Using O2 with ThreatModeler

Injecting O2 into ThreatModeler
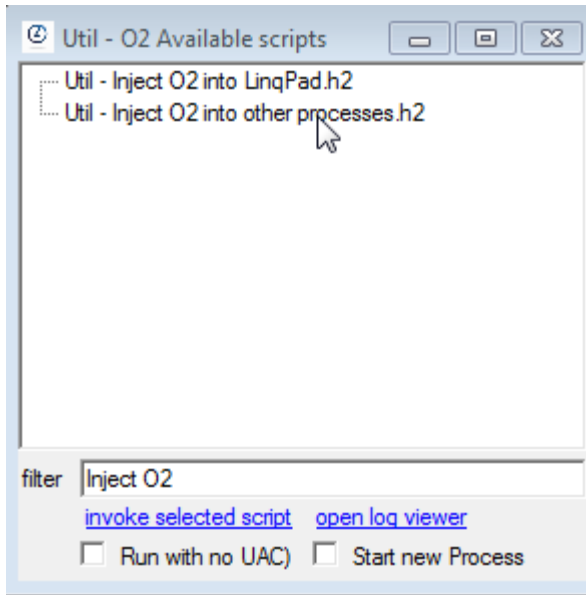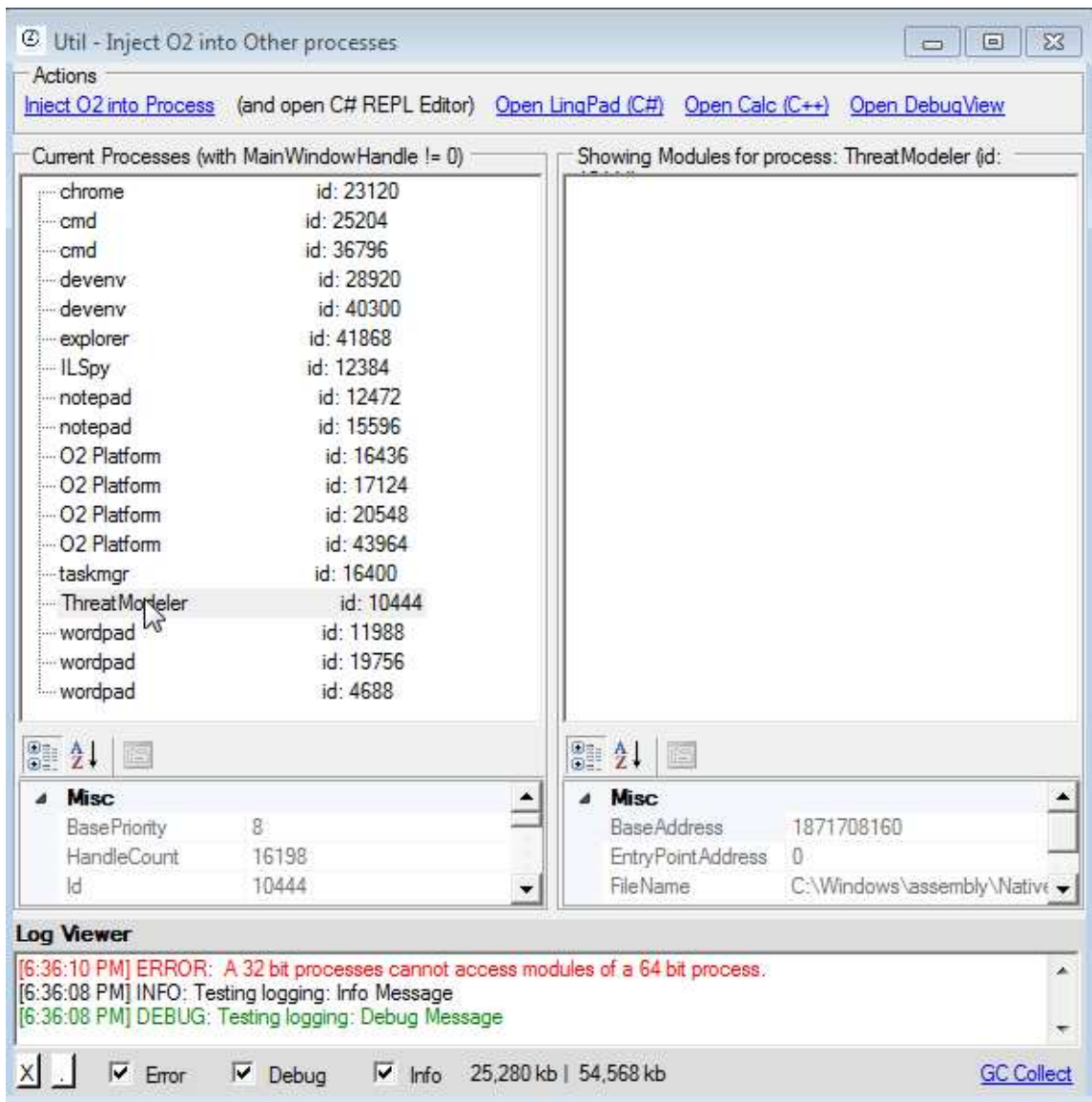
1) Open ThreatModeller

2) Open O2:

