Before You Begin

The Visionary Tutorial consists of one exercise of step-by-step tasks that illustrate the fundamentals of how to create and publish a Visionary world. Review this first page before you attempt the tasks in the following list, because you need to install a sample database before you begin.

1. Creating a Storyboard
2. Connecting to a Database
3. Building a Data Source
4. Inserting a Scene
5. Inserting a Layout
6. Inserting a Scene Parameter
7. Refining Text Objects
8. Creating Wormholes
9. Creating a Parameterized Query
10. Adding Scene Parameters
11. Inserting a Global Parameter
12. Inserting an Event Action
13. Publishing a World

This exercise will take approximately one hour to complete.

Installing the Sample Database

Before you can begin the tutorial exercise, you need to ask your database administrator (DBA) to install the **stores7** sample database. The **stores7** database is included with the Informix server. For installation details, direct your DBA to the **Informix Developer Network (IDN)** at http://www.informix.com/idn-secure/Visionary/WebPages/doclib.htm or to the *Informix Visionary User's Guide*.

Accessing Commands

You can access commands from the main menu bar or with a right-click to display a popup menu. All the tasks in the tutorial access commands with a right-click when this is available.

Tips

A drop-down list of all tasks is available at the beginning of each task. There are also buttons at the beginning and end of each task for going to the InfoShelf home page, to this page, and to print this tutorial. You can use an overall view of the Visionary Studio Environment as a guide to its editors and windows.

Related Reading

For more information about Informix Visionary, refer to the on-line help in Visionary and the *Informix Visionary User's Guide* available on the Visionary InfoShelf.

Tutorial Task #1

Creating a Storyboard

Before you start to create a Visionary world, use a storyboard to plan and illustrate your ideas. For example, suppose you are a business analyst. The executives of a large sporting goods clearinghouse that distributes through the World Wide Web want you to answer the following questions:

Which manufacturers' products are selling and which are not selling?

Which manufacturers could not deliver their products on time and have large backlogs?

When do the backlogs occur?

What are the selling trends for each manufacturer?

All the data to answer these questions is available in the **stores7** database. To effectively present the data, you decide to create a Visionary world. After you think about it for a while, you design a storyboard as a guide to help you visualize what to put in your Visionary world.

1

To create the storyboard, you design scenes, layouts, and ways to navigate between the scenes. For the storyboard, you use pencil and paper or computer-based tools, such as Microsoft PowerPoint or a Web authoring tool.

Here is a sample storyboard for the world you build with this tutorial. This storyboard was created in Microsoft PowerPoint as a single slide and saved as a GIF file.

As a way to show you what's implied by a storyboard, links were added to this storyboard. By clicking a link, you can navigate to four different graphics in the finished Visionary world. The graphics include Overview, Sales, the Husky Wear chart, and Backlog.

Backlog Management Storyboard

1. Click Sales in Overview
2. Click Husky Wear in Sales
3. Click Home in Husky Wear Chart
4. Click Backlog in Overview
5. Click Husky Wear in Backlog
6. Click Home in Husky Wear Chart
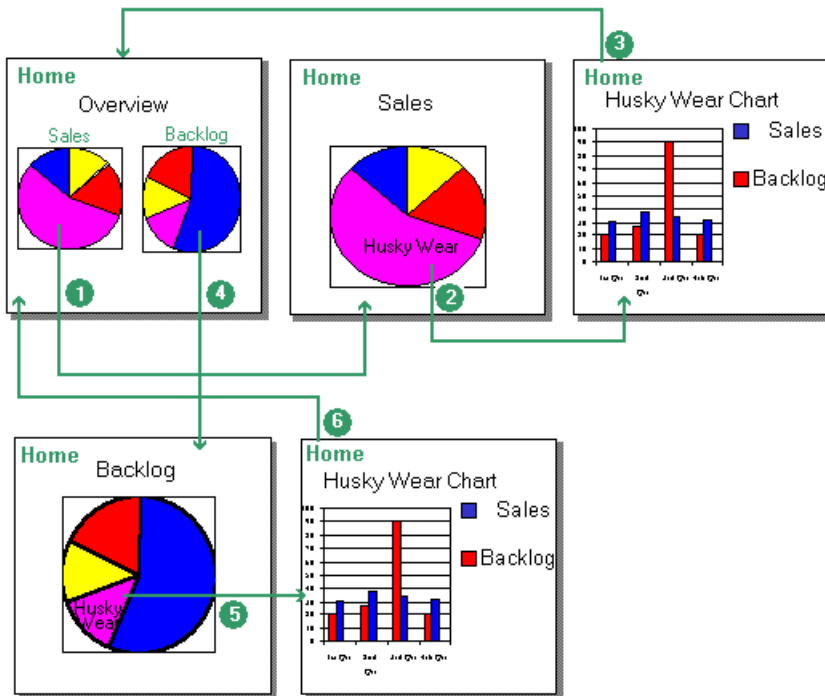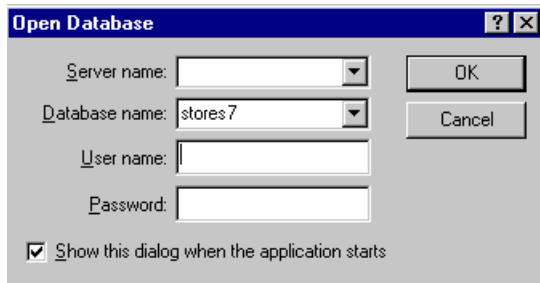
Tutorial Task #2

Connecting to a Database

2

When Visionary starts, the Open Database dialog box displays asking you for information about the database you intend to use. Use the **stores7** database that your DBA installed.

In the Open Database dialog box, enter your Informix server name, **stores7** for the database name, and your user name and password. Click **OK.**

Database connection information must be defined before you can connect to a database. Use the Informix Setnet32 utility to specify the database server and host information on your computer. You can also find details about the Setnet32 utility in the *Informix Client Products Installation Guide for Microsoft Windows Environments* on the Visionary InfoShelf.

Tutorial Task #3

Building a Data Source

You need to build a data source to specify the data you want to use in your world. You have several options to build a data source:

- ■ Use a wizard
- ■ Use a diagram
- ■ Use a SQL query

Suppose you have met with your DBA to discuss the ideas you have for your world as shown in your storyboard. Your DBA agrees to write a SQL query that you can use. Your DBA creates the SQL query based on the tables, columns, and filters in the **stores7** database.

Note: In Tutorial Task #9, you use a wizard to build a data source.

✔In the World Manager, right-click **World1** and select **Insert→Data source**.
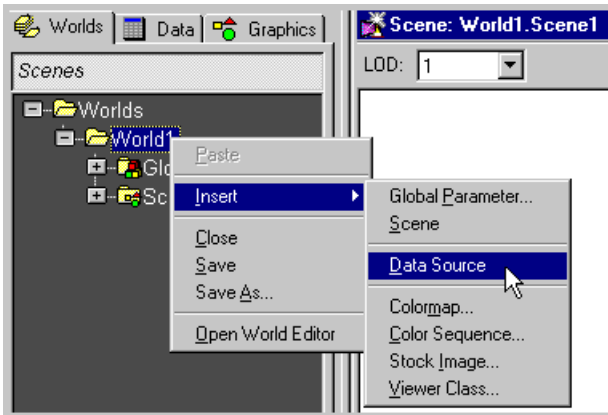
✔In the New Data Source dialog box, select **Direct SQL entry**. Click **OK.**
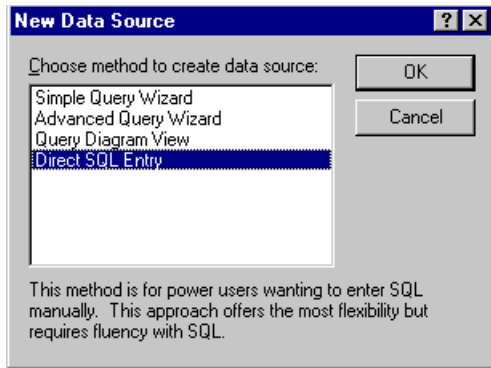
✔Copy the following query and paste it in the Query Editor:

```
SELECT R1.manu_code, R2.manu_name, R0.backlog,
     sum(R1.total_price) as total_price,
     sum(R1.quantity) as quantity
FROM orders R0, items R1, manufact R2
WHERE R0.order_num = R1.order_num
  and R1.manu_code = R2.manu_code
  and R0.backlog = :Dbacklog
GROUP by R1.manu_code, R2.manu_name, R0.backlog
;
```

✔In the World Manager, click the **Worlds** tab.

