

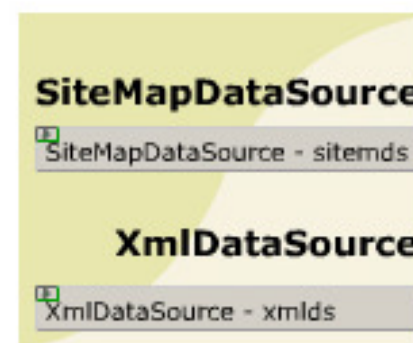
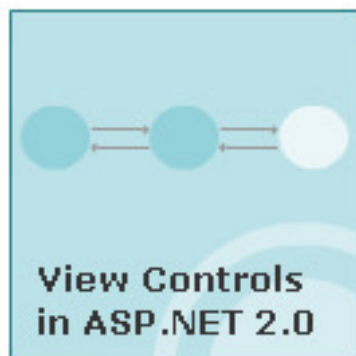
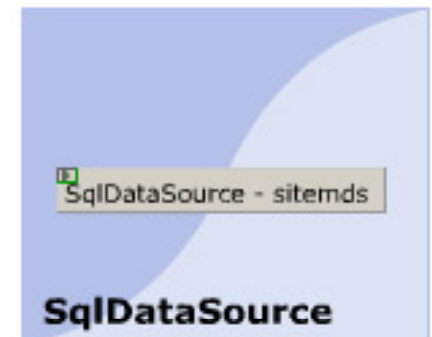
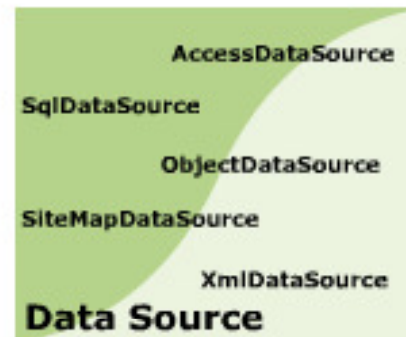
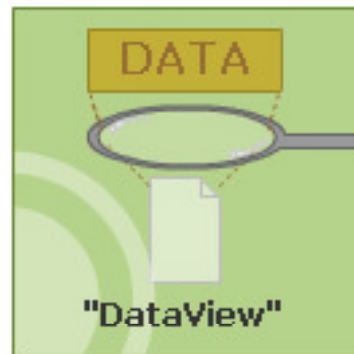
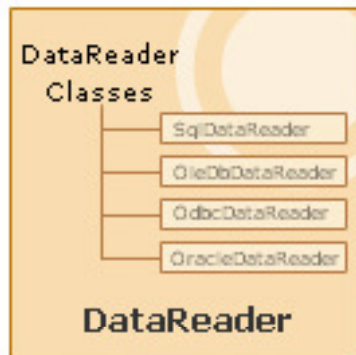
ACCP 17.1 – SEMESTER 3

DATABASE HANDLING IN ASP.NET

Module 3 & 4

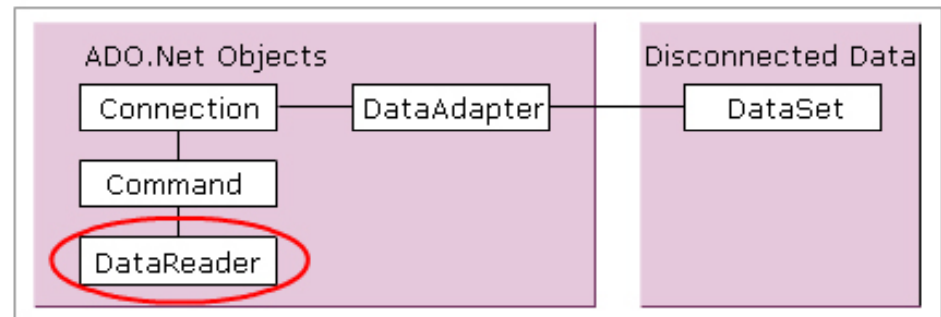
Session 2 – View and Data Source Controls

