

NET Compiler examples

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Overview

The goal for the development of the HBasic compilers should be that every compiler is capable of compiling every syntactical correct program. Currently the NET compiler has two main differences to the other compilers. First difference is that it cannot handle GUI's so that program functions cannot be started by a GUI event like a mousedick (typical function button1_clicked). It has to be started by a function called Main which will be called by the environment when starting the program. Second the NET compiler handles all definitions in and object oriented way which means you have to put every method into the body of a class definition.

In this document we will show some simple sourcecode examples that are similar to code examples we used for the normal HBasic interpreter or compiler but have been adapted for the NET compiler.

Hello world for the NET compiler

As a first example we show a simple program that displays the string "Hello world" on the console when it will be compiled and started. You can see how the declaration of the method main should be surrounded by a class definition. The main method has to be declared as static for the NET compiler because otherwise the environment cannot find and start this method.

```
Class example

  Static Sub Main()
    Print "Hello NET world"
  End Sub

End Class
```

Example hello_netcomp.bas: Example of simple program for NET compiler.

Variables, values and operator

The second example should show that you can create variables, assign values and combine them in expressions with operators in the same way as you would do it in other HBasic programs.

```
Class example

  Static Sub Main()
    Dim i, j, k As integer

    i = 11
    j = 22
    k = i + j
    Print k

    k = j / 2
    Print k
  End Sub

End Class
```

Example netcomp/net_assign.bas: Example of simple expressions for NET compiler.

For..Next example

You can find some examples in the code_examples/netcomp directory of your HBasic distribution that show you how different types of loops may be used in the NET compiler programs. In this example we will show a For..Next loop and in the next example the Do..Loop.

```

Class example

  Static Sub Main()
    Dim i As Integer

    For i=1 To 20 Step 3
      Print i
    Next i
  End Sub

End Class

```

Example netcomp/ for.bas: Example of For-loop for NET compiler.

Do..Loop and If example

This example shows a Do..Loop statement which will be terminated with an *Exit* statement. An *If statement* examines if the end condition for the loop has been reached.

```

Class example

  Static Sub Main()
    Dim i As Integer

    i = 1
    Do
      If i > 10 Then
        Exit Do
      End If

      Print i
      i = i + 1
    Loop
  End Sub

End Class

```

Example netcomp/ net_doloop.bas: Example of do..loop for NET compiler.

Call method with parameter

In this example we will call a method which has been defined in the same class, pass some parameter value to the method and display the return value, which is the sum of the parameter values.

```

Class example
  Sub add( p1 As Integer, p2 As Integer ) As Integer
    add = p1 + p2
  End Sub

  Static Sub Main()
    Dim c As example

    c = new example()
    Print c.add( 11, 22)
  End Sub

End Class

```

Example netcomp/ net_sub_par.bas: Example of method call for NET compiler.

Create instance of NET class

In this example we want to create an instance of a class "workclass" that has been defined at another position in the code. We store the reference to this object in the variable c and call a method for this class.

```

Class workclass
  Sub show()
    Print "Hello from NET class"
  End Sub
End Class

Class example

  Static Sub Main()
    Dim c As workclass

    c = New workclass()
    c.show()
  End Sub
End Class

```

```
End Sub
```

```
End Class
```

Example netcomp/ net_class_method.bas: Example of simple class access for NET compiler.

Access field in NET class

In this example we want to read and write the value of a field from the class "workclass".

```
Class workclass  
  Dim i As Integer  
End Class
```

```
Class example
```

```
  Static Sub Main()  
    Dim c As workclass  
  
    c = New workclass()  
    c.i = 1111  
    Print c.i  
  End Sub
```

```
End Class
```

Example netcomp/ net_class_prop.bas: Read and write field for NET compiler.