✔Click the **Data Sources** button.

✔Click the plus sign next to **Query1** to expand it.

✔Click the plus sign next to **Parameters** to expand it.

Building a Data Source

.
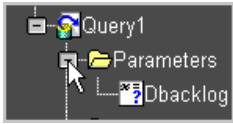
✔Double-click **Dbacklog.**

✔In the Query Parameter dialog box, select **Ivarchar** from the **Data type** list box and enter **n** in the **Has default value text box.** Click **OK.**
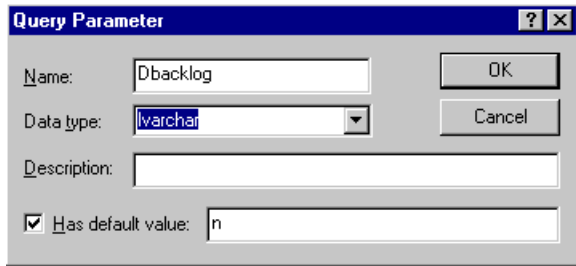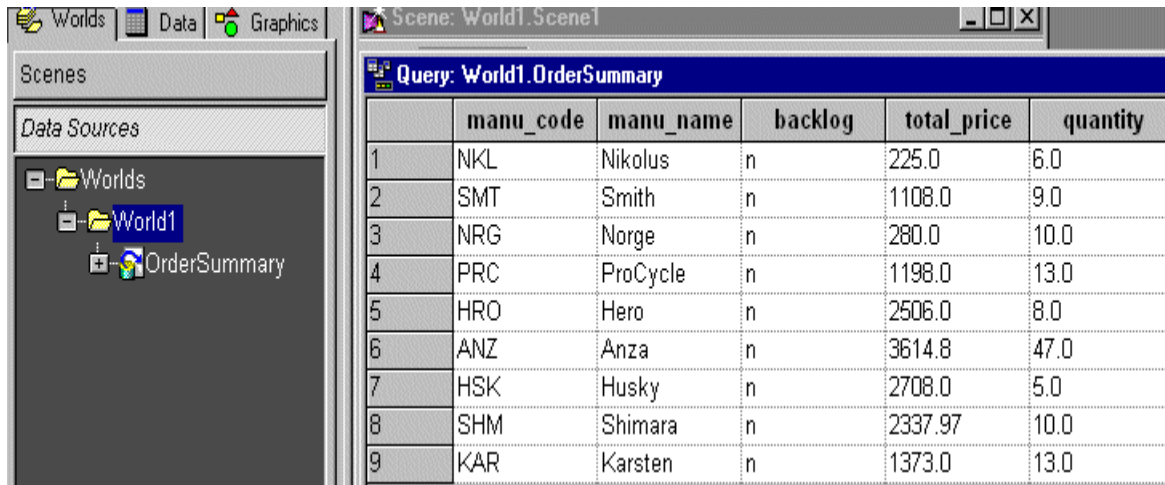

✔In the World Manager, right-click **Query1** and select **Rename.** Enter OrderSummary.
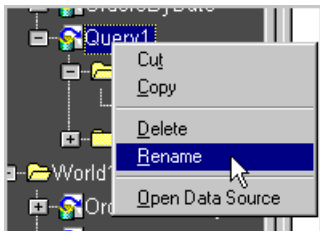
✔In the Query Editor, click **Data Sheet.**

The data sheet should look similar to the following illustration.

	manu_code	manu_name	backlog	total_price	quantity
1	NKL	Nikolus	n	225.0	6.0
2	SMT	Smith	n	1108.0	9.0
3	NRG	Norge	n	280.0	10.0
4	PRC	ProCycle	n	1198.0	13.0
5	HRO	Hero	n	2506.0	8.0
6	ANZ	Anza	n	3614.8	47.0
7	HSK	Husky	n	2708.0	5.0
8	SHM	Shimara	n	2337.97	10.0
9	KAR	Karsten	n	1373.0	13.0

Tutorial Task #4

Inserting a Scene

4

You need to insert a Scene into the world to hold objects representing the information in the data source.

✔ In the World Manager, click the **Worlds** tab.

✔ Click the **Scenes** button.

✔ Right-click **Scene1** and select **Rename.** Enter Orders.

.
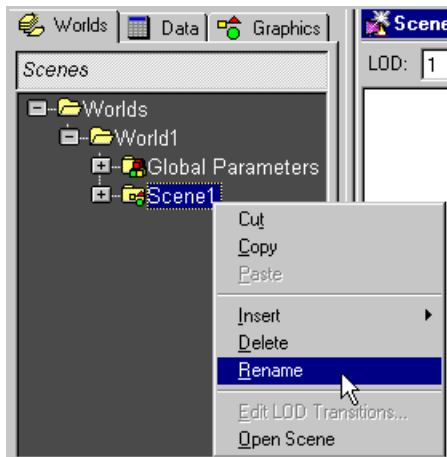
✔Right-click **Orders** and select **Open Scene.**
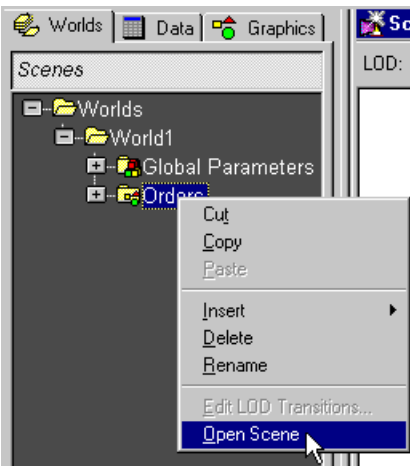
Tutorial Task #5

Inserting a Layout

```
5
```

You need to specify a Layout that best displays the data returned from the data source.

✔In the World Manager, click the **Graphics** tab.

✔In the Graphics page, click the **Layouts** button.

✔Double-click the pie chart to launch the Layout wizard.

✔Select **OrderSummary**. Click **Next.**
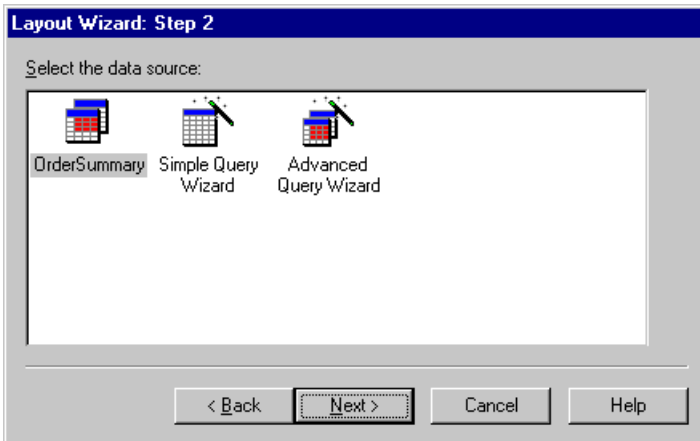
✔Select **total_price** from the **Slice values** drop-down list box. Select **manu_name** from the **Label column** drop-down list box. Check **Include the percentage the value represents of the whole pie.** Click **Finish**.
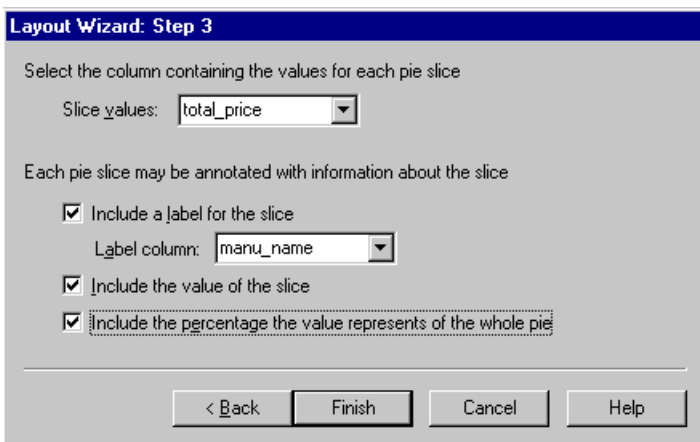
Two editor windows are open: the Data Element Editor and the Scene Editor. You can view the titles of each window by choosing **Window→Cascade** from the main toolbar or by rearranging your view.