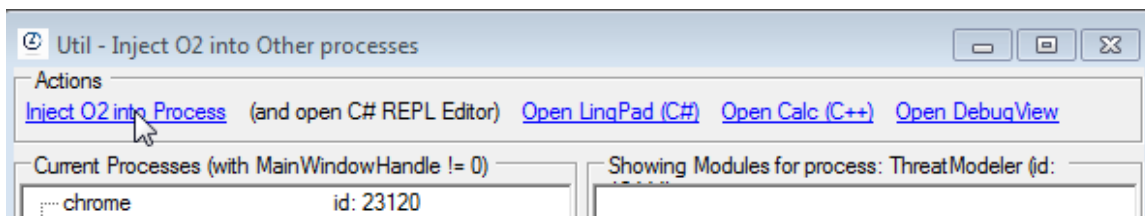3) click on 'Find an O2 Script'

4) search for 'Inject'

5) double-click on the the 'Util - Inject O2 into other processes.h2'
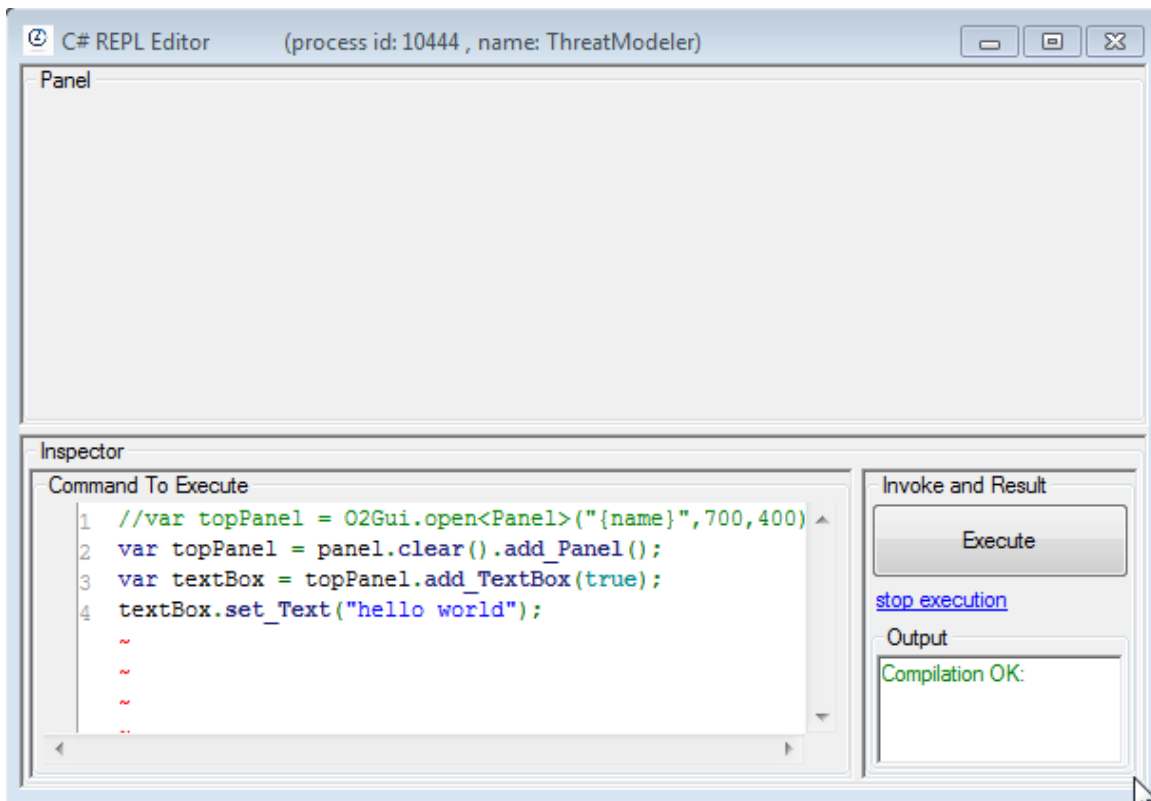
6) Select the ThreatModeler process (list on the left)

