'Store' completed.

Processing Dimension 'Time' completed.

Processing Dimension 'Warehouse' completed.

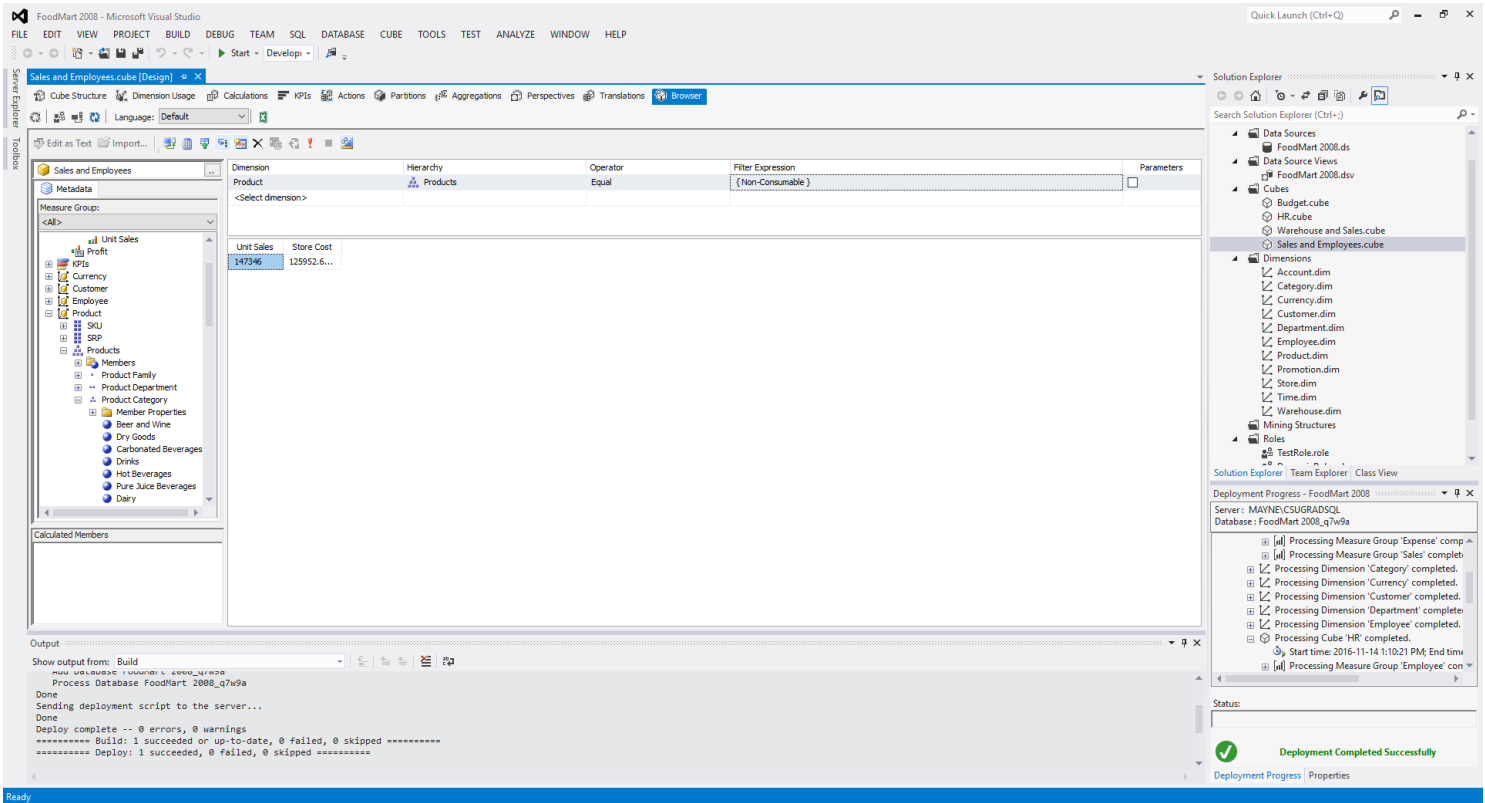
Processing Cube 'HR' completed.

