

What is an OleDbDataAdapter?

An OleDbDataAdapter is an object that allows us to access information from a database by using a Structured Query Language. (A Structured Query Language or *SQL* is a computer language that allows for the retrieval and management of data.) The Data Adapter can also send information back to our database, updating it with values or changes made in our program.

Why do we need a Data Adapter in the first place? Well, the DataSet (our invisible copy of our database) and the Connection Object (which allows us to link our VB.NET program with the correct database) can't directly "talk" to each other. They require an intermediary, and this is how the Data Adapter comes into play. The Data Adapter serves as a go-between for the Connection object and the DataSet. To place the information the Data Adapter returns, we'll create a DataSet object. (Note: You'll see this code be repeated in the "What is a DataSet" example; that's because Data Adapters and DataSets go hand-in-hand).

These three lines of code respectively create a new DataSet (which is a virtual, invisible copy of our original database), create a reference for our Data Adapter, and declare a new Data Adapter.

```
Dim DataSetName As New DataSet
```

```
Dim DataAdapterName As OleDb.OleDbDataAdapter
```

```
DataAdapterName = New OleDb.OleDbDataAdapter(sql, con)
```

By declaring your DataSet, you're giving yourself the ability to later "fill" it with the information stored in your Access database.

The second line of this code sets up a reference for our Data Adapter. As you'll remember, OLE is an abbreviation for Object linking and embedding, which essentially are objects that allow Visual Studio to connect to outside data sources like databases or even text files and email. The third line of code, however, creates this new Data Adapter. The two bracketed items are the SQL string (which, as you'll remember, is the way VB.NET can query the Access database) and the Connection String (which links us to the database in the first place).

For some practice using a Data Adapter, try your hand at the **Form Adapter**

Example.
