The purpose of this assignment is to introduce you to the graph modeling tools in Discoverer. It involves creating three types of graphics using the tables from H2.

**Graphs, Colors and Shapes**

In contrast to tabular and cross tabulation reports, graphs offer a better means to convey *information* about summarized data, particularly in identifying trend and proportion. As presented during a class lecture, when coupled with color and symbolized in shapes, graphs often make very efficient of our five visual input channels. The immediate benefits include (among others) extraction, retention and recall. However, considerable care must be taken in selecting the shapes (i.e., types of graphs) and colors.

Generally, most business analyses rely on three types: line graphs, pie charts and bar (horizontal and vertical) charts. Each presents information differently. Although they are created from the same sources of data, bar charts depict frequency or relative frequency (through the height or length of the bars) while pie charts a proportion of a relative frequency to the whole. In the case of bar charts, the independent variable placed on the axis usually represents a category (i.e., nominal scale data). Measurement in terms of the quantitative units assigned to the complementary axis determines the bar’s length.

In contrast, the entire pie of a pie chart represents the sum of all components and the slices their relative proportions or frequencies to one another. Similar to bar charts, categories or entities (i.e., nominal scale data) are assigned to the independent variable, the slices. The quantitative measurement (at least of interval scale), either in its raw form or as a percentage, determines the size of the slice. A corrected assembled pie chart will have its slices arranged in descending order, counterclockwise beginning in the twelve o’clock position (in Discoverer, sort the sheet).

Line graphs allow the viewer to identify trend as in the case of time series data. Unlike bar and pie charts, the independent variable assigned to the horizontal or $x$ axis must of at least ordinal scale (i.e., distinct non-interval values placed in ascending or descending sequence with the notion that one is of *greater* or *lesser* value than its predecessor). Thus, when used in time series analysis, the $x$ axis would show the time periods (years, quarters, months, etc.) sequenced in their correct order. The dependent variable assigned to the vertical axis represents a measurement of at least interval scale.
Graphs

Build the three types of graphs previously discussed to depict different kinds of information that focus on the sales performance of the two years. For example, this can be a line graph similar to the one demonstrated in the Screen Cam presentation. Use your discretion (within the guidelines) to determine the composition of the graph. Apply descriptive titles and labels through both the sheet’s and graph’s properties to identify the components (i.e., independent and dependent variables, measurement and scale). Use the drill-down and drill-up features to show detailed and aggregated views of your data (e.g., quarters and months, categories and manufacturers, etc.). Thus, for each type of graph, assemble a set of printouts composed of both aggregated and detailed views. Briefly explain on a separate sheet the information your graph sets convey.

Note. Nonsensical composition will be a detriment to your grade. Please use your common sense and business savvy to show information!

Tangibles

Submit the following items in a 9 × 12-inch manilla envelope:

- Printed copies of your graphs sets (6 printouts = 3 graph types x 2 views). Include the report that shows the data used to create the graph.
- Staple your brief explanation to the graph set.

Be sure your name appears on your envelope and printed output.

No diskette required