WebGL Nyan Cat

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jsc-solutions.net

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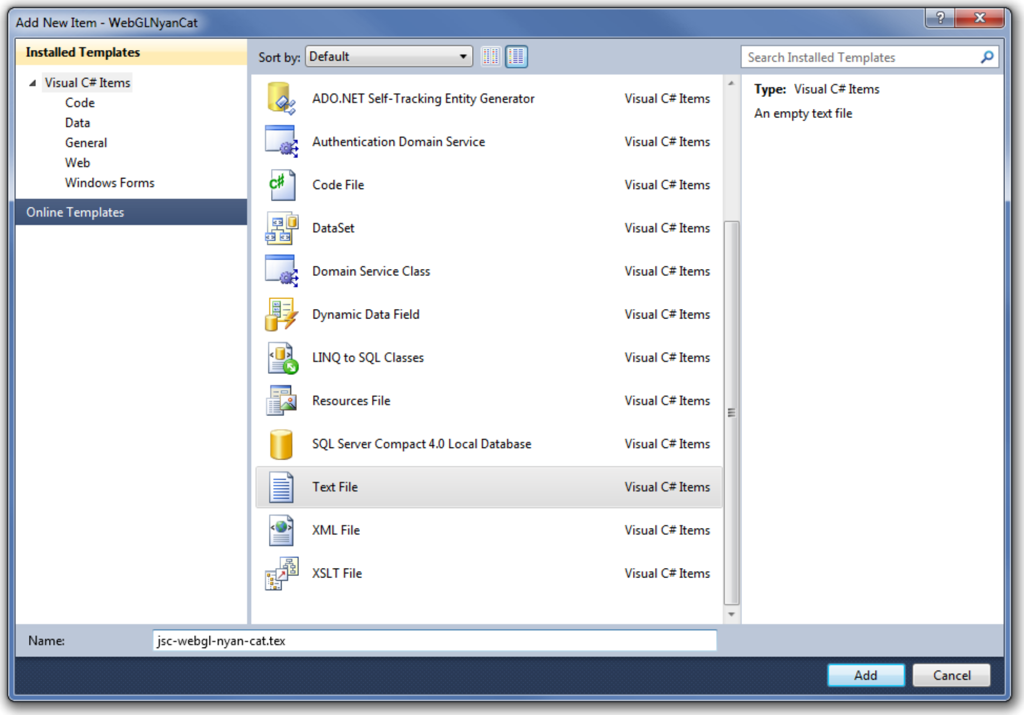
Chapter 1

The Beginning

1.0.1 Creating a new Web Application

Let's create a new project "WebGL Nyan Cat".



Sort by: Default

Type: Visual C# Items

An empty text file

Name: jsc-webgl-nyan-cat.tex

Figure 1.1: New Project

1.0.2 Creating a new preview image

In this document we shall port the example at http://dl.dropbox.com/u/6213850/WebGL/nyan
to CSharp.

1.0.3 Setting up TeXworks for LaTex documentation

Microsoft Visual Web Developer 2010 Expressneeds some additional configuration. While creating new commands in latex one needs to remember they cannot have numbers in the name.

1.0.4 Prebuild event

Just when our PDF is being generated we are ready to test run the project. First we should do a project rebuild. This is where JSC will generate the AssetsLibrary during the prebuild event.

At this time the most important type generated for us is the WebGLNyanCat.HTML.Pages.DefaultPage type. Essentially it will give us a typed access to all HTML elements within the HTML document with id attributes. We may however choose to ignore it and just attach to document instead.

1.0.5 Start Debugging

Now we should test JSC. Without changing anything else let's just run the project. A web broswer will be started once the build is ready.

1.0.6 Inspecting the original

Now we are ready to start. JSC does not only support looking at .NET assemblies. It also supports looking at Web Applications. At this time however the HTML parser is unforgiving and does not help us. We need to do manual code review of the original Web Application to replicate it.

