Assuming the following database is created to maintain our Studebaker cars.

In order to populate our GUI ComboBoxes, we need to query the database and retrieve the proper information. For the purpose of this assignment, we need to populate the following controls with proper data:

1) Model ComboBox
2) Year ComboBox
3) Color ComboBox
4) BasePrice TextBox
5) Ex. Credit (Package ComboBox and Options Textbox)

The code segment below demonstrates how one can construct a SQL statement. Note that each SQL string is displayed using the MessageBox.Show() to make sure the statement is correctly constructed.
Select all the available MODELS.

```vbnet
Dim sqlStr As String = "SELECT distinct ModelName FROM Models"
MessageBox.Show(sqlStr)
```

Select the YEARS when a given Model was manufactured. Prior to issuing such a query, we must know what the ModelID or ModelName is.

```vbnet
SelectedModel = CStr(ComboBoxModel.SelectedItem()) 'ModelName is selected by the user
Dim sqlStr As String = "SELECT distinct Year " & _
"FROM   Models, Manufactured " & _
"WHERE ModelName = " & "'" & SelectedModel & "''" & _
" AND " & _
"Models.ModelID = Manufactured.ModelID"
MessageBox.Show(sqlStr)
```

Selecting the COLORS available for a given Model and Year. Prior to issuing such a query, we must know what the ModelName and Year are.

```vbnet
SelectedModel = CStr(ComboBoxModel.SelectedItem())
SelectedYear = CStr(ComboBoxYear.SelectedItem())
Dim sqlStr As String = "SELECT distinct Colors.ColorName " & _
"FROM   Models, Colors, Manufactured " & _
"WHERE ModelName = " & "'" & SelectedModel & "''" & _
" AND " & _
"Models.ModelID = Manufactured.ModelID" & _
" AND " & _
"Manufactured.year = " & "'" & SelectedYear & "''" & _
" AND " & _
"Manufactured.ColorID = Colors.ColorID"
MessageBox.Show(sqlStr)
```

Selecting the BASE PRICE associated with a given Model. In our current database, the BasePrice is associated to the Model. Therefore, prior to issuing such a query, we must know what the ModelID or ModelName is.

```vbnet
Dim sqlStr As String = "SELECT BasePrice " & _
"FROM  Models " & _
"WHERE " & _
"Models.ModelName   = " & "'" & SelectedModel & "''"
MessageBox.Show(sqlStr)
```

Selecting the PICTURE associated with a given Model, Year, and Color.

```vbnet
Dim sqlStr As String = "SELECT distinct Picture " & _
"FROM   " & _
"Models, Colors, Manufactured " & _
"WHERE " & _
"Models.ModelName   = " & "'" & SelectedModel & "''" & _
" AND " & _
"Colors.ColorName   = " & "'" & SelectedColor & "''" & _
" AND " & _
"Manufactured.Year    = " & "'" & SelectedYear & "''" & _
" AND " & _
"Manufactured.ModelID = Models.ModelID " & " AND " & _
"Manufactured.ColorID = Colors.ColorID"
MessageBox.Show(sqlStr)
```

Selecting the OPTIONS associated with a given Model, Year, and Package. (This query will be used by those who are working on the extra credit)

```vbnet
Dim sqlStr As String = "SELECT distinct OptionName " & _
"FROM   Packages, Options, PackageOptions " & _
"WHERE " & _
"Packages.PackageName = " & "'" & SelectedPackage & "''" & _
" AND " & _
"Packages.PackageID = PackageOptions.PackageID" & _
```
"And " & _
"PackageOptions.Optionid = Options.OptionID"

MessageBox.Show(sqlStr)

Each of the above SQL statements could be tested using the shell module below:

'--------------------------------------
Option Explicit On
Option Strict On
'--------------------------------------
Imports System.Data.OleDb
'--------------------------------------
Public Class Form1
  Inherits System.Windows.Forms.Form

Private Sub Form1_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load
  Dim SelectedModel, SelectedYear, SelectedPackage As String
  SelectedModel = "President"
  SelectedYear = "1922"
  SelectedPackage = "Gold Package"

  Dim connStr As String = "Provider=Microsoft.Jet.OLEDB.4.0;" & _
                        "Data Source = Studebaker.MDB"

  Dim sqlStr As String = "SELECT ...... "
  MessageBox.Show(sqlStr)
  Dim dataAdapter As New OleDbDataAdapter(sqlStr, connStr)
  Dim dt As New DataTable         'An internal (in memory) DataTable structure
  dataAdapter.Fill(dt)            'load the DataTable from the database
  dataAdapter.Dispose()           'Get rid of the connection.

  Dim RecordNo As Integer
  For RecordNo = 0 To dt.Rows.Count - 1
    MessageBox.Show(CType(dt.Rows(RecordNo)("FILED_NAME")))
  Next RecordNo
End Sub

End Class