The Scene Editor contains a layout for the pie chart. The Data Element Editor displays a single data point from the layout.

✔Click **Runtime Mode** in either the Scene Editor or the Data Element Editor to test the outcome.
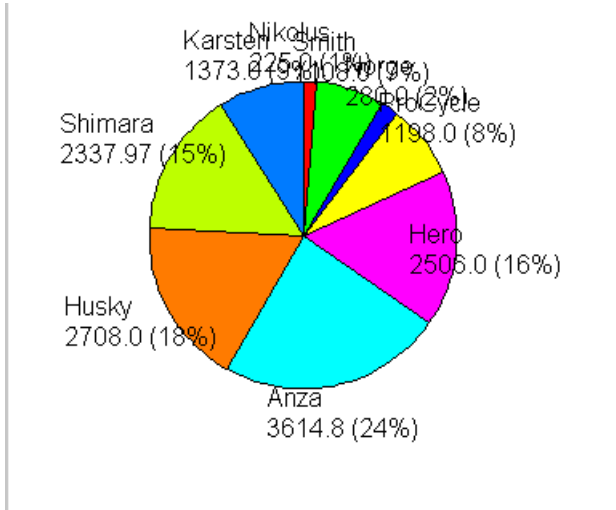
The information is all there, but you need to refine it so that it is readable. In the next task, you use a scene parameter to modify how the scene appears.

*Tutorial Task #6*

Inserting a Scene Parameter

6

One of the ways you change how a scene looks is to use a Scene Parameter. In this task, you insert a scene parameter with a specified variable to effect the appearance of the scene.

✔ In the Scenes panel of the World Manager, right-click **Orders** and select **Insert→Parameter.**
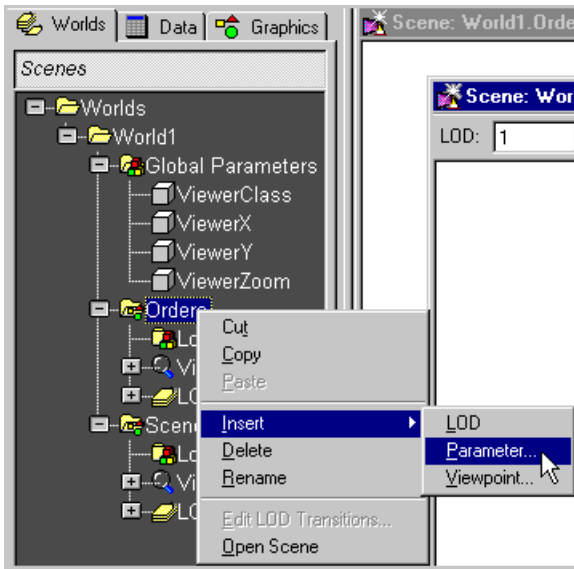
✔In the Insert Parameter dialog box, enter Sbacklog in the **Name** text box. Select **Text** from the **Data type** list box. Enter n in the **Has default value** text box. Click **OK.**
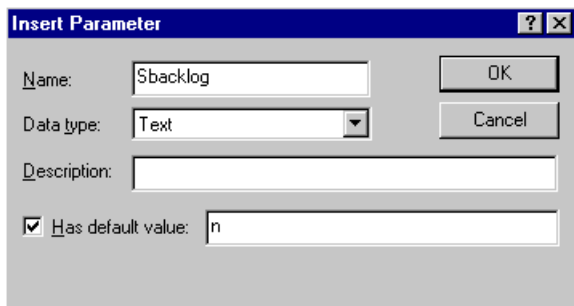
✔Make sure you are in the Scene editor and click **Design Mode**.

✔Right-click anywhere on the scene background and select **Properties.**
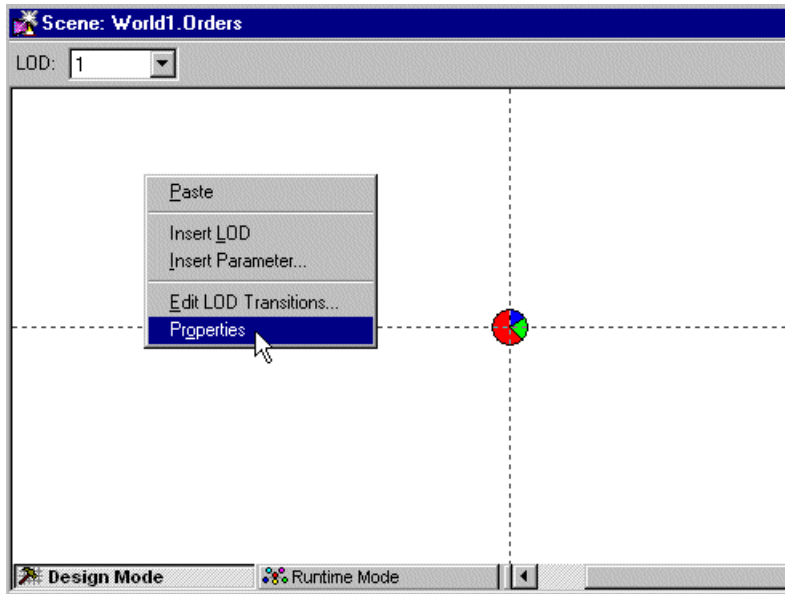
✔From the Object Inspector list box, select **Piechart1.DataElement1.OrderSummary1** and, in the property cell next to Dbacklog, enter the value Sbacklog.

Tip

To easily differentiate your variables, you might want to use a naming scheme such as an initial S for scene parameters, an initial G for global parameters, and an initial D for data elements.

If you test in this task, you will not see any changes. The next task shows you how to use the parameter Sbacklog to refine the Orders scene.

Tutorial Task #7

Refining Text Objects

7

You can refine the Orders scene by putting a title on it and making the labels for the wedges on the pie chart readable.

Make sure you are in design mode.

✔In the World Manager, click the **Graphics** tab
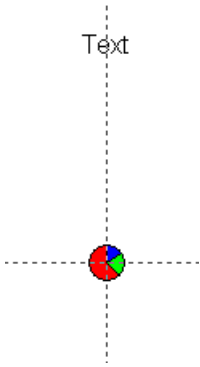
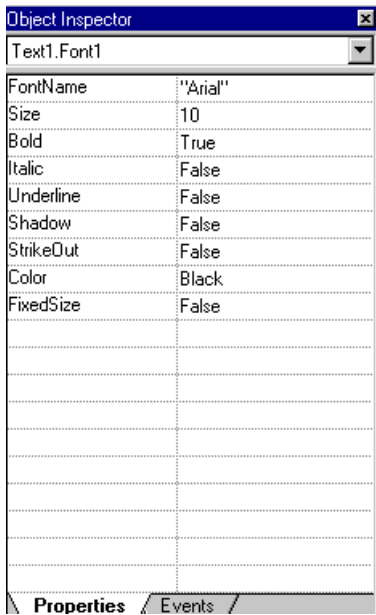✔Click the **Primitives** button.
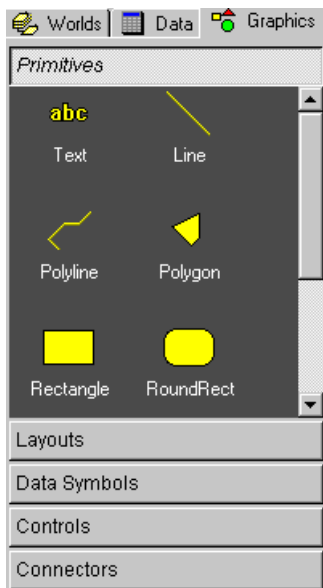
✔Click the **Text** object.

✔In the Scene Editor, click above the pie chart.