1.0.7 Adding fullscreen and dispose

xxx

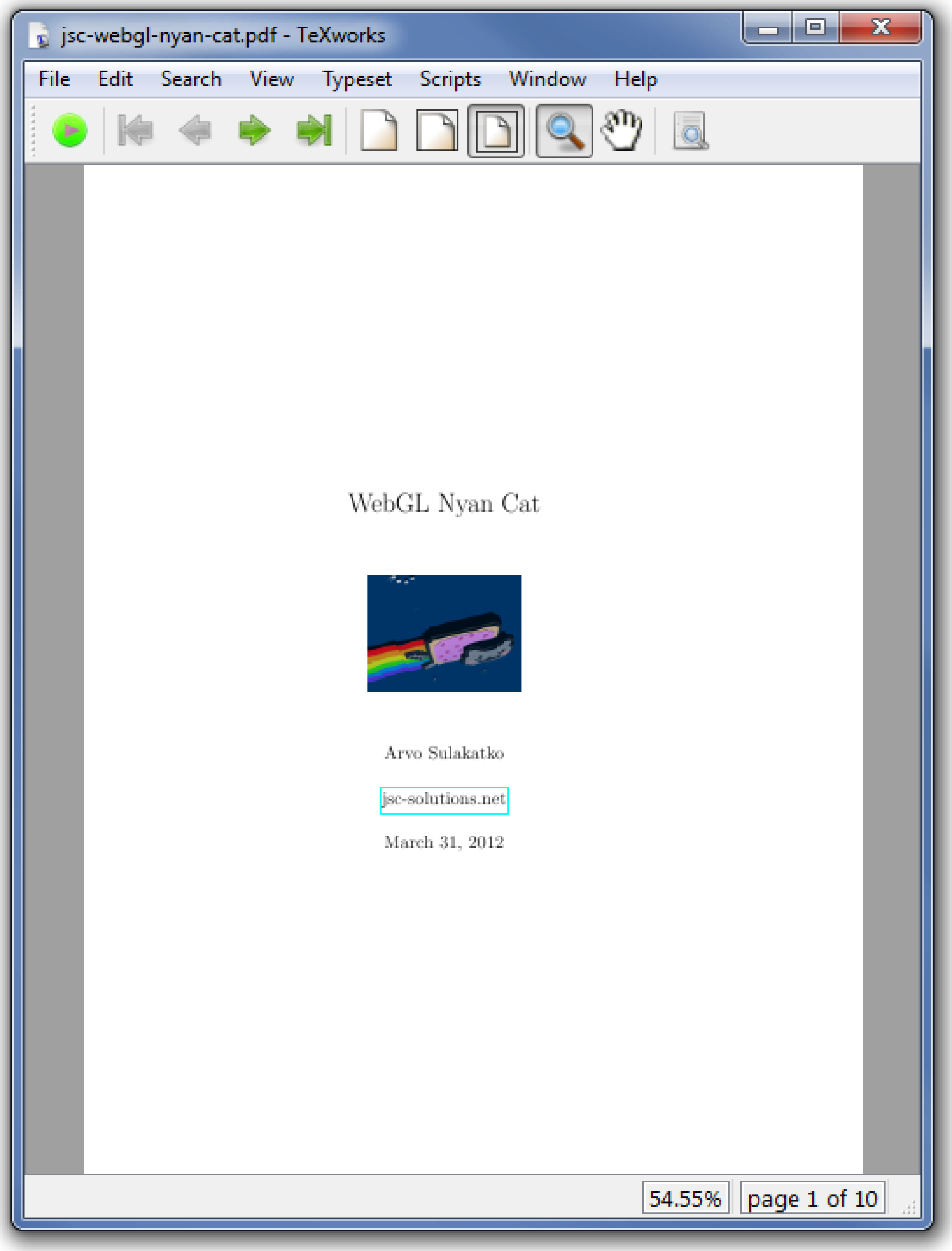