Start time: 2016-11-14 1:02:21 PM; End time: 2016-11-14 1:02:21 PM

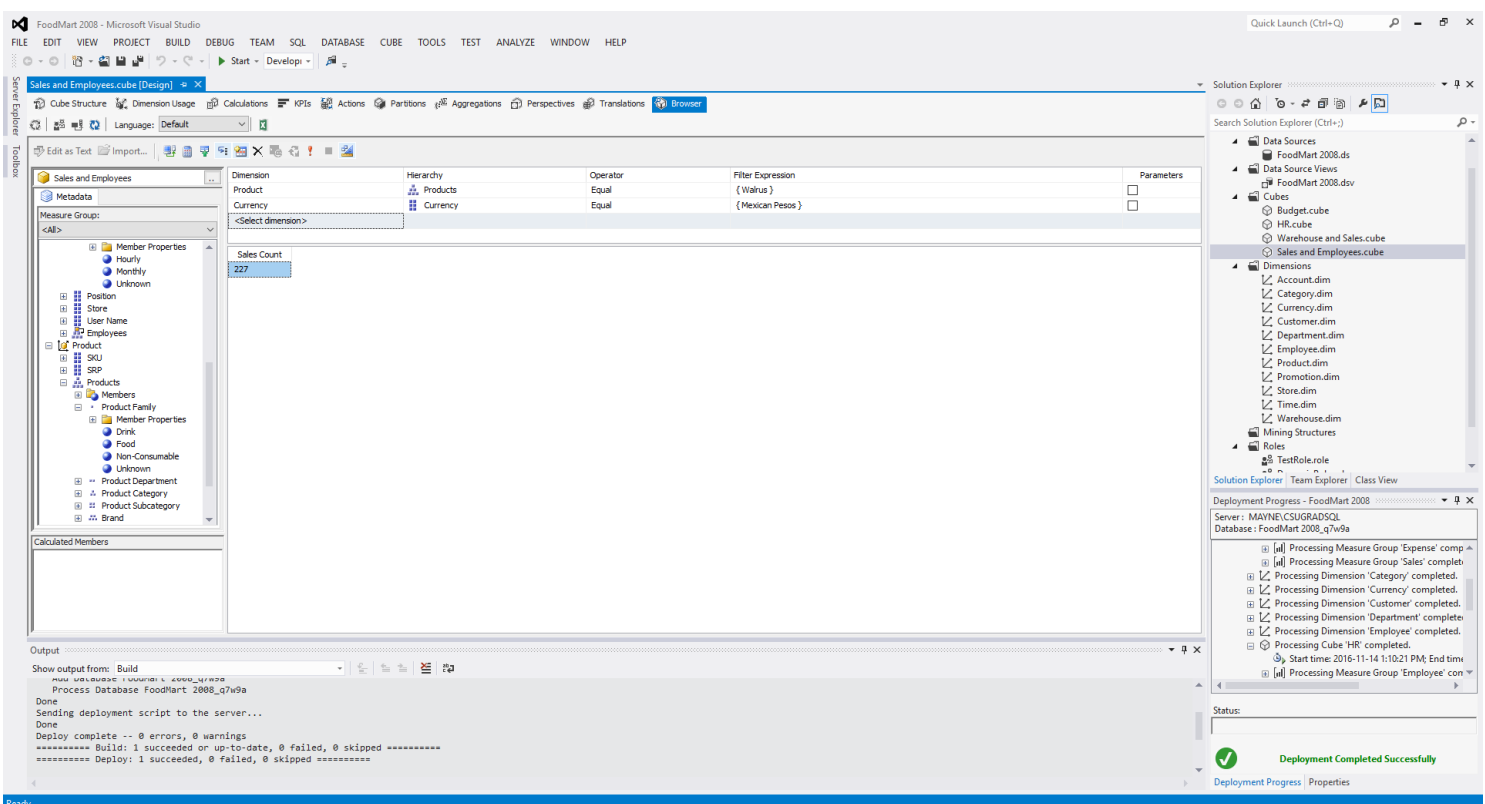
Status:

Deployment Completed Successfully

Deployment Progress Properties



## Exercise 5



This query finds the number of “Walrus” products that have been bought using Mexican Pesos. These results could be useful for determining the demographic of those purchasing the products.