7) click on *'Inject O2 into process'*

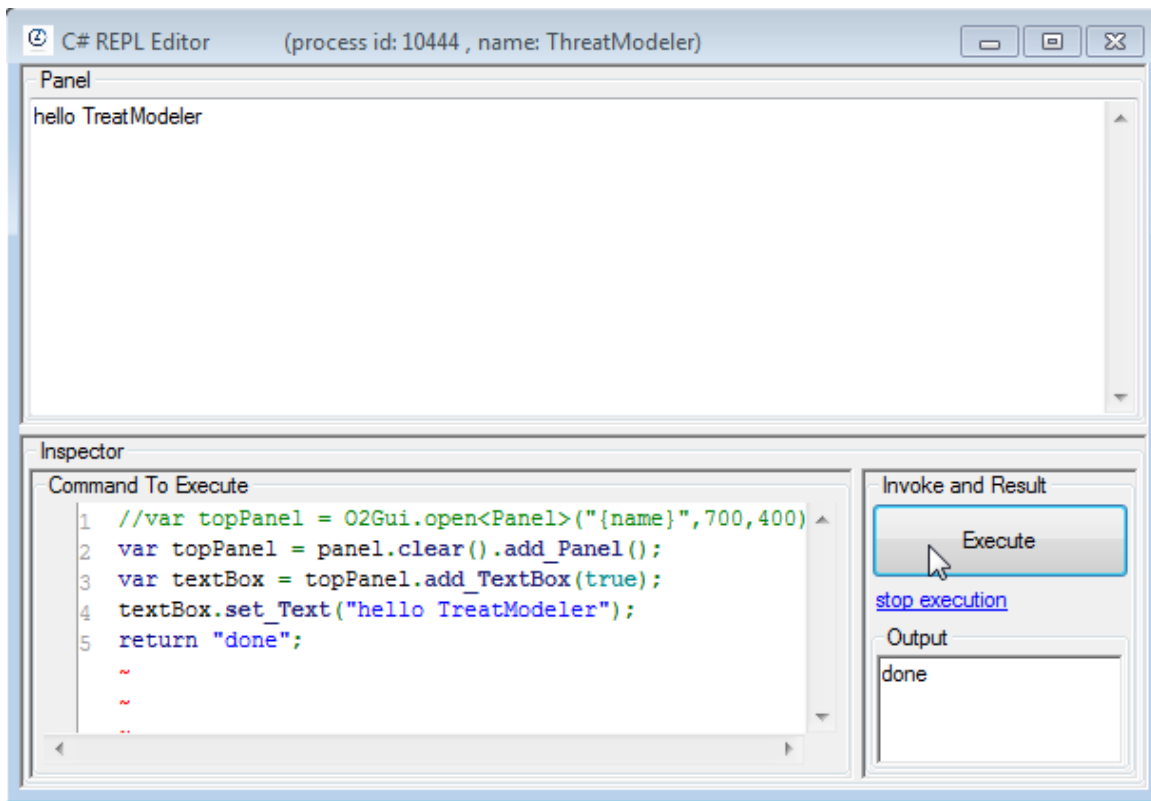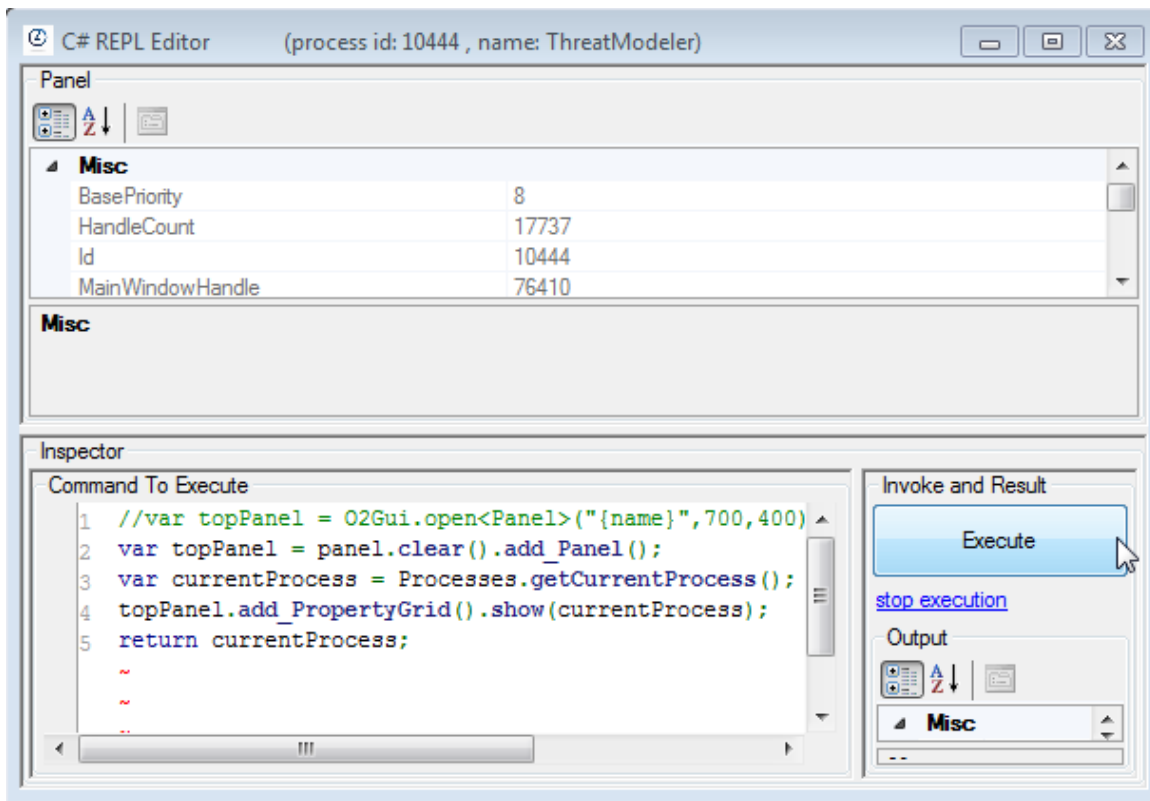

8) an *O2 C# Repl Editor* window should pop up

8) Modify the set_Text value, add an return value and click on 'Execute'

9) script to see details of current process

```
//var topPanel = O2Gui.open<Panel>("{name}",700,400);
var topPanel = panel.clear().add_Panel();
var currentProcess = Processes.getCurrentProcess();
topPanel.add_PropertyGrid().show(currentProcess);
return currentProcess;
```

.