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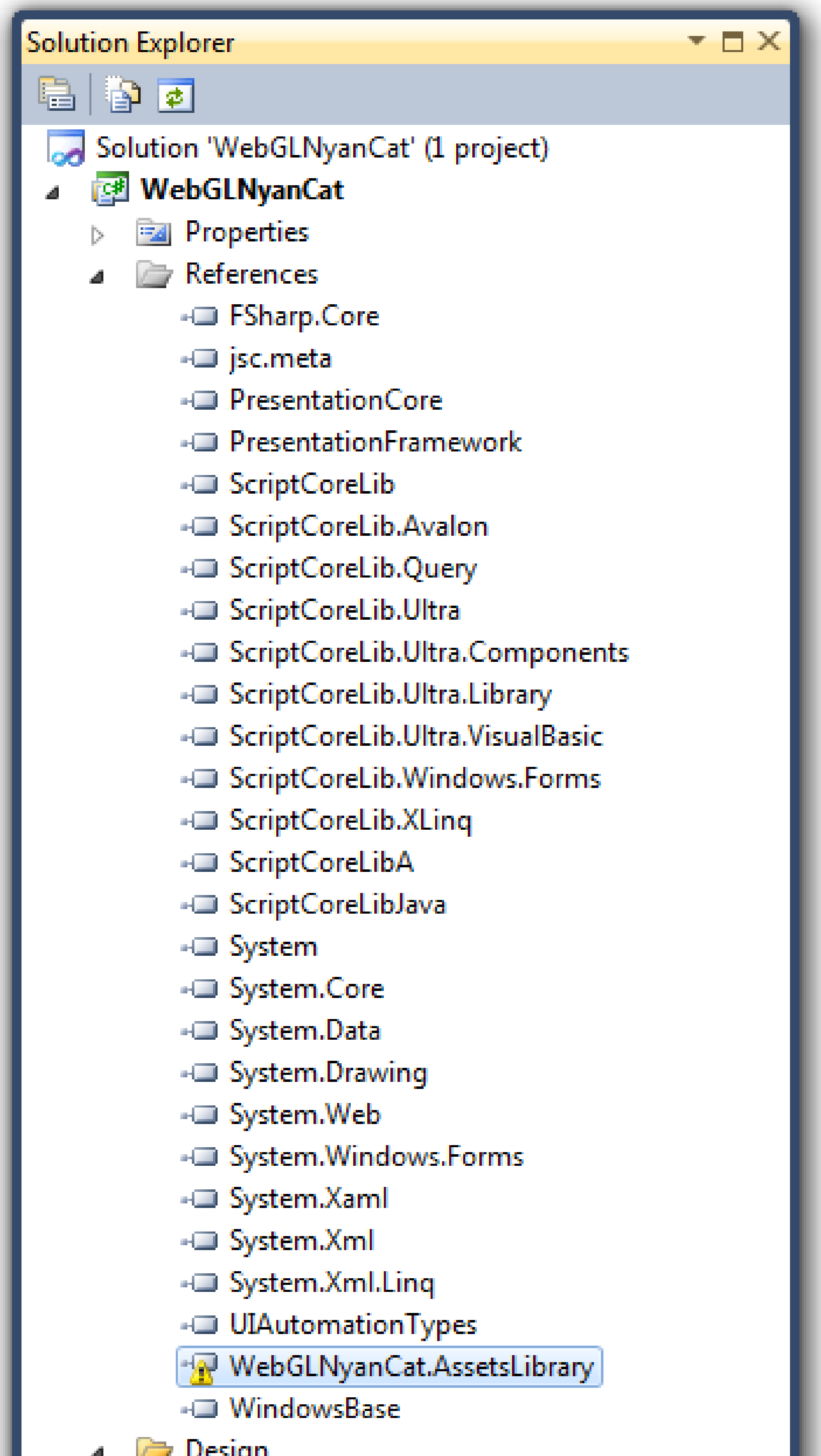