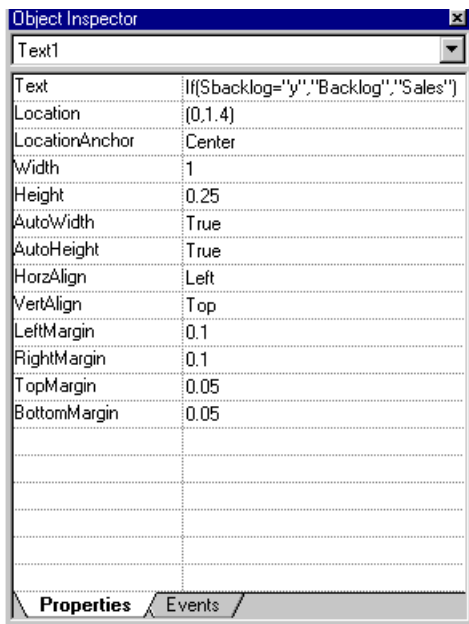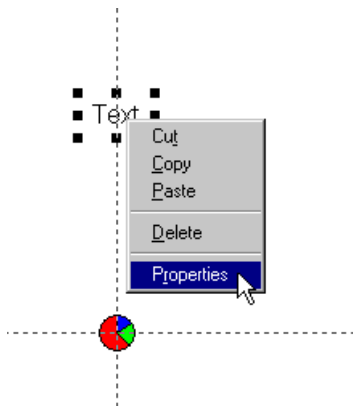> Where you click becomes the location for your text.

Text

✔Right-click the **Text** object and select **Properties.**

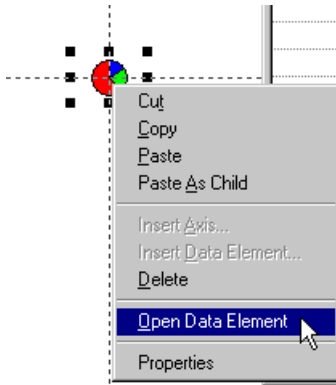✔From the Object Inspector list box, select **Text1.Font1**. In the property cell for Size, enter 10.

Object Inspector	☒
Text1.Font1	▼
FontName	"Arial"
Size	10
Bold	True
Italic	False
Underline	False
Shadow	False
StrikeOut	False
Color	Black
FixedSize	False

╲ **Properties** ╱ Events ╱

✔In the Orders Scene, right-click **Text** and select **Properties.**

✔In the Object Inspector, with the default as **Text1** in the list box, enter the expression
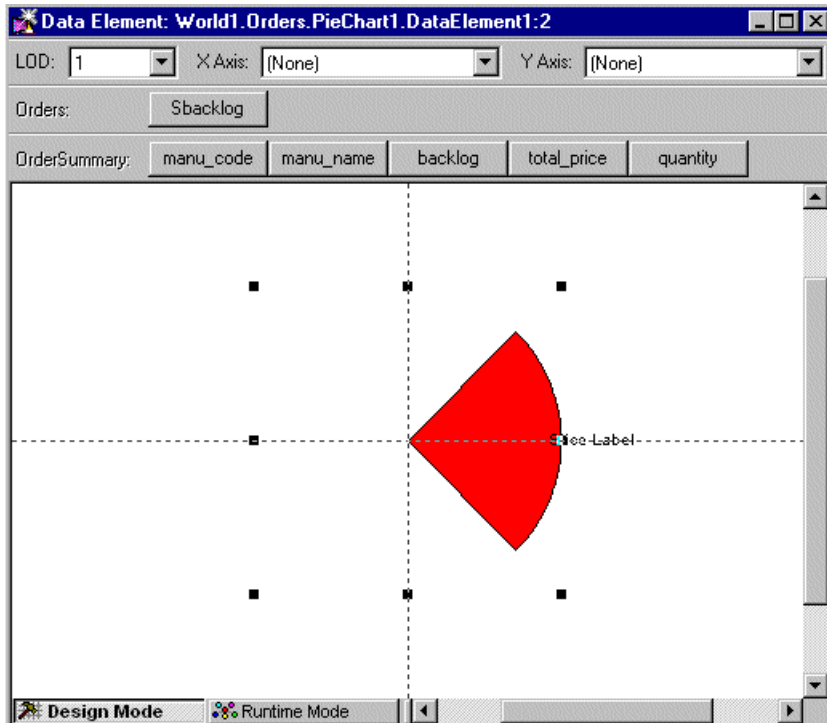If(Sbacklog="y","Backlog","Sales") for the Text property cell.

The property expression for the text creates two titles for the pie chart: Sales and Backlog. The one that displays for the title depends on the data.

✔In the Scene Editor, right-click the piechart and select **Open Data Element.**

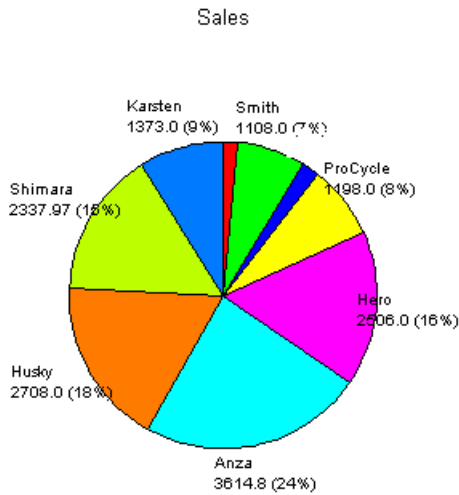✔In the DataElement Editor, right-click the wedge and select **Properties.**

✔From the Object Inspector list box, select **AlignPanel1.Text1.Font1**. In the property cell for Size, enter 8. In the property cell for Color, enter If(total_price>300, Black,White)

```
Object Inspector                          ×
AlignPanel1.Text1.Font1                    ▼
FontName        "Arial"
Size            8
Bold            False
Italic          False
Underline       False
Shadow          False
StrikeOut        False
Color           If(total _price>300,Black,White)
FixedSize       False




   Properties   Events
```

The property expression for Color shows only the manufacturers who have sold more than $300 worth of goods. Their names appear in black on the white background. Those manufacturers with less than $300 in sales do not show because their names are in white on the white background.

✔Click **Runtime Mode** to test. You should see a pie chart similar to the one that follows.

Sales

Karsten 1373.0 (9%)   Smith 1108.0 (7%)   ProCycle 1498.0 (8%)
Shimara 2337.97 (15%)
Hero 2506.0 (16%)
Husky 2708.0 (18%)
Anza 3614.8 (24%)

Tutorial Task #8

Creating Wormholes

8

You link one scene in a Visionary world to another with a Wormhole. Wormholes also allow you to show a portion of the target scene while still in the originating scene. In this task, you create two wormholes to view two different scenes: Sales and Backlog.

✔Insert a new scene and rename it **Overview**. See task #4 for details.

✔In the World Manager, click the **Graphics** tab to display the **Primitives** button.

✔In the Primitives panel, click the **Wormhole** object.