O2 scripts to be executed in the C# REPL enviroment inside the TreatModeler process

Loading assembly and returning EntryPoint

```
var threatModeler = @"ThreatModeler\SourceDir\ThreatModeler.exe".assembly();
return threatModeler.EntryPoint;
//O2Ref:ThreatModeler\SourceDir\ThreatModeler.exe
```

Getting reference to main Window and getting all controls

```
var threadModeler = (Form)Application.OpenForms[0];

var controls = threadModeler.controls(true);
return controls;


//O2Ref:Telerik.WinControls.UI.dll
```

Getting reference to main Window and making all controls pink

```
var threadModeler = (Form)Application.OpenForms[0];

var controls = threadModeler.controls(true).Select((c)=>c.pink()).toList();
return controls;


//O2Ref:Telerik.WinControls.UI.dll
```
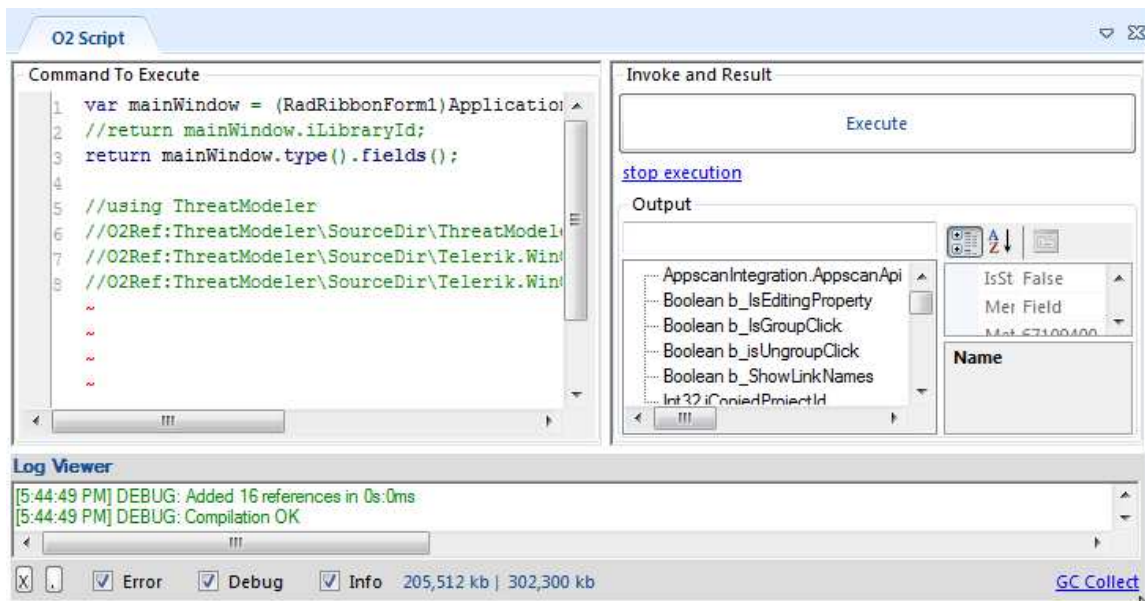
Main window as strongly typed object (see screenshot below)

```
var mainWindow = (RadRibbonForm1)Application.OpenForms.first();
//return mainWindow.iLibraryId;
return mainWindow.type().fields();

//using ThreatModeler
//O2Ref:ThreatModeler\SourceDir\ThreatModeler.exe
//O2Ref:ThreatModeler\SourceDir\Telerik.WinControls.UI.dll
//O2Ref:ThreatModeler\SourceDir\Telerik.WinControls.dll
```


injecting an O2 Script editor: (see screenshot below)

```
//var topPanel = O2Gui.open<Panel>("{name}",700,400);
var threadModeler = (Form)Application.OpenForms[0];

var documentTabStrip = threadModeler.control<DocumentTabStrip>(true);

documentTabStrip.invokeOnThread(
        ()=>{
                    var docWindow = new DocumentWindow("O2 Script");
                    documentTabStrip.TabPanels.Add(docWindow);
                    docWindow.add_Script();
            });
var pages = documentTabStrip.TabPanels;
```
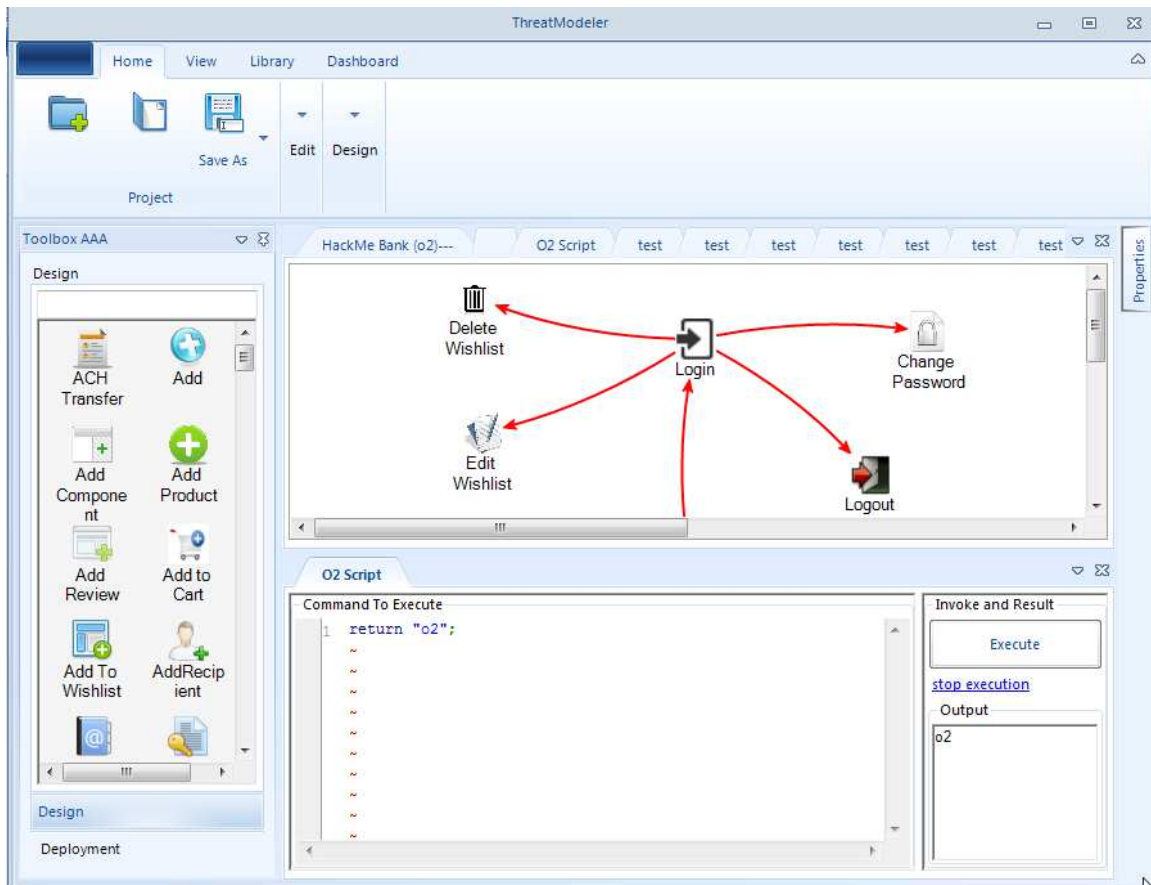
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```
var page = (DocumentWindow)pages.first();
return pages;