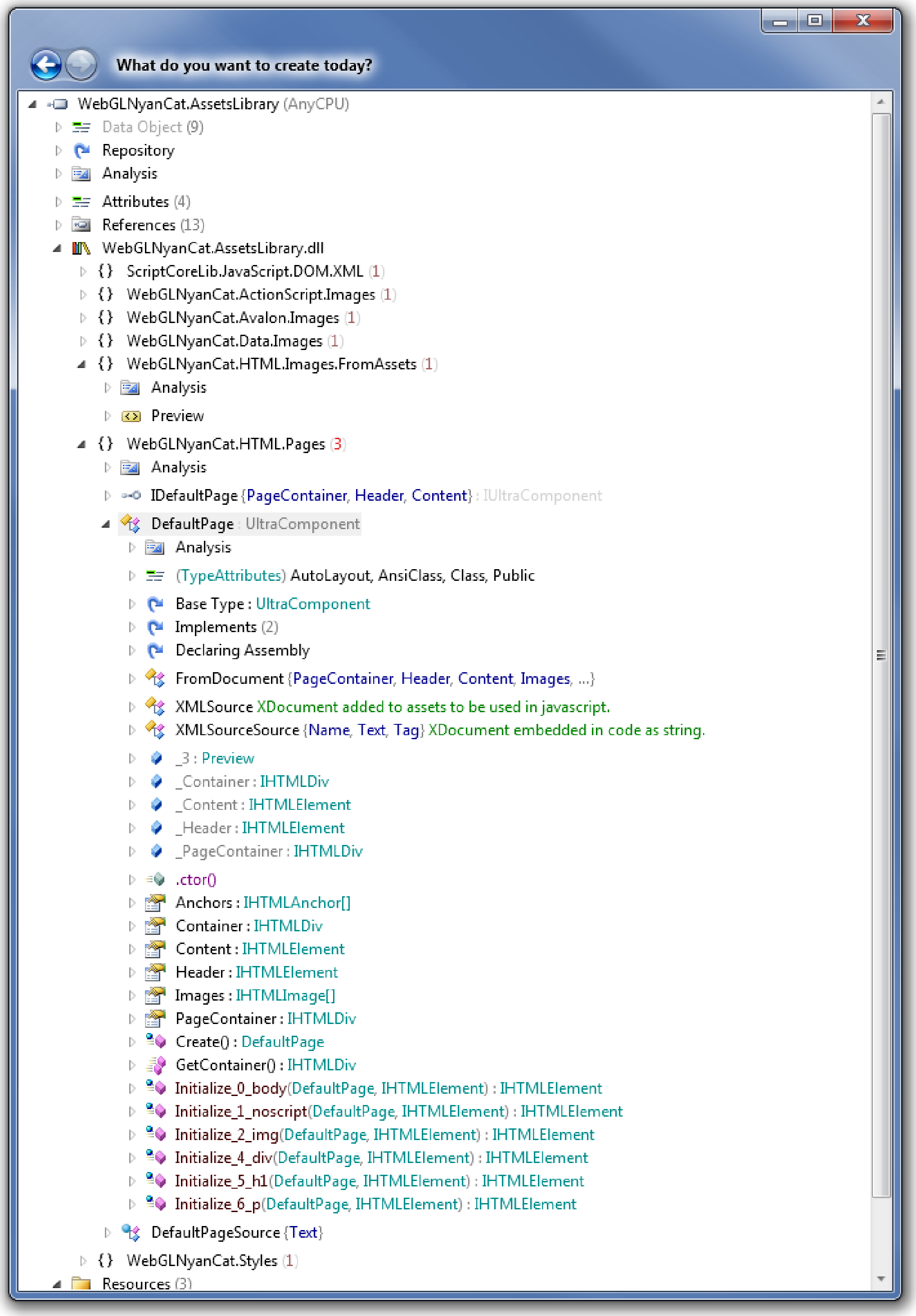
Figure 1.2: TeXworks