✔In the Scene Editor, drag to create a frame (rubber band) where you want the wormhole to appear.
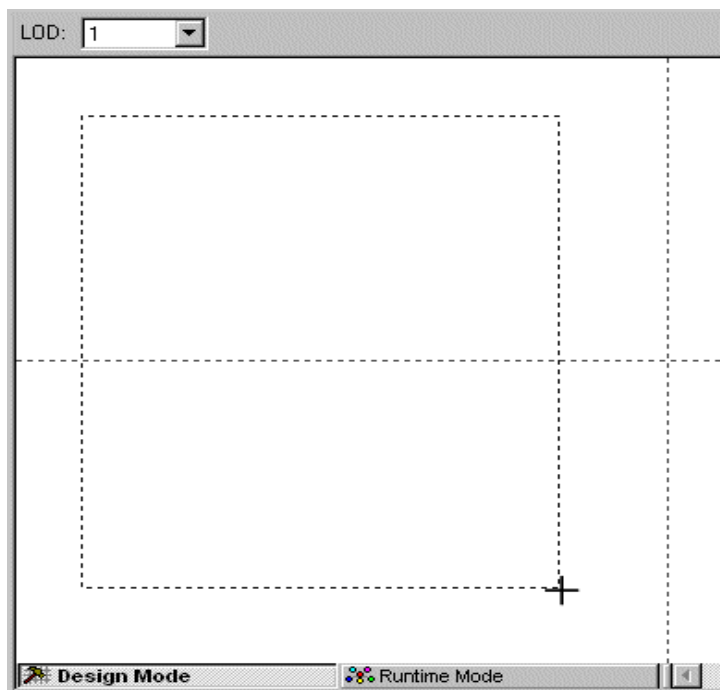
✔In the Wormhole dialog box, select **Orders** for the destination.
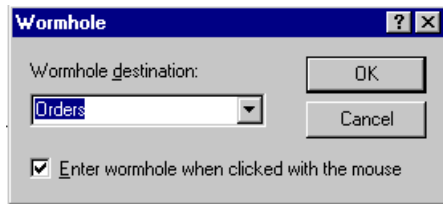
✔ Repeat the preceding three steps to insert a second wormhole.
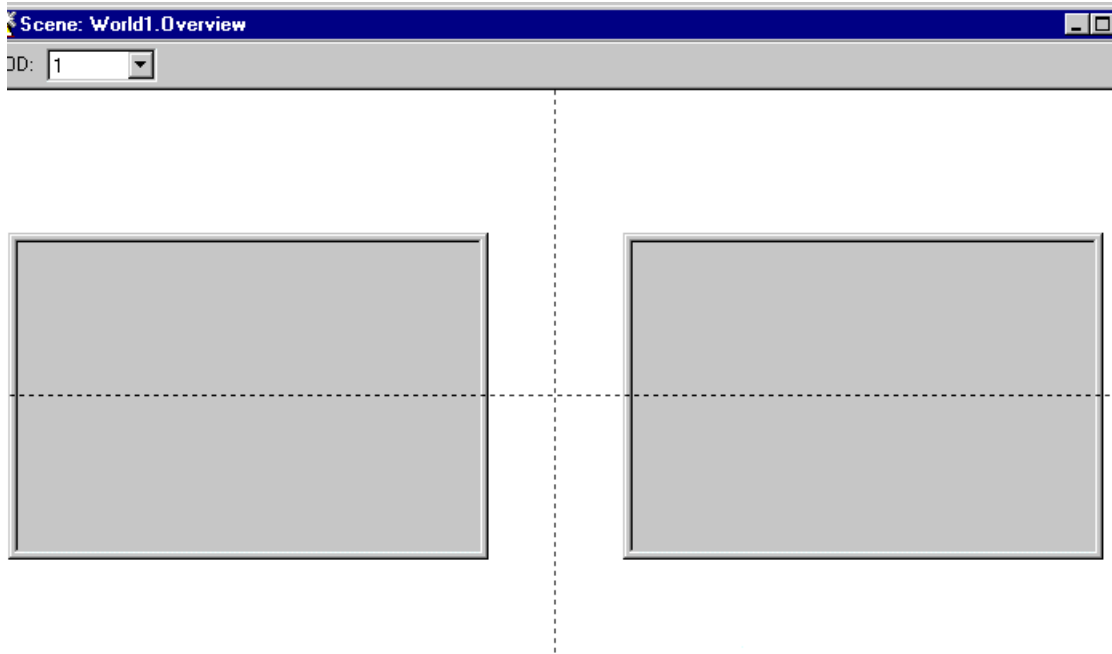
✔Right-click **Wormhole1** and select **Properties**.

✔From the Object Inspector list box, select **Wormhole1.SceneParameters1** and enter "n" as the value of Sbacklog.

      Make sure you retain the pair of double-quotes.
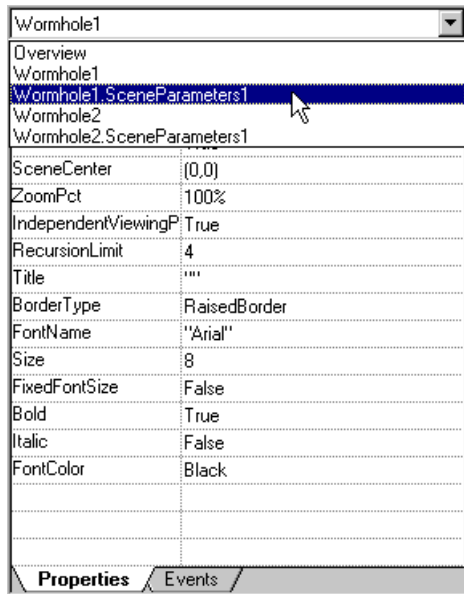
✔Right-click **Wormhole2** and select **Properties**.

✔From the Object Inspector list box, select **Wormhole2.SceneParameters1** and enter "y" as the value of Sbacklog.

✔Click **Runtime Mode** to test. You should see two pie charts similar to the graphics that follow.
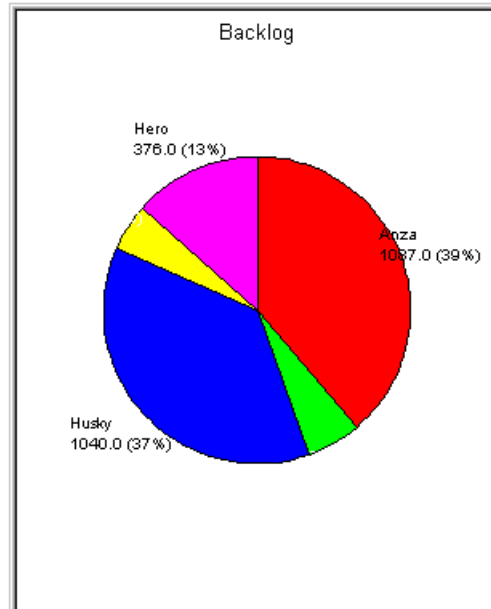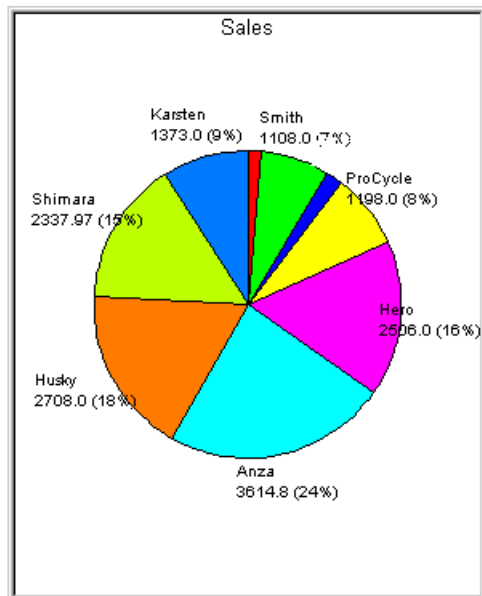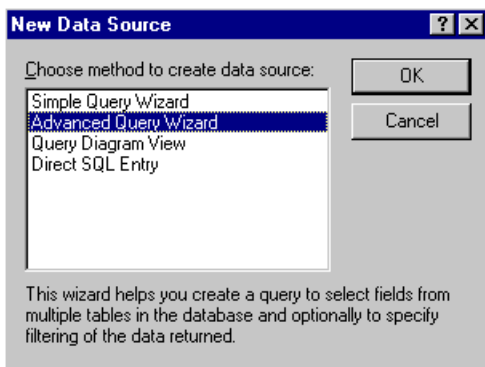
Tutorial Task #9

Creating a Parameterized Query

9

In this task, you use the Query wizard to guide you in creating a parameterized query. You join tables and filter output to create a more advanced query than in tutorial task #3.

✔In the World Manager, right-click **World1** and select **Insert→Data Source.**
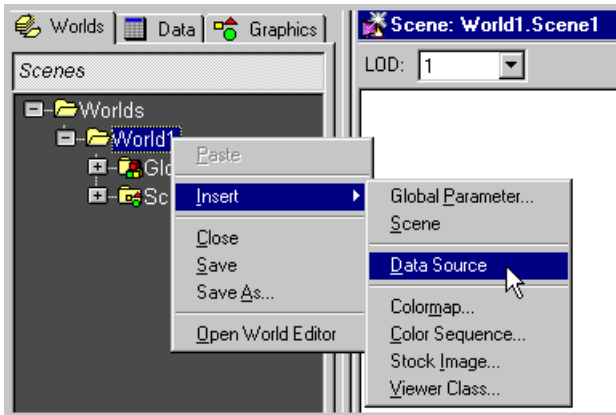
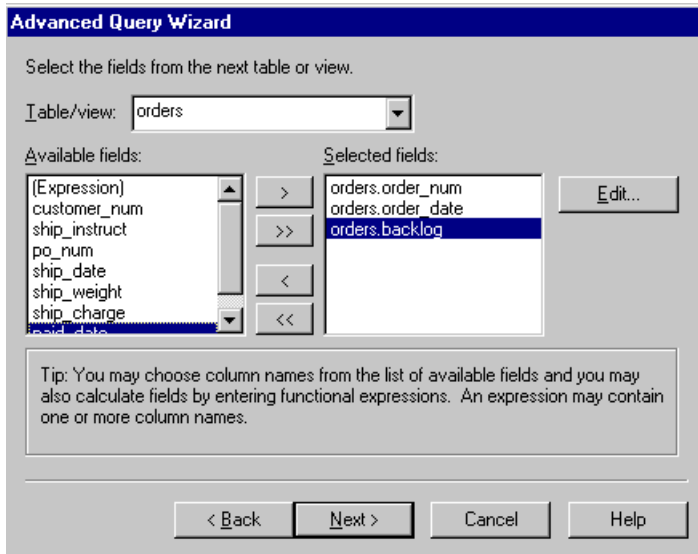✔In the New Data Source dialog box, select **Advanced Query Wizard**. Click **OK.**

.