//O2File:Scripts_Extensions.cs

//documentTabStrip.visible(true);
//documentTabStrip.details();

//using Telerik.WinControls.UI
//using Telerik.WinControls.UI.Docking
//O2Ref:ThreatModeler\SourceDir\TelerikCommon.dll
//O2Ref:ThreatModeler\SourceDir\Telerik.WinControls.dll
//O2Ref:ThreatModeler\SourceDir\Telerik.WinControls.UI.dll
//O2Ref:ThreatModeler\SourceDir\Telerik.WinControls.RadDock.dll
```


Adding a Tab with a DataGridView (see screenshot below)

```
var threadModeler = (Form)Application.OpenForms[0];

var documentTabStrip = threadModeler.control<DocumentTabStrip>(true);

documentTabStrip.invokeOnThread(
        ()=>{
                var docWindow = new DocumentWindow("A tab with
```

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```
DataGridView");
                    documentTabStrip.TabPanels.Add(docWindow);
                    docWindow.add_DataGridView()
                                .add_Columns("one column", "another column")
                                .add_Row("data 1","data 2");
        });
var pages = documentTabStrip.TabPanels;
var page = (DocumentWindow)pages.first();
return pages;

//documentTabStrip.visible(true);
//documentTabStrip.details();

//using Telerik.WinControls.UI
//using Telerik.WinControls.UI.Docking
//O2Ref:ThreatModeler\SourceDir\TelerikCommon.dll
//O2Ref:ThreatModeler\SourceDir\Telerik.WinControls.dll
//O2Ref:ThreatModeler\SourceDir\Telerik.WinControls.UI.dll
//O2Ref:ThreatModeler\SourceDir\Telerik.WinControls.RadDock.dll
```
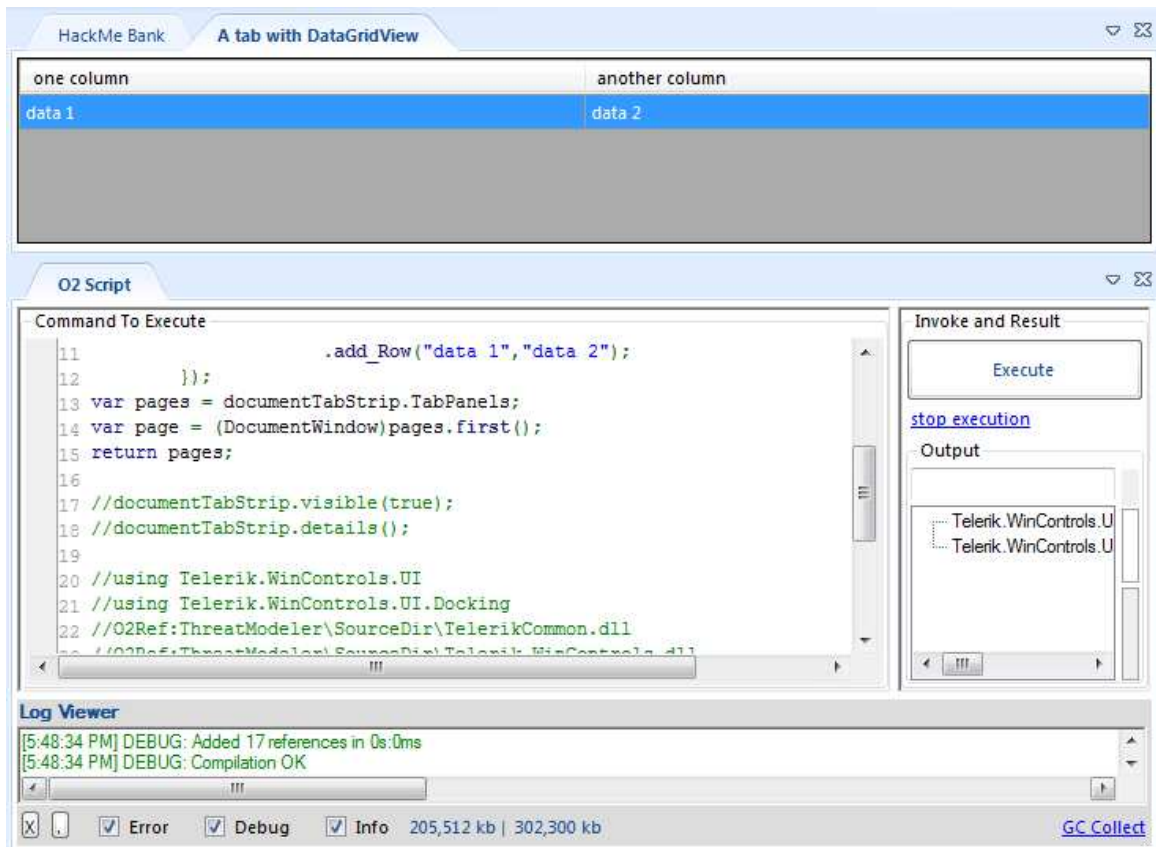