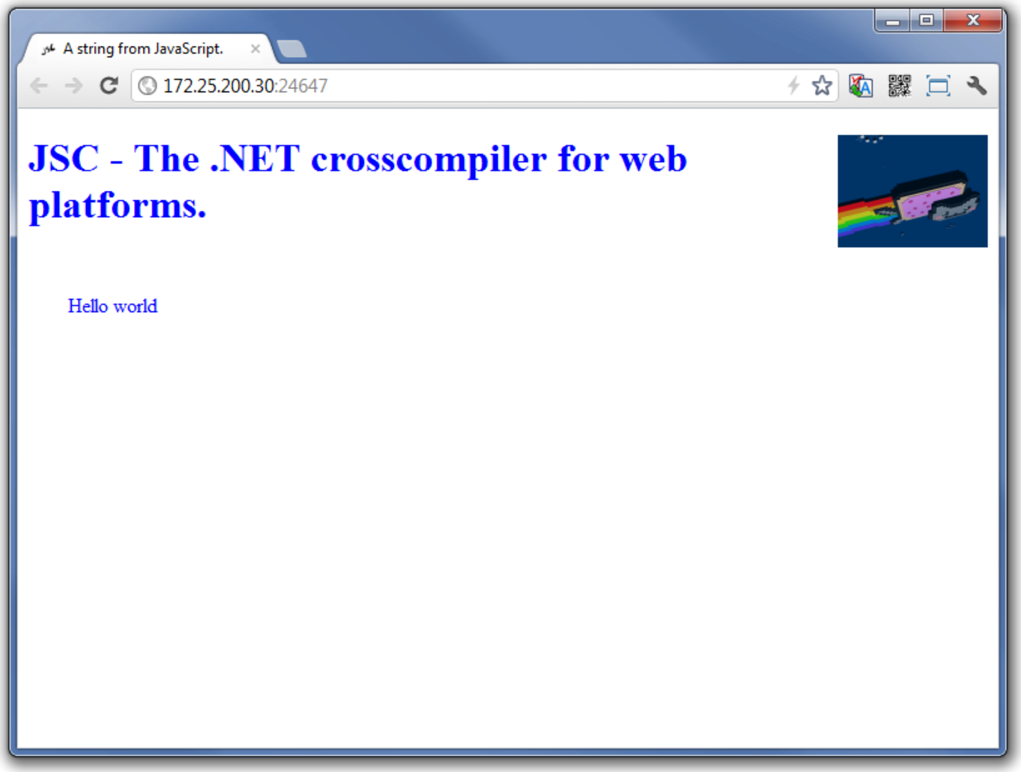
Solution Explorer

- Solution 'WebGLNyanCat' (1 project)
  - **WebGLNyanCat**
    - Properties
    - References
      - FSharp.Core
      - jsc.meta
      - PresentationCore
      - PresentationFramework
      - ScriptCoreLib
      - ScriptCoreLib.Avalon
      - ScriptCoreLib.Query
      - ScriptCoreLib.Ultra
      - ScriptCoreLib.Ultra.Components
      - ScriptCoreLib.Ultra.Library
      - ScriptCoreLib.Ultra.VisualBasic
      - ScriptCoreLib.Windows.Forms
      - ScriptCoreLib.XLinq
      - ScriptCoreLibA
      - ScriptCoreLibJava
      - System
      - System.Core
      - System.Data
      - System.Drawing
      - System.Web
      - System.Windows.Forms
      - System.Xaml
      - System.Xml
      - System.Xml.Linq
      - UIAutomationTypes
      - WebGLNyanCat.AssetsLibrary
      - WindowsBase
    - Design



```
◢ WebGLNyanCat.AssetsLibrary (AnyCPU)
    ▷ Data Object (9)
    ▷ Repository
    ▷ Analysis
    ▷ Attributes (4)
    ▷ References (13)
    ◢ WebGLNyanCat.AssetsLibrary.dll
        ▷ {} ScriptCoreLib.JavaScript.DOM.XML (1)
        ▷ {} WebGLNyanCat.ActionScript.Images (1)
        ▷ {} WebGLNyanCat.Avalon.Images (1)
        ▷ {} WebGLNyanCat.Data.Images (1)
        ◢ {} WebGLNyanCat.HTML.Images.FromAssets (1)
            ▷ Analysis
            ▷ Preview
        ◢ {} WebGLNyanCat.HTML.Pages (3)
            ▷ Analysis
            ▷ IDefaultPage {PageContainer, Header, Content} : IUltraComponent
            ◢ DefaultPage : UltraComponent
                ▷ Analysis
                ▷ (TypeAttributes) AutoLayout, AnsiClass, Class, Public
                ▷ Base Type : UltraComponent
                ▷ Implements (2)
                ▷ Declaring Assembly
                ▷ FromDocument {PageContainer, Header, Content, Images, ...}
                ▷ XMLSource XDocument added to assets to be used in javascript.
                ▷ XMLSourceSource {Name, Text, Tag} XDocument embedded in code as string.
                ▷ _3 : Preview
                ▷ _Container : IHTMLDiv
                ▷ _Content : IHTMLElement
                ▷ _Header : IHTMLElement
                ▷ _PageContainer : IHTMLDiv
                ▷ .ctor()
                ▷ Anchors : IHTMLAnchor[]
                ▷ Container : IHTMLDiv
                ▷ Content : IHTMLElement
                ▷ Header : IHTMLElement
                ▷ Images : IHTMLImage[]
                ▷ PageContainer : IHTMLDiv
                ▷ Create() : DefaultPage
                ▷ GetContainer() : IHTMLDiv
                ▷ Initialize_0_body(DefaultPage, IHTMLElement) : IHTMLElement
                ▷ Initialize_1_noscript(DefaultPage, IHTMLElement) : IHTMLElement
                ▷ Initialize_2_img(DefaultPage, IHTMLElement) : IHTMLElement
                ▷ Initialize_4_div(DefaultPage, IHTMLElement) : IHTMLElement
                ▷ Initialize_5_h1(DefaultPage, IHTMLElement) : IHTMLElement
                ▷ Initialize_6_p(DefaultPage, IHTMLElement) : IHTMLElement
            ▷ DefaultPageSource {Text}
        ▷ {} WebGLNyanCat.Styles (1)
    ◢ Resources (3)
```