✔In the Advanced Query wizard, do the following actions:

1.   From the Table/view list box, select the **Orders** table. Select and click **>** for each of the following columns:
     order_num, order_date, and **backlog.** Click **Next.**

   Tip

   Double-clicking the column name also selects it.

2.   Choose **Yes, there is more information**. Click **Next.**

3.   From the Table/view list box, select the **Items** table. Select and click **>** for each of the following columns:
   **order_num, total_price,** and **manu_code.** Click **Next.**
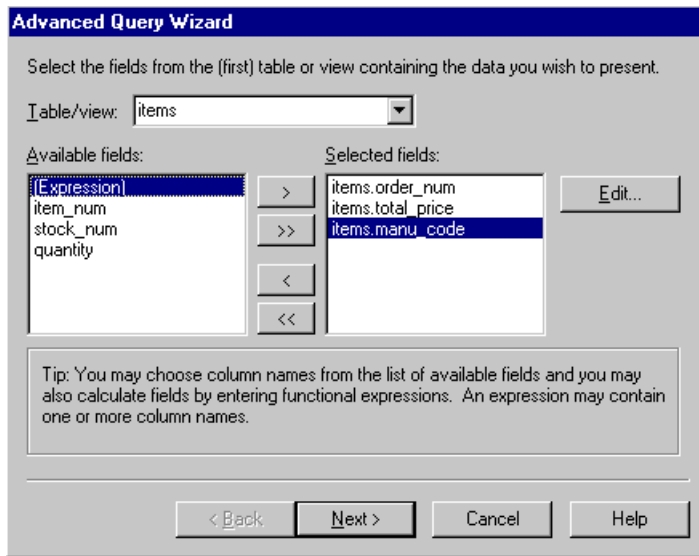
4. Click the **Column** button ▣ and choose **items.order_num**. Click **OK.**

5. Click the **Check** button ✓ . Click the cell under **Related field** that is to the right of the equals sign (=) and is in the same row as items.order_num. Click the **Column** button, choose **orders.order_num,** click **OK** and click the **Check** button. Click **Next.**
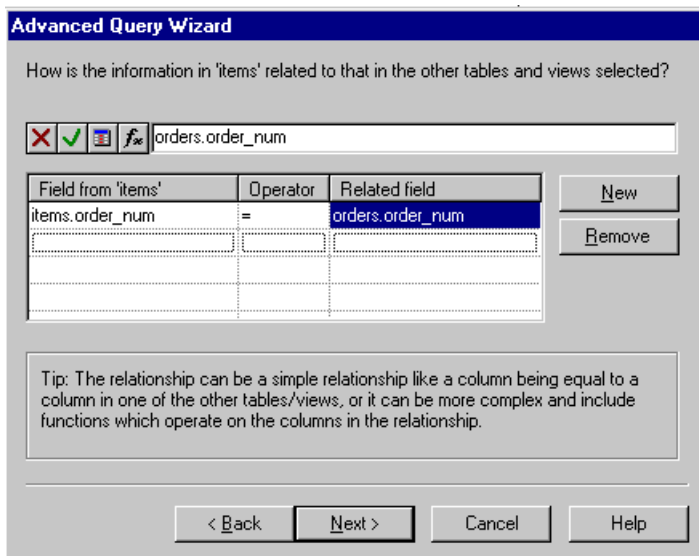

6. Choose **No, there is no more information to be added**. Click **Next.**

7. Choose **Yes, filter the rows based on additional criteria**. Click **Next.**

8. Click **Define Parameter.**
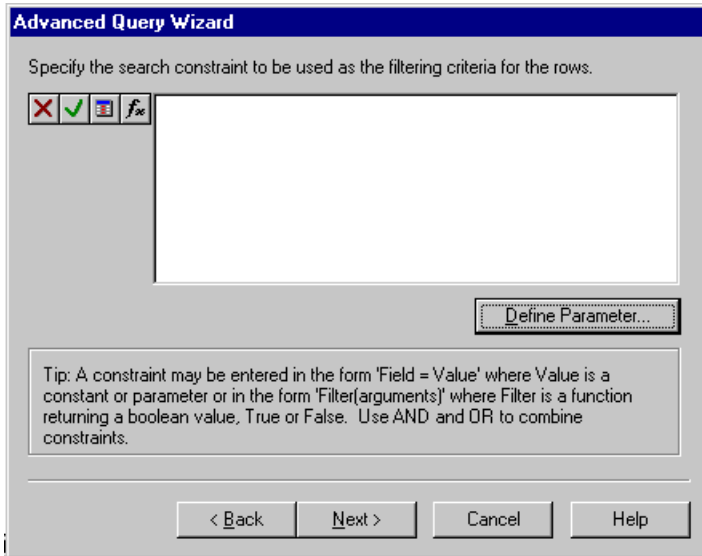
9. In the Query Parameters dialog box, enter Dmanu_code in the **Parameter name** text box. Leave lvarchar for the data type. Check **Has default value:** and enter ANZ in the text box. Click **OK.**
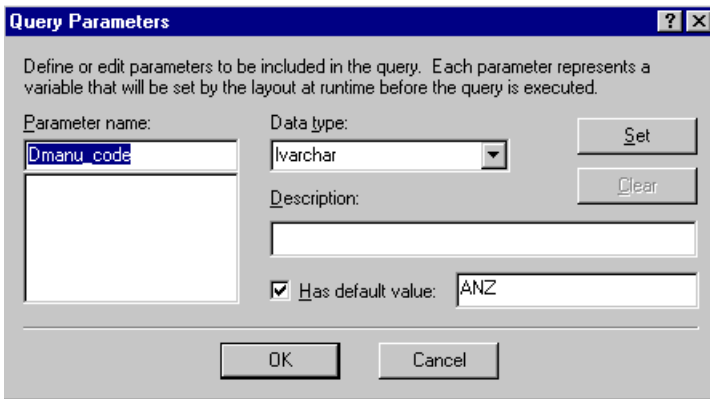
10. Click the **Column** button and select **items.manu_code**. Click **OK.** Enter items.manu_code = Dmanu_code in the text box. Click **Next.**

Creating a Parameterized Query
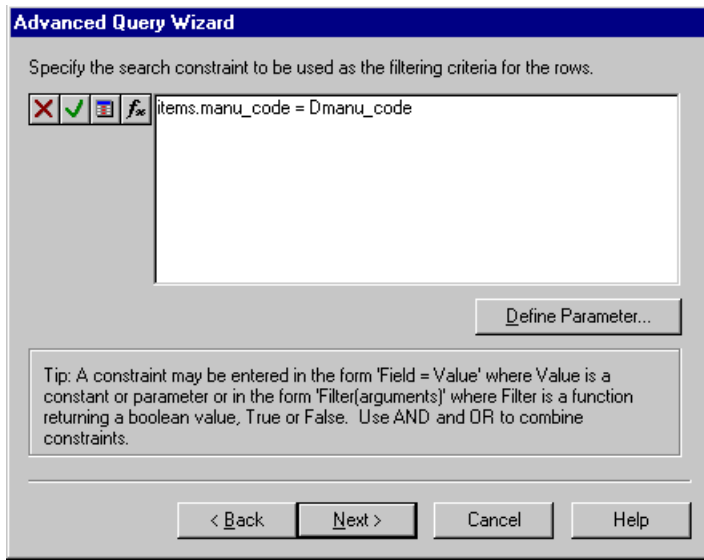
11. Choose **Return individual records**. Click **Next.**

12. In the **What do you want to name the query?** text box, enter OrdersByDate. Click **Finish.**

Click Yes to view the data sheet. The data sheet should look similar to the following:


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Tutorial Task #10

## Adding Scene Parameters

10

You create a parameterized scene by mapping the scene to the data source that you created in Tutorial Task #9. You add scene parameters to show an individual manufacturer's sales and backlog.