Objectives



A note on DataReader

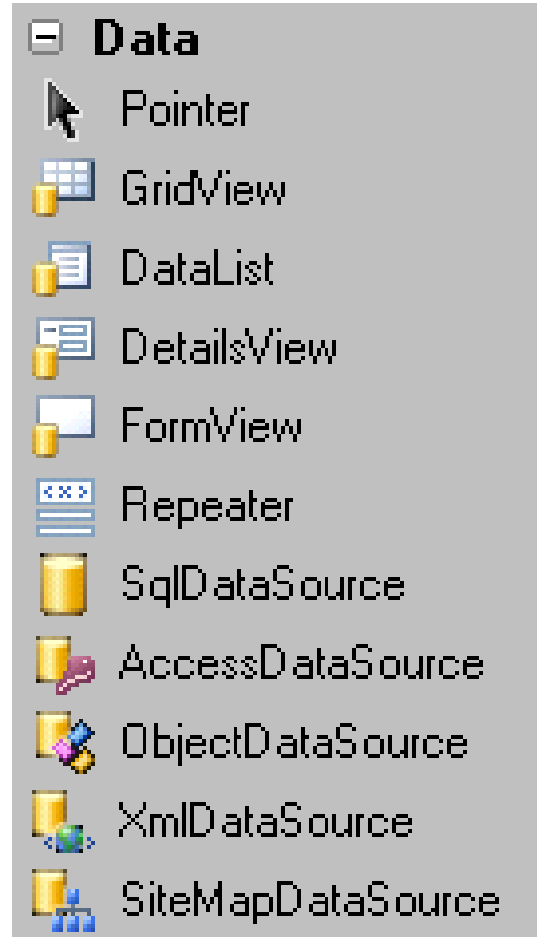
- ❑ DataSet limitation
 - ▣ Memory consuming
 - ▣ Additional processing
- ❑ For speedy query execution, use DataReader instead
- ❑ DataReader is read-only and forward-only



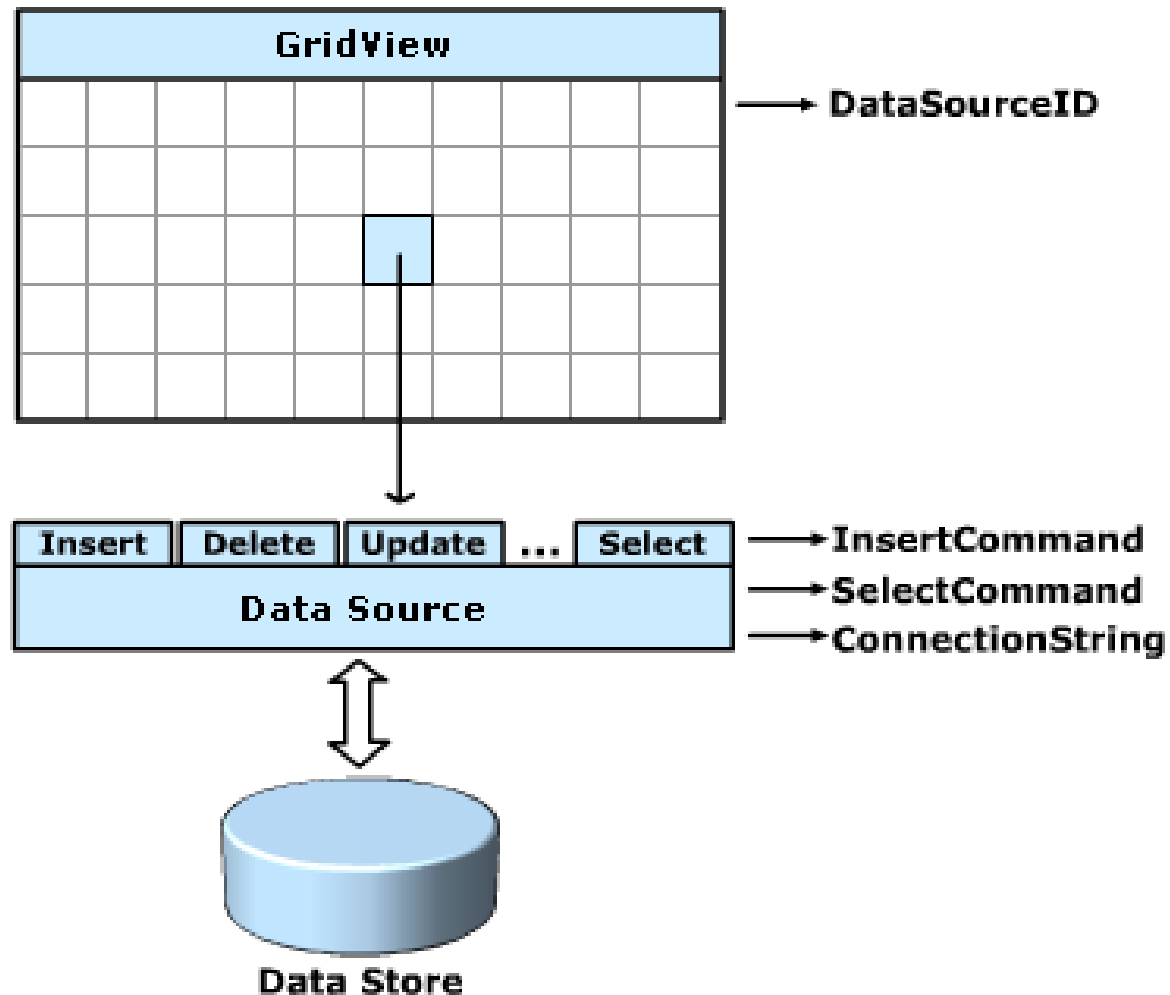
Functional Relationships between ADO.NET Objects

