

Accessing Data

DataReader

DataReader

- If all you need to do is read some data and display it, use a DataReader object instead of a dataset.
- Less overhead
- Forward only fire hose cursor
- Data readers, though, are NOT disconnected

DataReader

- You cannot execute a data reader's constructor directly.
- Instead, once your SqlCommand object is created, you call the ExecuteReader() method of this object.

```
SqlDataReader reader =  
command.ExecuteReader(CommandBehavior.CloseConnection);
```

- Argument is an optional enumeration value that tells SqlDataReader object that when it is closed, it should close the connection.

DataReader

The **Read()** method of the DataReader accesses the next row of data.

- First row is not available until you call Read(). Subsequent calls moves to next row.
- Method returns a Boolean indicating whether it got a row or not.

DataReader

```
Get an open connection to the database first  
SqlCommand command = new SqlCommand(sqlStr, conn);  
SqlDataReader reader = command.ExecuteReader();  
while (reader.Read())  
{  
    string s = reader.GetString(0); // gets string data in first column  
    perhaps put this string in a TextBox  
    get remaining columns in the Reader  
}
```

DataReader

- Also has methods for all of the CLR's data types
- GetBytes(colNum)
- GetFloat()
- GetInt16()
- etc.
- Cannot use string column names in these Get<> methods, only ordinal column numbers.

DataReader

- DataReader also has an Item property that returns the contents of a column for the current row.
- With Item, you can pass column number or string column name.
- Item is the indexer for the DataReader, so syntax is reader[column];
- Indexer returns an object, so casting is necessary.

DataReader

- One useful property is
`bool noData = reader.IsDBNull(int ndx);`
- Gets a value indicating whether the column contains non-existent or missing values.
- Always call reader.Close() when you are done with it.
- Using column number is always faster.

DataReader

- The GridView (data grid for an aspx web page) has a DataBind method.
- Windows Forms DataGridView does not have a DataBind() method.
- You can assign a SqlDataReader to a GridView's DataSource property and then call DataBind.

```
CustomerGrid.DataSource = reader;  
CustomerGrid.DataBind();  
reader.Close();
```