✔Insert a new scene and rename it OrdersByDate. See task #4 for details.

✔Click **Graphics→Layouts**. Double-click **Timeline Chart.**

✔In the Layout wizard, select the **OrdersByDate** data source. Click **Next.**

✔Leave blank the list boxes that are displayed. Click **Finish.**

✔Maximize the Data Element Editor. You will see an angled line. Drag diagonally to enclose and select the entire line with a dashed rectangle. Press the **Delete** key.
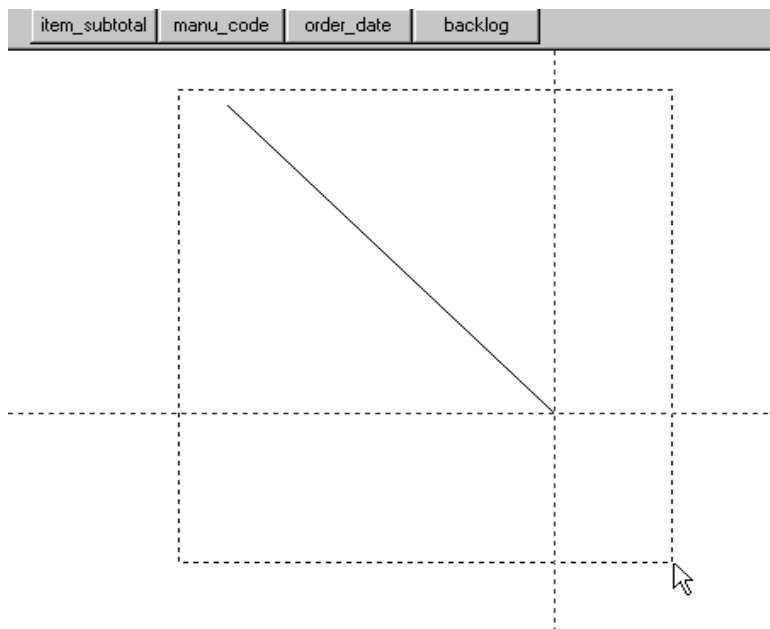
✔Click **Graphics→Data Symbols**. Double-click **Vertical Value Bar**.

✔Right-click the **Vertical Value Bar** and select **Properties**.

✔Click the **order_date** button on the **OrdersByDate** parameter bar. Move the line attached to the red dot to the **Location** property in the Object Inspector and click the red dot there.

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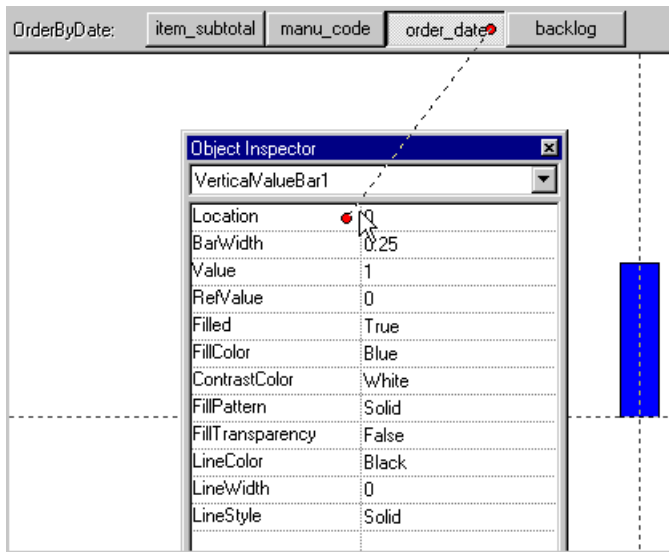
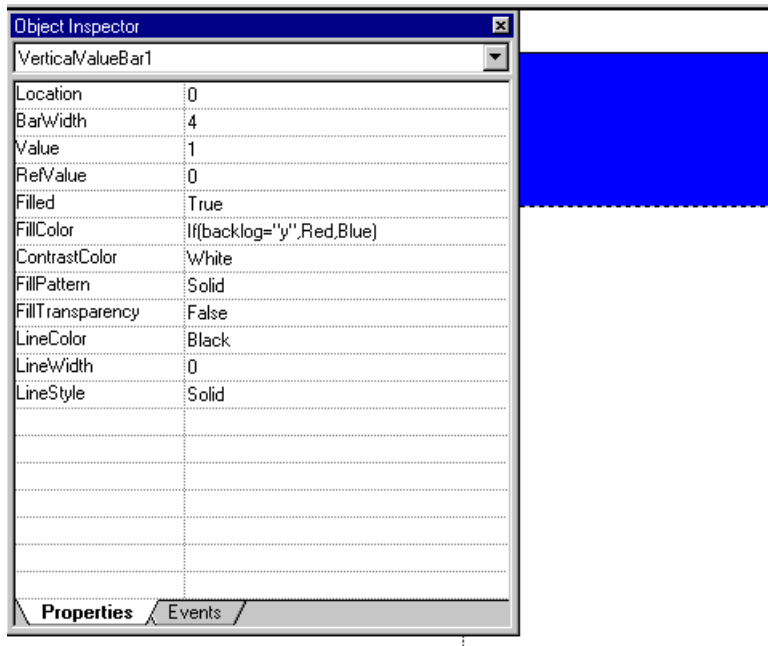✔Click the **total_price** button on the **OrdersByDate** paramater bar. Move the line attached to the red dot to the **Value** property in the Object Inspector and click the red dot there.
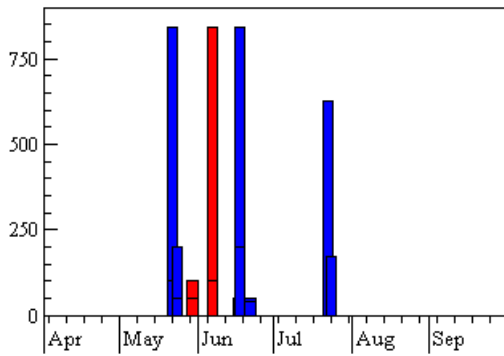

✔In the Object Inspector, enter 4 in the Bar Width property cell and If(backlog="y",Red,Blue) in the FillColor property cell.

✔Click **Runtime Mode** to test.

You should see a graphic similar to the one that follows.

Tutorial Task #11

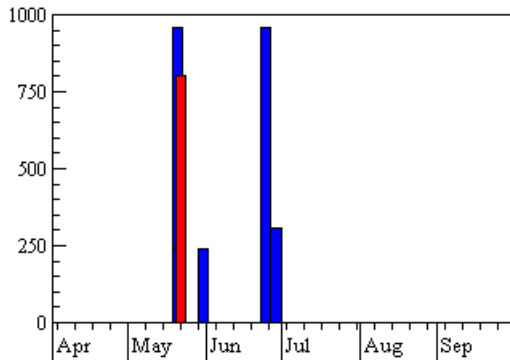## Inserting a Global Parameter

11

You can access a global parameter from anywhere in a Visionary world. In this task, you define a global parameter for the title of the **OrdersByDate** scene. You define a second global parameter for the value of the **Dmanu_code** data source parameter that you defined in task #9.

✔In the Scenes Panel of the World Manager, right-click **World1** and select **Insert→Global Parameter.**

✔In the Insert Parameter dialog box, enter Gmanu_name in the **Name** text box. Select **Text** in the **Data type** list box. Enter Husky Wear in the **Has Default Value** text box. Leave **Public at runtime** checked. Click **OK.**

✔Right-click **OrdersByDate** and select **Open Scene.**

✔ From the main menu bar, choose **Insert→Primitive→Text.** The text displays in the center of the scene.

✔Drag the **Text** object from the center and position it above the chart.

✔ Right-click the **Text** object and select **Properties.**

✔ In the Object Inspector, select **Text1**. Enter Gmanu_name in the Text property cell.

✔ In the Object Inspector, select **Text1.Font1**. Select or enter True in the Italic property cell. Select or enter Blue in the Color property cell.

✔ Click **Runtime Mode** to test.

Your graphic should appear similar to the following one. The blue bars represent orders and the red bars represent backlog

Husky

The next steps in this task require you to set the parameter **Dmanu_code** so that it always has the same value as **Gmanu_code**.

Make sure you are in Design mode.