ASP.NET Data bound controls

- ❑ <asp:GridView>
- ❑ <asp:DataGrid>
- ❑ <asp:DetailsView>
- ❑ <asp:TreeView>
- ❑ <asp:Menu>
- ❑ <asp:DataList>
- ❑ <asp:Repeater>
- ❑ <asp:DropDownList>
- ❑ <asp:BulletedList>
- ❑ <asp:CheckBoxList>
- ❑ <asp:RadioButtonList>
- ❑ <asp:ListBox>
- ❑ <asp:AdRotator>




GridView



Source: <http://beta.asp.net/QUICKSTART/aspnet/doc/ctrlref/data/default.aspx>

DataView

- Use as a data source control for GridView
- Support filtering and sorting



Students table

StudentID	FirstName	City	BatchID
101	James	Chicago	A1
102	Cynthia	London	A3
103	George	London	A3
104	Timothy	Portland	A3
105	Sarah	Kansas	A1

Records filtered by BatchID

	StudentID	FirstName	City	BatchID
1	101	James	Chicago	A1
2	105	Sarah	Kansas	A1

Records filtered by City

	StudentID	FirstName	City	BatchID
1	102	Cynthia	London	A3
2	103	George	London	A3

All records in the GridView 1:

	PatientID	PatientName	City	Discharged
Edit Delete	101	Peter	Boston	<input checked="" type="checkbox"/>
Edit Delete	103	Amanda	London	<input type="checkbox"/>
Edit Delete	700	Jimmy	Boston	<input type="checkbox"/>
Edit Delete	701	Goerge	London	<input checked="" type="checkbox"/>
Edit Delete	702	Cynthia	New York	<input checked="" type="checkbox"/>
Edit Delete	703	William	New York	<input checked="" type="checkbox"/>
Edit Delete	999	Dick	London	<input type="checkbox"/>

Filtered and Sorted Records from the DataView in GridView 2:

	PatientID	PatientName	City	Discharged
Edit Delete	103	Amanda	London	<input type="checkbox"/>
Edit Delete	999	Dick	London	<input type="checkbox"/>
Edit Delete	701	Goerge	London	<input checked="" type="checkbox"/>

DetailsView

- ❑ DetailsView is typically used along with the GridView control in a master-detail scenario but can also be used in an independent scenario
- ❑ It can be customized as GridView using style properties

All records in the GridView (Master):

