**SqlConnection**

The SqlConnection class provides a connection to a SQL Server database. When we construct a SqlConnection object, we can choose to specify a connection string as a parameter. The connection string contains all of the information required to open a connection to our database.

The connection string

The way that the connection string is constructed will depend on what data provider we are using. We are using the SQL Server provider. When accessing SQL Server, we will usually provide a Server and database parameter:

The code fragment below uses the SqlConnection class to initialize a connection object that uses a specific user ID and password in the connection string:

Dim myConnection As SqlConnection = New SqlConnection(Server=localhost;Database=master)

Opening and Closing the connection

Once we have initialized a connection object with a connection string , we can invoke the methods of the SqlConnection object such as Open and Close, which actually open and close a connection to the database specified in the connection string.

Example

‘open the database connection

myConnection.Open()

‘…use the connection

‘close the database connection

myConnection.Close()

**SqlCommand**

SqlCommand class represents a SQL command to execute against a data store. The command will usually be a select, insert, update or delete a query and can be a SQL string.

The constructor for the SqlCommand class has several variations, but the simplest method is to initialize an SqlCommand object with no parameters.

The following code fragment below shows how to initialize a SqlCommand object:

Dim myCommand As SqlCommand= new SqlCommand()

The Connection Property

There are certain properties that must be set on the SqlCommand before we can execute the query. The first of these properties is the Connection property. This property is set to a SqlConnection object, as shown in the code fragment.

myCommand.Connection=myConnection

The CommandText Property

The next property that must be set is the CommandText property. This property specifies the SQL string or stored procedure to be executed.

Dim myConnection As SqlConnection = New SqlConnection(Server=localhost;Database=master)

Dim myCommand As SqlCommand = new SqlCommand()

myCommand.Connection = myConnection

myCommand.CommandText = ” insert into employee” & “(empid,empname,designation,salary)” & “values(‘123’,’Varun’,’Manager’,30000)”

**SqlDataAdapter**

The SqlDataAdapter class is very similar to the OleDbDataAdapter. The main difference is that OleDbDataAdapter can access any datasource that supports OLEDB, while the SqlDataAdapter only supports SQL Server databases.

Data adapters act as a bridge between our data source and in-memory data objects such as the DataSet.

The SqlDataAdapter class’s SelectCommand property is used to hold a SqlCommand that retrieves data from the data source. The data adapter then places the result of the query into DataSet or DataTable. The SqlDataAdapter also has UpdateCommand, DeleteCommand and InsertCommand properties.

**DataSet**

The DataSet class is used to store data retrieved from a data store, and stores that data in memory on the client. The DataSet object contains a collection of tables, relationships and constraints that are consistent with the data read from the data store. It acts as a lightweight database engine, enabling us to store tables, edit data and run queries using a DataView.

**DataView**

The DataView class is typically used for sorting, filtering, searching, editing and navigating the data from a DataSet. A DataView is bindable, meaning that it can be bound to controls in the same way that the DataSet can be bound to controls.

The constructor for the DataView class initializes a new instance of the DataView Class and accepts DataTable as an argument. The code fragment below declares a DataView object and initializes it using employee table from the DataSet named myDataSet.

‘set the DataView object to the DataSet Object…

Dim myDataView=New DataView(objDataSet.Tables(“employee”))

The DataView class has the Sort Property, RowFilter property and Find method also.