Getting the DocumentWindow with the main Graph

```
var threadModeler = (Form)Application.OpenForms[0];
var documentTabStrip = threadModeler.control<DocumentTabStrip>(true);
```

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```
var documentWindow  = (DocumentWindow)documentTabStrip.TabPanels.first();
documentWindow.visible(false);
this.sleep(1000);
documentWindow.visible(true);
return documentWindow;


//using Telerik.WinControls.UI
//using Telerik.WinControls.UI.Docking
//O2Ref:ThreatModeler\SourceDir\TelerikCommon.dll
//O2Ref:ThreatModeler\SourceDir\Telerik.WinControls.dll
//O2Ref:ThreatModeler\SourceDir\Telerik.WinControls.UI.dll
//O2Ref:ThreatModeler\SourceDir\Telerik.WinControls.RadDock.dll
```

Viewing details of DocumentWindow object (see screenshot below)
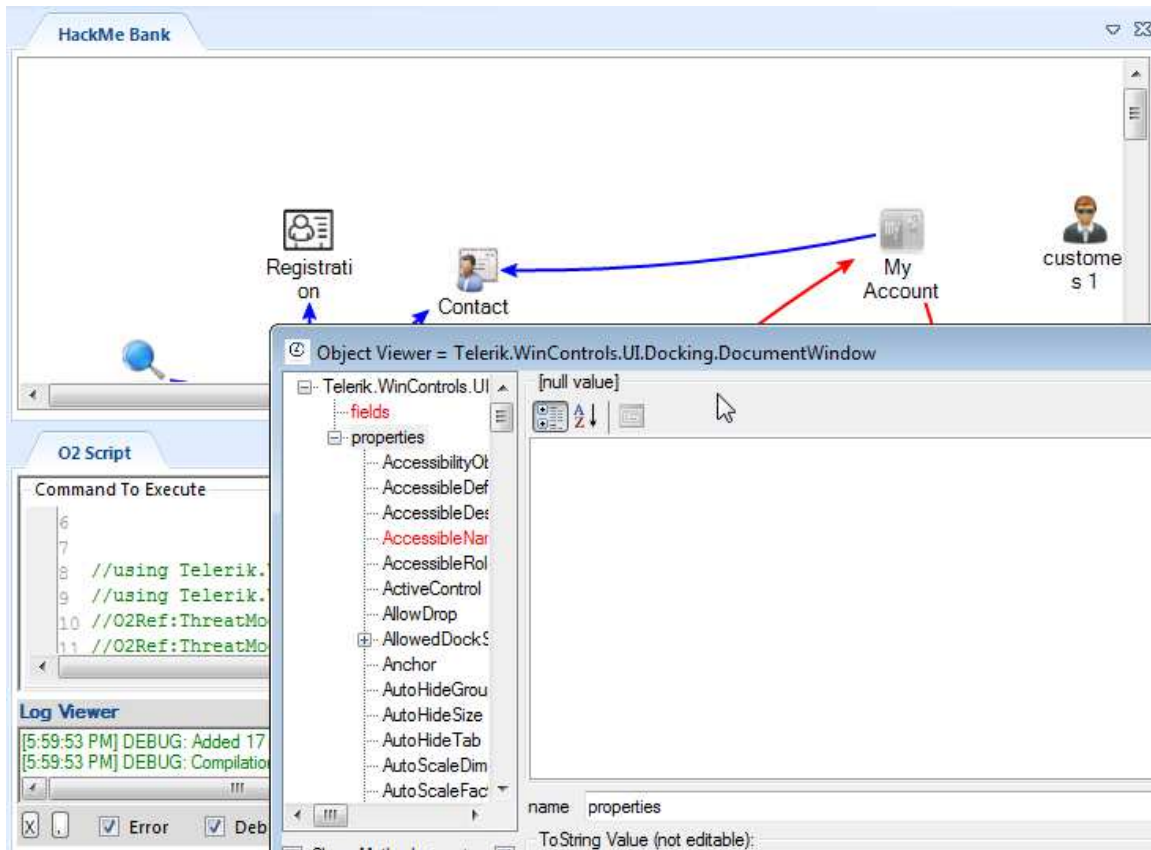
```
var threadModeler = (Form)Application.OpenForms[0];
var documentTabStrip = threadModeler.control<DocumentTabStrip>(true);
var documentWindow  = (DocumentWindow)documentTabStrip.TabPanels.first();
documentWindow.details();
return documentWindow;