	ProductID	ProductName	AgeGroup	Price
Select	101	B	4-8	200.0000
Select	102	B	2-3	80.0000
Select	103	B	1-3	150.0000

Details View (Detail):

OrderID	1
	12/12/2008
OrderDate	12:00:00 AM
ProductID	101
Quantity	100
	Remove
	Edit Delete New

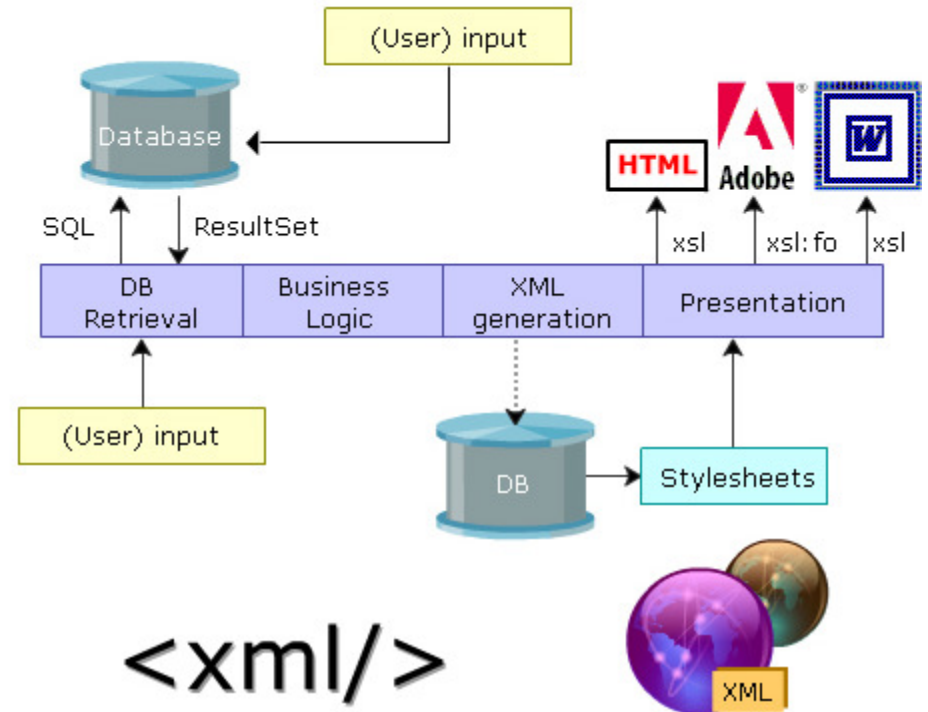
Newly added Command



XML and DataSets

- The DataSet class provides three XML-based methods:

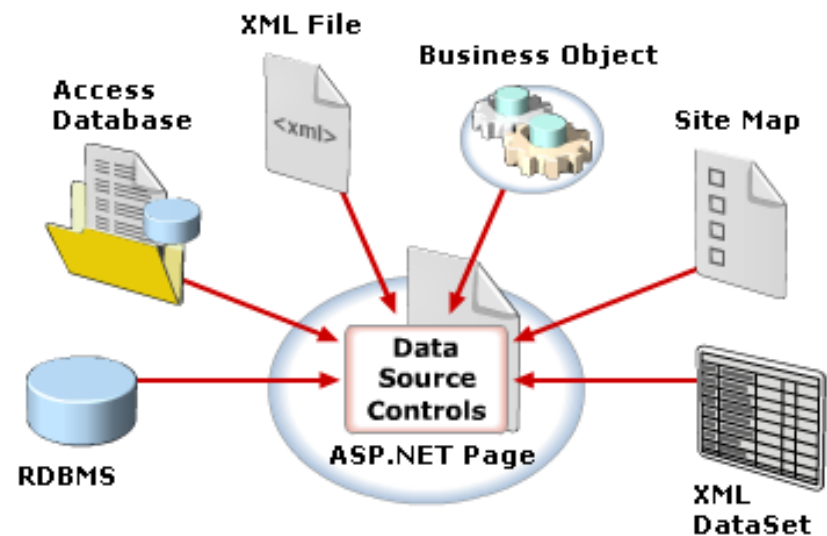
- ▣ ReadXml ()
- ▣ WriteXml ()
- ▣ GetXml ()



