```vb
1  Imports System.Collections.Generic
2
3  Imports Grasshopper.Kernel
4  Imports Rhino.Geometry
5  Imports Interop.gsa_8_7
6  Imports UsageDataCollection
7
8
9
10 Public Class GetElementProperties
11     Inherits GH_Component
12     ''' <summary>
13     ''' Initializes a new instance of the GetElementProperties class.
14     ''' </summary>
15     Public Sub New()
16         MyBase.New("Get Element Properties", "ElProps", _
17                   "Import Element Properties from GSA File", _
18                   "GsaComTools", "Elements")
19     End Sub
20
21     ''' <summary>
22     ''' Registers all the input parameters for this component.
23     ''' </summary>
24     Protected Overrides Sub RegisterInputParams(pManager As
         GH_Component.GH_InputParamManager)
25         pManager.AddGenericParameter("Gsa", "Gsa", "Gsa COM Object",
             GH_ParamAccess.item)
26         pManager.AddIntegerParameter("Elements", "Els", "Element Numbers",
             GH_ParamAccess.list)
27     End Sub
28
29     ''' <summary>
30     ''' Registers all the output parameters for this component.
31     ''' </summary>
32     Protected Overrides Sub RegisterOutputParams(pManager As
         GH_Component.GH_OutputParamManager)
33         pManager.AddGenericParameter("Gsa", "Gsa", "Gsa COM Object",
             GH_ParamAccess.item)
34         pManager.AddIntegerParameter("Element Properties", "ElProps", "Element
             Properties", GH_ParamAccess.list)
35     End Sub
36
37     ''' <summary>
38     ''' This is the method that actually does the work.
39     ''' </summary>
40     ''' <param name="DA">The DA object is used to retrieve from inputs and
         store in outputs.</param>
41     Protected Overrides Sub SolveInstance(DA As IGH_DataAccess)
42
43         'Declare Variables
44         Dim FileName As String = ""
45         Dim ElemRefs As New List(Of Integer)
46         Dim Elements() As GsaElement
47         Dim ElementProperties As New List(Of Integer)
48         Dim s As Short
49         Dim myDataCollector As New DataCollector
```

```vb
50              Dim myObjectWrapper As Types.GH_ObjectWrapper
51
52              'Import GSA File Name
53              If (Not DA.GetData(0, myObjectWrapper)) Then Return
54              If (Not DA.GetDataList(1, ElemRefs)) Then Return
55
56              Dim GsaObj As ComAuto = TryCast(myObjectWrapper.Value, ComAuto)
57
58              'Get Data
59              s = GsaObj.Elements(ElemRefs.ToArray, Elements)
60              For Each item In Elements
61                  ElementProperties.Add(item.Property)
62              Next
63
64              ' Assign the data to the output parameter.
65              DA.SetData(0, GsaObj)
66              DA.SetDataList(1, ElementProperties)
67
68              'Send Usage Data
69              myDataCollector.UsageStatistics("GetElementProperties")
70
71          End Sub
72
73          ''' <summary>
74          ''' Provides an Icon for every component that will be visible in the User   ⮡
               Interface.
75          ''' Icons need to be 24x24 pixels.
76          ''' </summary>
77          Protected Overrides ReadOnly Property Icon() As System.Drawing.Bitmap
78              Get
79                  'You can add image files to your project resources and access them  ⮡
                     like this:
80                  ' return Resources.IconForThisComponent;
81                  Return My.Resources.Element_ElProps
82              End Get
83          End Property
84
85          ''' <summary>
86          ''' Gets the unique ID for this component. Do not change this ID after      ⮡
               release.
87          ''' </summary>
88          Public Overrides ReadOnly Property ComponentGuid() As Guid
89              Get
90                  Return New Guid("{ee4c6984-f722-444c-b1f2-08f1bcd8cda3}")
91              End Get
92          End Property
93  End Class
```