//using Telerik.WinControls.UI
//using Telerik.WinControls.UI.Docking
//O2Ref:ThreatModeler\SourceDir\TelerikCommon.dll
//O2Ref:ThreatModeler\SourceDir\Telerik.WinControls.dll
//O2Ref:ThreatModeler\SourceDir\Telerik.WinControls.UI.dll
//O2Ref:ThreatModeler\SourceDir\Telerik.WinControls.RadDock.dll
```
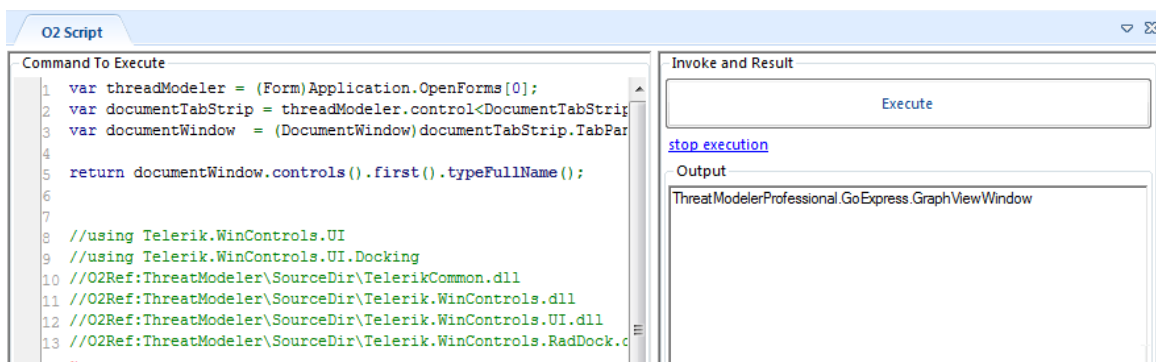
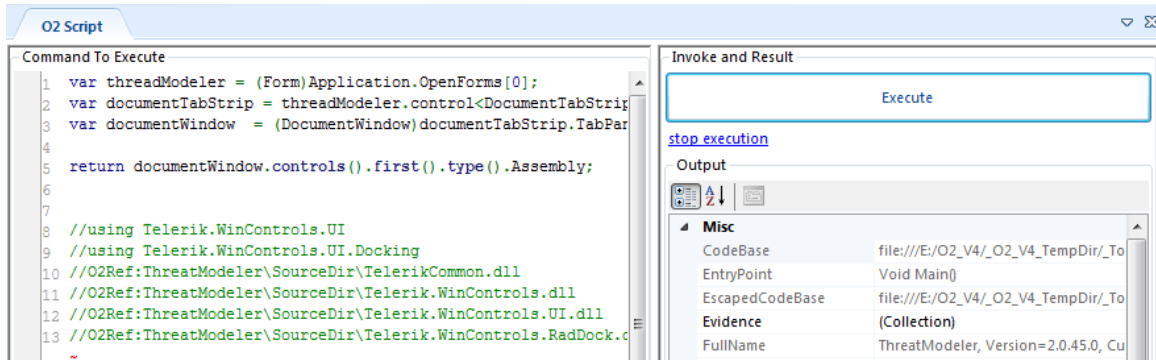**Type of Graph Window** (see screenshot below)

```
var documentWindow  = (DocumentWindow)documentTabStrip.TabPanels.first();

return documentWindow.controls().first().typeFullName();
```


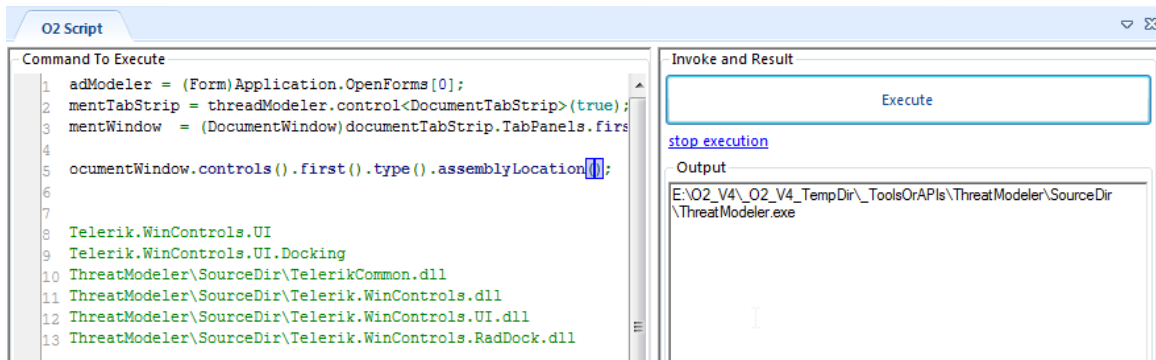**Assembly where Graph Window is located** (see screenshot below)

```
var documentWindow  = (DocumentWindow)documentTabStrip.TabPanels.first();
```

```
return documentWindow.controls().first().type().Assembly;
```


Location of Assembly (see screenshot below)

```
var documentWindow  = (DocumentWindow)documentTabStrip.TabPanels.first();

return documentWindow.controls().first().type().assemblyLocation();
```


Strongly Typed Graph Window control