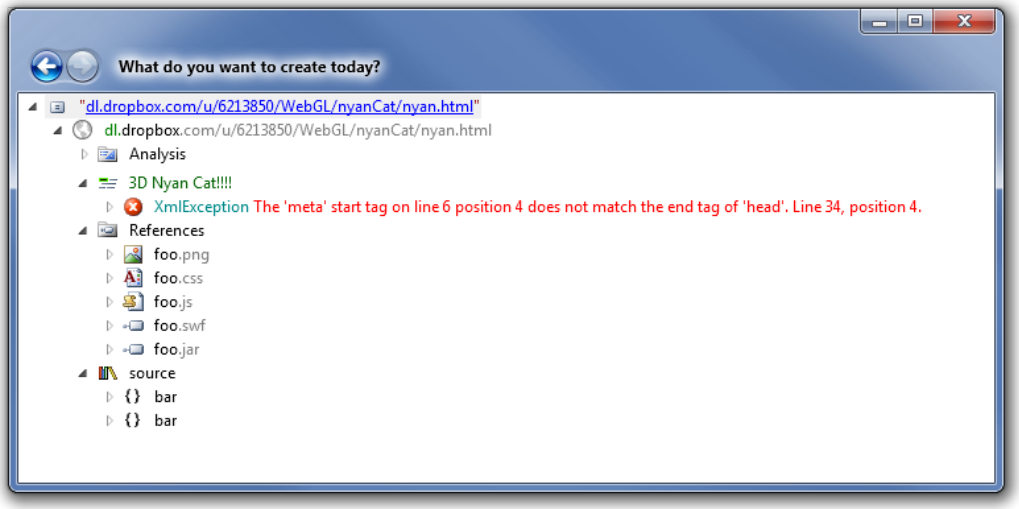
Figure 1.4: JSC eXplore - WebGLNyanCat.AssetsLibrary



JSC - The .NET crosscompiler for web platforms.

Hello world

Figure 1.5: Application running inside Chrome



```
"dl.dropbox.com/u/6213850/WebGL/nyanCat/nyan.html"
  dl.dropbox.com/u/6213850/WebGL/nyanCat/nyan.html
    Analysis
    3D Nyan Cat!!!!
      XmlException The 'meta' start tag on line 6 position 4 does not match the end tag of 'head'. Line 34, position 4.
    References
      foo.png
      foo.css
      foo.js
      foo.swf
      foo.jar
    source
      bar
      bar
```

Figure 1.6: JSC eXplore - Web Application

Chapter 2

Notes for future work

2.0.8 Less references

Future versions of JSC shall consider merging ScriptCoreLibr assemblies to keep the number low.

2.0.9 Exclude from Project Template

Some files should be excluded from project template.

Chapter 3

References

3.0.10 Document Source

https://jsc.svn.sourceforge.net/svnroot/jsc/examples/javascript/ArduinoSpiderControlCenter/SpiderModel/Documents/spider.tex

3.0.11 Project Source

https://jsc.svn.sourceforge.net/svnroot/jsc/examples/javascript/ArduinoSpiderControlCenter/SpiderModel/

3.0.12 Video

http://www.youtube.com/v/hKksAVmekAE

3.0.13 JSC Web Installer

http://download.jsc-solutions.net

3.0.14 Website

http://www.jsc-solutions.net

3.0.15 Blog

http://zproxy.wordpress.com