

# Enterprise Systems & Architecture

## Lab 5 (Week 3): XSL Exercises – Basic XSL

### Exercise 1

- Create an xml file called **note.xml** with the following content (note the *processing instruction* that specifies the xsl stylesheet):

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

<?xml-stylesheet type="text/xsl" href="note.xsl"?>

<note>
  <to>Tove</to>
  <from>Jani</from>
  <heading>Reminder</heading>
  <body>Don't forget me this weekend!</body>
</note>
```

- Create an xsl stylesheet called **note.xsl** with the following content:

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

  <xsl:output method="html"/>

  <xsl:template match="/">

    To: <xsl:value-of select="note/to"/>
    <br/>
    From: <xsl:value-of select="note/from"/>
    <br/>
    Heading: <xsl:value-of select="note/heading"/>
    <br/>
    Body: <xsl:value-of select="note/body"/>
    <br/>

  </xsl:template>

</xsl:stylesheet>
```

- View your xml file in the Firefox or IE web browser (note, you can launch the browser from notepad++ using *Run->Launch in Firefox*).
- Note how the browser has processed the stylesheet and displayed the resulting html file. Remember, the browser is using its built in XSL processor to apply the stylesheet to the XML in order to produce the output document (html) which is then rendered by the browser (if you look at the page source, all you will see is the XML).

## Exercise 2

- Modify your **note.xml** so that it contains at least two more note elements (with child elements). Remember, an xml document must have a root node that appears only once.
- Modify your **note.xsl** to use an **<xsl:for-each>** element so that all the note elements are displayed by the browser.
- Add some html literals to your xsl files to make the display a bit more user friendly.

## Exercise 3

- Create an xml file called **project.xml** with the contents as set out below.
- Create an XSLT style sheet **project.xsl** that will be used to transform **project.xml** into a HTML document. The result document should display Student's name using the **<h1>** tag, date using the **<h2>** tag, the objective name using the **<h4>** tag, and the description using the **<div>** tag (see screenshot below). Display it Firefox or IE.
- Enhance the appearance of the page by altering the xsl file.

### project.xml

```
<?xml version="1.0"?>
<?xml-stylesheet type="text/xsl" href="project.xsl"?>

<project>
<student>Student</student>
<date>Date</date>
<objective>
  <name>Working with XSL</name>
  <description>XSL is composed of three parts: XSL-FO
  (Extensible Style sheet Language - Formatting Objects),
  XSLT (Extensible Style sheet Language Transformations),
  and XPath. XSL-FO is used to implement page layout and design.
  XSLT is used to transform XML content into another presentation format.
  XPath is used to locate information from an XML document
  and perform operations and calculations upon that content.
</description>
</objective>

<objective>
  <name>Introducing XSLT style sheets and processors</name>
  <description>An XSLT style sheet contains instructions for transforming
  the contents of an XML document into another format. An XSLT style
  sheet document is itself an XML document, but has an extension .xsl.
  An XSLT style sheet converts a source document of XML content into
  a result document containing the markup codes and other instructions
  for formatting.
</description>
</objective>

<objective>
  <name>Creating an XSLT style sheet</name>
  <description>To attach an XML file to the style sheet,
  insert the processing instruction following the first line
  in the document. An XSLT style sheet has the general structure
  of all XML documents.
</description>
</objective>
</project>
```

# Student

## Date

### Working with XSL

XSL is composed of three parts: XSL-FO (Extensible Style sheet Language - Formatting Objects), XSLT (Extensible Style sheet Language Transformations), and XPath. XSL-FO is used to implement page layout and design. XSLT is used to transform XML content into another presentation format. XPath is used to locate information from an XML document and perform operations and calculations upon that content.

### Introducing XSLT style sheets and processors

An XSLT style sheet contains instructions for transforming the contents of an XML document into another format. An XSLT style sheet document is itself an XML document, but has an extension .xsl. An XSLT style sheet converts a source document of XML content into a result document containing the markup codes and other instructions for formatting.

### Creating an XSLT style sheet

To attach an XML file to the style sheet, insert the processing instruction following the first line in the document. An XSLT style sheet has the general structure of all XML documents.

Done

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