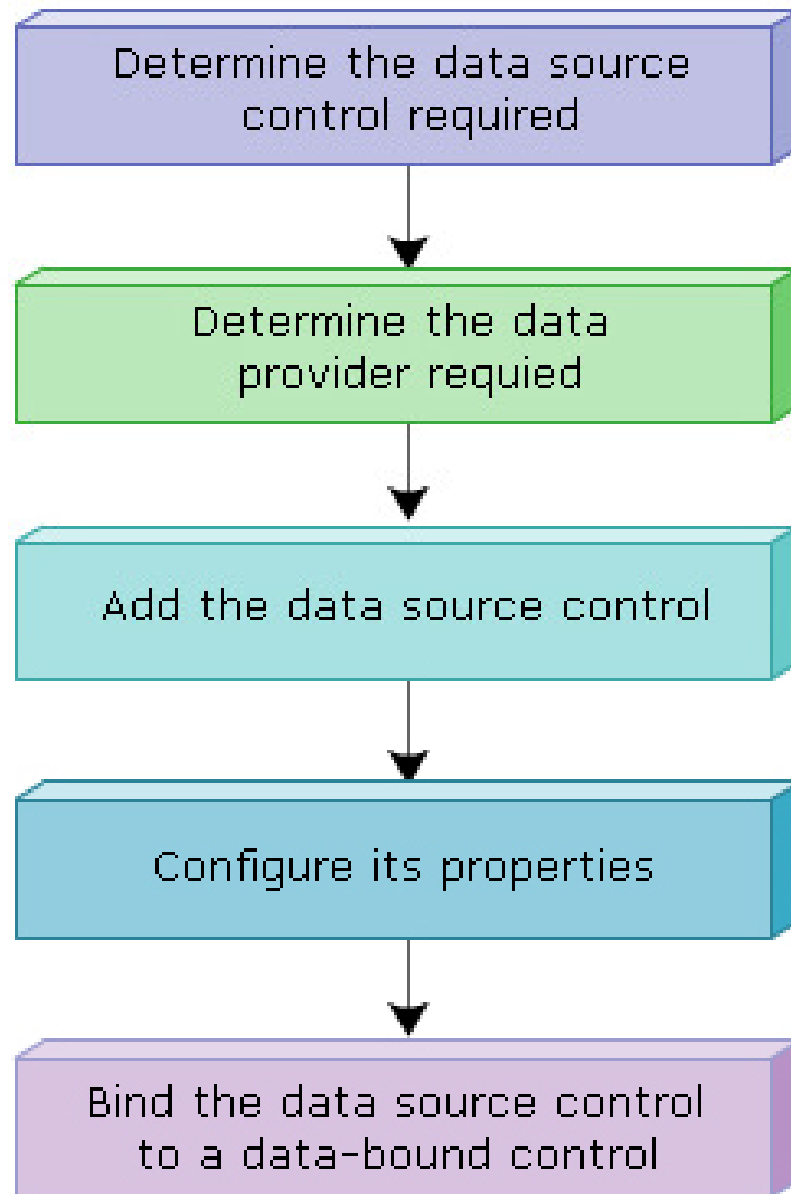
Data Source Controls

- Data Source Controls: a bridge between an external data source and data-bound controls on the Web form
- Usage:
 - ▣ Connect to various data sources
 - ▣ Minimal coding effort required
 - ▣ Display and manipulate data

- Types of Data Source Controls:
 - ▣ SqlDataSource
 - ▣ XmlDataSource
 - ▣ SiteMapDataSource



Connecting to Databases



Data Binding

SqlDataSource - sqldsEmp

EmployeeID: 0
LastName: abc
FirstName: abc
HireDate: 3/25/2008 12:00:00 AM

EmployeeID: 1
LastName: abc
FirstName: abc
HireDate: 3/25/2008 12:00:00 AM

XmlDataSource - xmldsMovie

Movie Details:

Root
Parent 1
Leaf 1
Leaf 2
Parent 2
Leaf 1
Leaf 2

TreeView Tasks

Auto Format...

