CS 683 Emerging Technologies
Fall Semester, 2004
Doc 15 Generators
Contents

References 2
XSL 3
  XSLT With out Files 5
Generators 7
  VelocityGenerator 8

Copyright ©, All rights reserved. 2004 SDSU & Roger Whitney, 5500 Campanile Drive, San Diego, CA 92182-7700 USA. OpenContent (http://www.opencontent.org/opl.shtml) license defines the copyright on this document.

References

Cocoon Developer's Handbook, Moczar & Aston, Sams Publishing, 2003

XSL

VisualWorks

Load the parcel XSL.pcl in parcels directory in your VW installation.

Read the XSL stylesheet processing (page 529) section of chapter 24 (XML Framework) of the VisualWorks Application Developer's Guide

Java

Download Xalan-Java (http://xml.apache.org/xalan-j/)

Read the docs and examples

Warning about Files & Web pages

If a server generates a file called foo to help process a request

What happens if the server gets two such requests at the same time?

XSLT With out Files

```
import java.io.FileNotFoundException;
import java.io.FileOutputStream;
import java.io.IOException;
import java.io.StringReader;
import java.io.StringWriter;

import javax.xml.transform.Transformer;
import javax.xml.transform.TransformerConfigurationException;
import javax.xml.transform.TransformerException;
import javax.xml.transform.TransformerFactory;
import javax.xml.transform.stream.StreamResult;
import javax.xml.transform.stream.StreamSource;

public class SimpleTransform
   {
   public static void main(String[] args) throws
      TransformerException, TransformerConfigurationException,
      FileNotFoundException, IOException
      {
      TransformerFactory tFactory =
         TransformerFactory.newInstance();
      String xsl = "<?xml version=\"1.0\" encoding=\"ISO-8859-
1\"?><xsl:stylesheet version=\"1.0\"
xmlns:xsl=\"http://www.w3.org/1999/XSL/Transform\"><xsl:templ
ate match=\"/\"><html> <title> <xsl:value-of
select=\"greetings\"/></title> <body><h1><xsl:value-of
select=\"greetings\"/></h1>
</body></html></xsl:template></xsl:stylesheet>";
```

Example Continued

```
        Transformer transformer =
          tFactory.newTransformer(
            new StreamSource(new StringReader(xsl)));

        String xml = "<?xml version=\"1.0\"?><?xml-stylesheet
    type=\"text/xsl\" href=\"hello.xsl\"?><greetings>Hello
    World</greetings>";

        StringWriter result = new StringWriter();
        transformer.transform(
          new StreamSource( new StringReader( xml)),
          new StreamResult(result));
        System.out.println(result.toString());
        }
      }
```

Generators

DirectoryGenerator
ErrorGenerator
HTMLGenerator
JspGenerator
RequestGenerator
ScriptGenerator
VelocityGenerator

VelocityGenerator

Processing without the tags

http://jakarta.apache.org/velocity/

velocity/templates/login.vm

```
<?xml version="1.0"?>

#set($user = $request.getParameter("user"))
#set($pass = $request.getParameter("pass"))

<page>
  <title>Login Results</title>
  <content>
    #if ($pass == 'hi')
      <paragraph>Your In</paragraph>
    #else
      <paragraph>You missed</paragraph>
    #end
    <h3>Parameters</h3>
    #foreach ($name in $request.getParameterNames())
      <paragraph>
      $name = $request.getParameter($name)
      </paragraph>
    #end
  </content>
</page>
```

http://bismarck.sdsu.edu:9006/cocoon/velocity/index.html?user=foo&pass=hi&less=more

http://bismarck.sdsu.edu:9006/cocoon/velocity/index.html?pass=no

velocity/style/main.xsl

```
<?xml version="1.0"?>
<xsl:stylesheet version="1.0"
  xmlns:xsl="http://www.w3.org/1999/XSL/Transform">

  <xsl:template match="page">
  <html>
    <head>
      <title>
        <xsl:value-of select="title"/>
      </title>

      </head>
      <body>
        <xsl:apply-templates/>
      </body>
    </html>
  </xsl:template>

  <xsl:template match="title">
    <h2><xsl:apply-templates/></h2>
  </xsl:template>

  <xsl:template match="paragraph">
    <p><xsl:apply-templates/></p>
  </xsl:template>

</xsl:stylesheet>
```

velocity/sitemap.xmap

```
<?xml version="1.0"?>
<map:sitemap xmlns:map="http://apache.org/cocoon/sitemap/1.0">
  <map:components>
    <map:generators default="file" />
    <map:transformers default="xslt" />
    <map:readers default="resources" />
    <map:serializers default="html" />
    <map:selectors default="browser" />
    <map:matchers default="wildcard" />
  </map:components>
  <map:pipelines>
    <map:pipeline>
      <map:match pattern="index.html">
        <map:generate type="velocity" src="templates/login.vm" />
        <map:transform type="xslt" src="style/main.xsl" />
        <map:serialize type="html" />
      </map:match>
    </map:pipeline>
  </map:pipelines>
</map:sitemap>
```

Added to Cocoon main site map

```
<map:pipeline>
    <map:match pattern="velocity/**">
     <map:mount uri-prefix="velocity" src="velocity/sitemap.xmap"
        check-reload="yes" reload-method="synchron"/>
    </map:match>
  </map:pipeline>
```