```
var threadModeler = (Form)Application.OpenForms[0];
var documentTabStrip = threadModeler.control<DocumentTabStrip>(true);
var documentWindow  = (DocumentWindow)documentTabStrip.TabPanels.first();

return (GraphViewWindow)documentWindow.controls().first();


//using ThreatModelerProfessional.GoExpress
//using Telerik.WinControls.UI
//using Telerik.WinControls.UI.Docking
//O2Ref:ThreatModeler\SourceDir\ThreatModeler.exe
//O2Ref:ThreatModeler\SourceDir\TelerikCommon.dll
//O2Ref:ThreatModeler\SourceDir\Telerik.WinControls.dll
//O2Ref:ThreatModeler\SourceDir\Telerik.WinControls.UI.dll
//O2Ref:ThreatModeler\SourceDir\Telerik.WinControls.RadDock.dll
```

Creating new GraphViewWindow control in a new window (see screenshot below)

```
var threadModeler = (Form)Application.OpenForms[0];
var documentTabStrip = threadModeler.control<DocumentTabStrip>(true);
var documentWindow  = (DocumentWindow)documentTabStrip.TabPanels.first();

var graph = (GraphViewWindow)documentWindow.controls().first();



var newGraph = "GraphViewWindow".popupWindow()
                                                    .add_Control
<GraphViewWindow>();

return graph.Doc;

return "ok";
//using ThreatModelerProfessional.GoExpress
//using Telerik.WinControls.UI
//using Telerik.WinControls.UI.Docking
//O2Ref:ThreatModeler\SourceDir\ThreatModeler.exe
//O2Ref:ThreatModeler\SourceDir\TelerikCommon.dll
//O2Ref:ThreatModeler\SourceDir\Telerik.WinControls.dll
//O2Ref:ThreatModeler\SourceDir\Telerik.WinControls.UI.dll
//O2Ref:ThreatModeler\SourceDir\Telerik.WinControls.RadDock.dll
//O2Ref:ThreatModeler\SourceDir\Northwoods.Go.dll
```
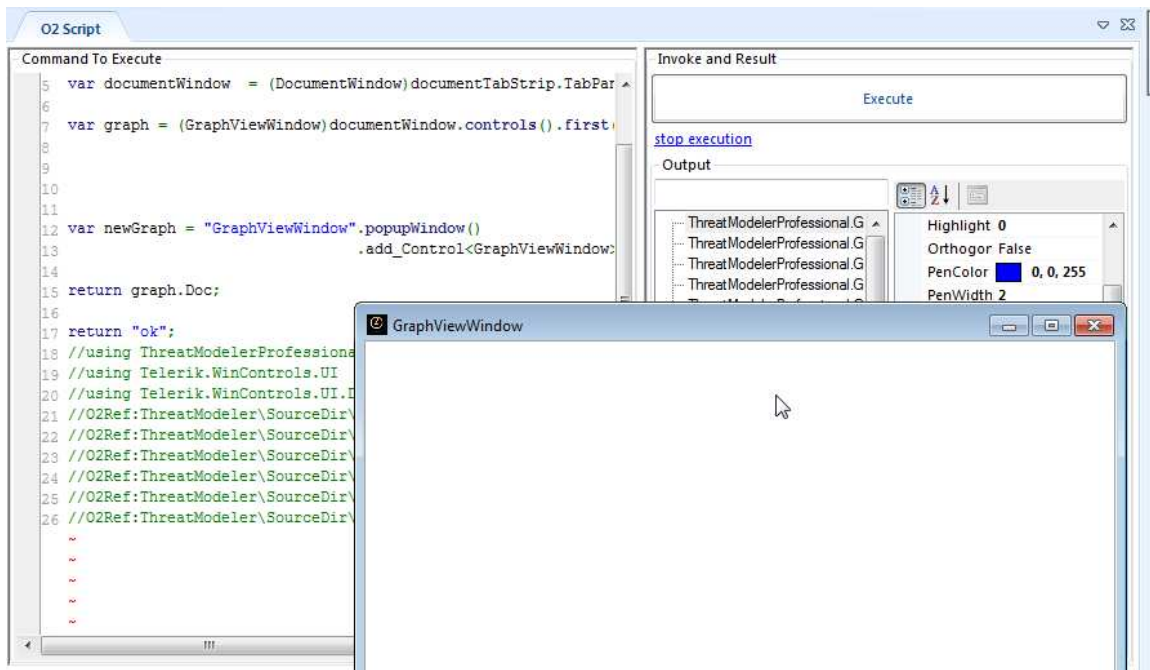
Open projects Dialog (note the reflection to get private type)

```
//var topPanel = O2Gui.open<Panel>("{name}",700,400);

var text = "Threat Models";
//var control =  new ProjectList();
var projectList = "ThreatModeler.exe".assembly().type("ProjectList");
using (ThreatModelerForm threatModelerForm = new ThreatModelerForm())
        {
                threatModelerForm.Text = text;
                threatModelerForm.add_Control(projectList);
                threatModelerForm.ShowDialog();
        }

//using ThreatModeler
//O2Ref:ThreatModeler\SourceDir\Telerik.WinControls.dll
//O2Ref:ThreatModeler\SourceDir\Telerik.WinControls.UI.dll
//O2Ref:ThreatModeler\SourceDir\ThreatModeler.exe
```