✔Right-clilck **World1** and select **Insert→Global Parameter.**

✔In the Insert Parameter dialog box, for **Name** enter Gmanu_code. For **Data type** select **Text**. For **Has default value:** enter ANZ. Leave **Public at runtime** checked. Click **OK.**
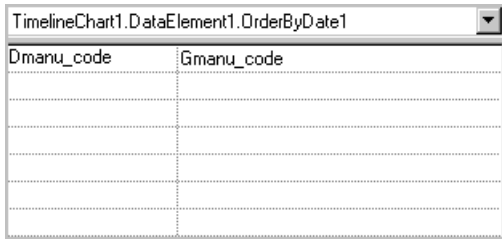
✔In the Scenes Panel of the World Manager, right-click **OrdersByDate** and select **Open scene.**

✔Position your mouse anywhere in the background (not on an object) of the scene and right-click to select **Properties.**
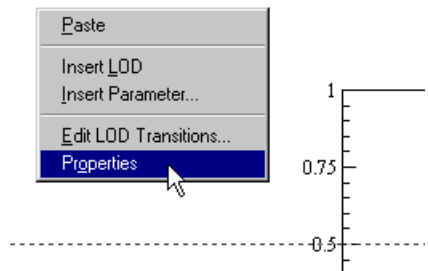
✔From the the Object Inspector list box, select **Timeline Chart1.DataElement1.OrdersByDate1.**

✔Enter Gmanu_code as the value for Dmanu_code.

```
TimelineChart1.DataElement1.OrderByDate1      ▼
Dmanu_code       Gmanu_code
```

If you test in this task, you will not see any changes. The next task shows you how to use the global parameter you created with an event action.

Tutorial Task #12

Inserting an Event Action

12

To allow you to jump through any wedge of the pie chart to see the data associated with it, you create a Wormhole event action.

✔In the Scenes Panel of the World Manger, right-click **Orders** scene and select **Open Scene**.

✔In the Scene Editor, right-click the pie chart and select **Open Data Element**.

✔In the Data Element Editor, right-click the wedge and select **Properties**.

✔In the Object Inspector, click the **Events** tab. Double-click **Click.**
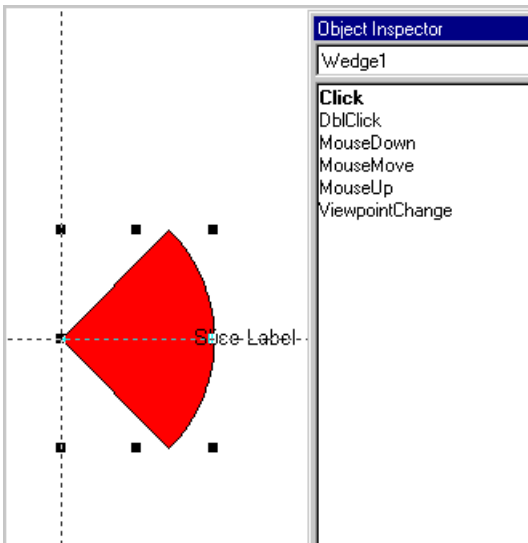
✔With the **Perform Action** tab as the default, select **Jump to new location** in the **Action** list box. Select **"OrdersByDate"** in the **Scene** list box and **"Default"** in the **Viewpoint** list box. Click **Apply.**

✔In the Object Behavior dialog box, select the **Set Parameters** tab and click **New.**
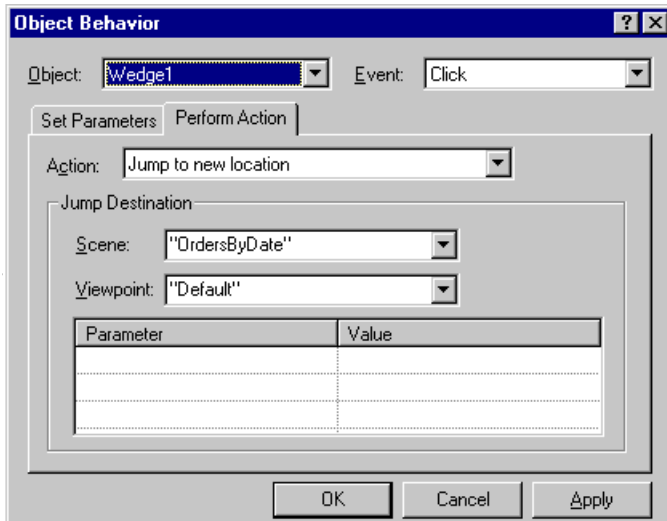
✔Select Sbacklog in the Parameter list and backlog in the Value list. Click **New.** Select Gmanu_code in the Parameter list and manu_code in the Value list. Click **New.** Select Gmanu_name in the Parameter list and manu_name in the Value list. Click **OK.**
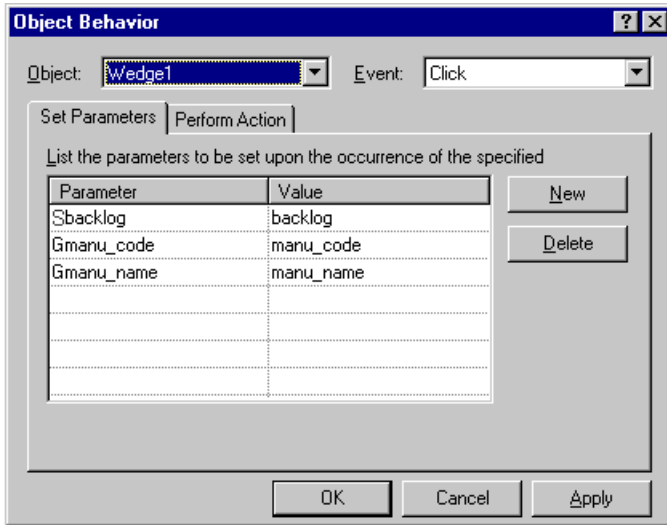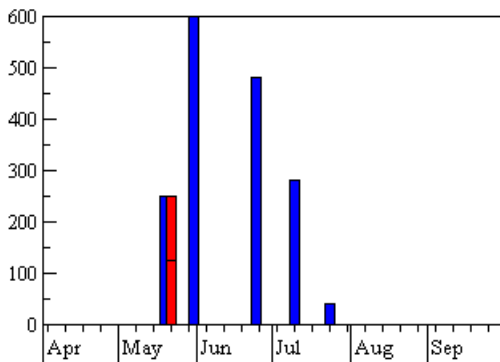
✔Click **RuntimeMode** to test.

You can click any of the pie wedges in the pie chart and thereby jump to the chart containing the correct sales and backlog data for that manufacturer.

For example, if you click the **Hero** slice, you see a chart similar to the following one.

In the World Manager, you can double-click the Orders scene to open it and click Runtime Mode to test other slices.

Tutorial Task #13

Publishing a World

13

You can save the Visionary world your created on your local file system or in the database. To save a Visionary world in a database, you must first connect to the database.

✔Right-click **World1** and select **Save** from the popup menu.

✔Click **Save to a file** or **Save to a database** to select where to save your world.

✔Enter the name of the world you want to save in the **Filename** text box.

✔Click **Save.**

Note

Visionary worlds are saved with the file extension **.vwp**.

Visionary worlds stored in the database are stored in the **VisWorlds** table.

After you have designed your world, you can publish it as a component so that it can be viewed by other users.

You deploy your world in Visionary Viewer. Visionary Viewer is an ActiveX runtime control (visviewer.ocx file) that can be embedded in a Web page or a container application supporting ActiveX controls. For example, you can run Visionary Viewer in a Visual Basic, C++, or Java container application or in a Microsoft Office application such as Powerpoint. The Visionary Viewer control is automatically registered when you install Visionary Studio.

✔Choose **World→Publish World** to display the Publish World dialog box. The active Visionary world file appears in the **Filename** text box.

✔Select **Overview** from the **Initial scene** list box.

   You can type a user name and password in the **User name** and **Password** text boxes.

   You can check the **Prompt the user to logon** check box to display the Open Database dialog box when the world is opened in Visionary Viewer.

✔Leave the default for the number of threads in the **Number of threads per connection** text box.

✔Click **OK** to display the HTML Test Page dialog box.

✔Type a name and click **Yes** to create a sample HTML page for your world. The **HTML Test page** is created and displayed in a Microsoft Internet Explorer window. You will see Visionary Viewer within the sample HTML page.