Choose Data Source: xmldsMovie

Configure Data Source...

Refresh Schema

Edit TreeNode Databindings...

Customize Line Images...

☒ Show Lines

SiteMapDataSource - sitemdsCompany

Customers
External
Internal

TreeView bound to
SiteMapDataSource
control

SiteMapDataSource - sitemdsTechWebsite

Main Page ▶

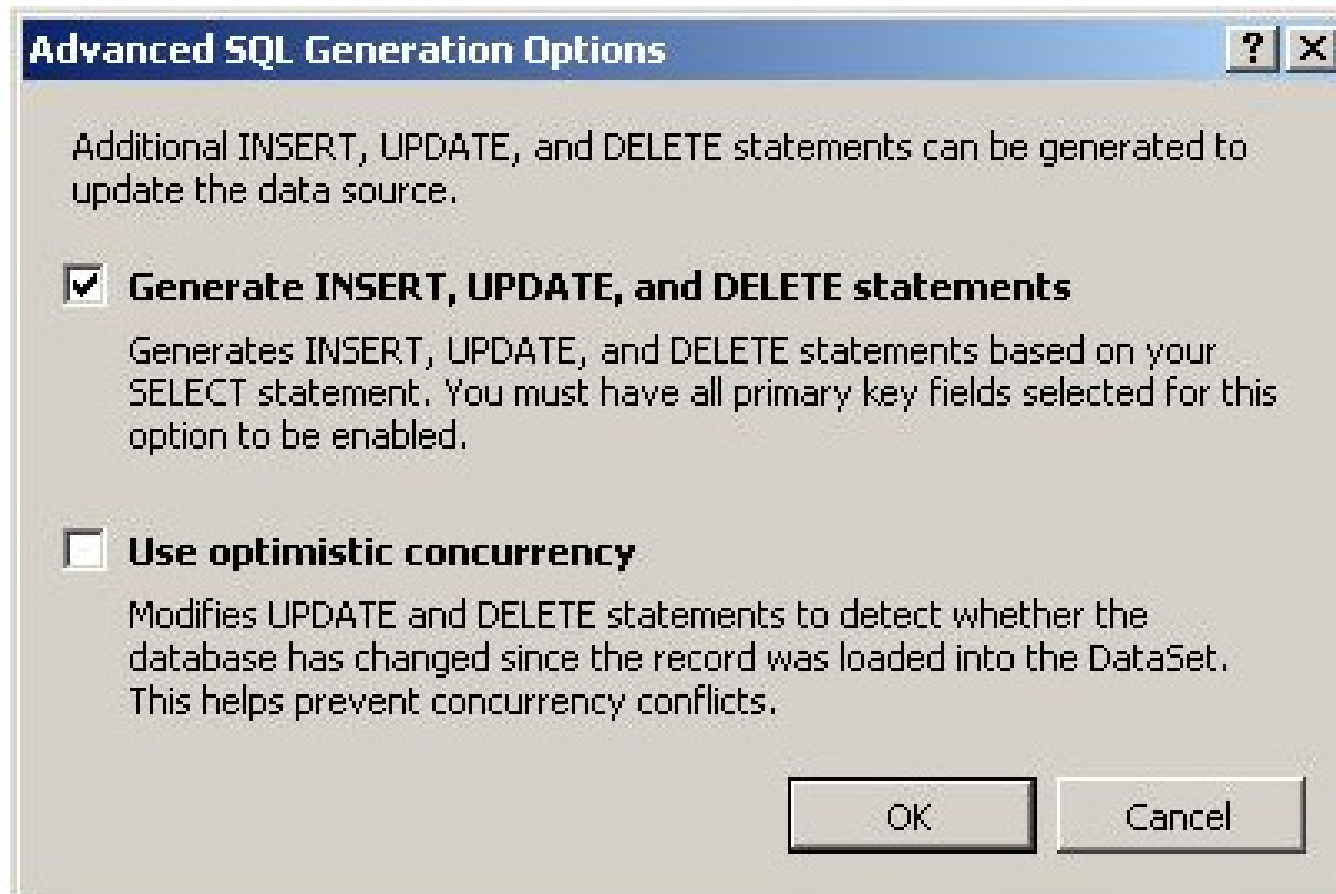
Menu bound to
SiteMapDataSource
control

Parameterized Queries



- ❑ The parameters for parameterized queries can be set at design time through the Configure Data Source dialog box
- ❑ Sources of parameters:
 - ❑ Control
 - ❑ Cookie
 - ❑ Form
 - ❑ QueryString

Updating Records



More on GridView

The screenshot shows a GridView control with the following data:

CategoryID	Category Name	Description
0	abc	abc
1	abc	abc
2	abc	abc
3	abc	abc
4	abc	abc

Below the GridView is a label: **AccessDataSource - AccessDataSource1**.

To the right is the **GridView Tasks** context menu:

- Auto Format...
- Choose Data Source: AccessDataSource1
- Configure Data Source...
- Refresh Schema
- Edit Columns** (highlighted with a red circle)
- Add New Column...
- ☐ Enable Paging (Edit the GridView's columns)
- ☐ Enable Sorting
- ☐ Enable Selection
- Edit Templates

A red arrow points from the **Edit Columns** option to the **Fields** dialog box.

The **Fields** dialog box is shown with the following sections:

- Available fields:** A tree view showing **(All Fields)**, **BoundField** (expanded), **CategoryID**, **CategoryName**, **Description**, **CheckBoxField**, and **HyperLinkField**.
- Selected fields:** A list containing **CategoryID**, **CategoryName** (highlighted), and **Description**.
- HyperLinkField properties:** A table of properties for the selected field.
- Buttons:** **Add**, **Refresh Schema**, **OK**, and **Cancel**.

HyperLinkField properties:

InsertVisible	True
NavigateUrl	
ShowHeader	True
SortExpression	
Target	
Visible	True
Data	
DataNavigateUrlField	CategoryID, CategoryName
DataNavigateUrlFormatString	ProductsByCategory
DataTextField	CategoryName
DataTextFormatString	
Styles	
HeaderText The text within the header of this field.	

[Convert this field into a TemplateField](#)

Set up HyperlinkField

- Set up the Hyperlink field so that it displays CategoryName as the link words, and links to ProductsByCategory.aspx while passing two QueryString variables cid and cname where cid contains CategoryID and cname contains CategoryName

The diagram illustrates the configuration of a **HyperlinkField** control. It consists of three main components:

- HyperLinkField properties:** A table showing the configuration for the **HyperlinkField** control.
- String Collection Editor:** A dialog box for entering strings in the collection.
- DataTextField:** A control that displays the data from the collection.

HyperLinkField properties:

HyperLinkField properties:	
ShowHeader	True
SortExpression	
Target	
Visible	True
Data	
DataNavigateUrlField	CategoryID, CategoryName
DataNavigateUrlFormatString	ProductsByCategory.aspx?cid={0}&cname={1}
DataTextField	CategoryName
DataTextFormatString	
Styles	
ControlStyle	
FooterStyle	
DataNavigateUrlFormatString	
The formatting applied to the value bound to the NavigateUrl property of the hyperlink. For ...	

String Collection Editor:

Enter the strings in the collection (one per line):

CategoryID
CategoryName

DataTextField:

DataTextField	CategoryName
CategoryID	
CategoryName	
Description	

The diagram shows the following connections:

- The **CategoryID, CategoryName** text box is connected to the **DataNavigateUrlField** property in the **HyperLinkField properties** table.
- The **CategoryID, CategoryName** text box is connected to the **DataNavigateUrlFormatString** property in the **HyperLinkField properties** table.
- The **CategoryID, CategoryName** text box is connected to the **DataTextField** property in the **HyperLinkField properties** table.
- The **CategoryID, CategoryName** text box is connected to the **CategoryName** header in the **DataTextField** table.
- The **CategoryID, CategoryName** text box is connected to the **CategoryName** row in the **DataTextField** table.
- The **CategoryID, CategoryName** text box is connected to the **CategoryName** row in the **DataTextField** table.

Summary

