

XSLT Basics

LIS 653
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What we will (re?)learn today

- How to make XSLT go
 - including `<?xml-stylesheet?>` PI
- Skeleton XSLT stylesheet
 - with namespaces!
- The following XSLT elements:
 - `xsl:stylesheet`, `xsl:output`
 - `xsl:template`, XPath in match attribute
 - `xsl:apply-templates`
 - `xsl:text`
 - `xsl:value-of`
 - (if there's time) `xsl:if`, `xsl:for-each`

What is XSLT?

- A programming language
 - HTML is not. XML is not. XSLT is!
- Expressed in XML
- For turning XML into other stuff.
 - Other XML
 - HTML (X- or otherwise, but XHTML is easiest)
 - XSL:FO (but seriously, nobody does this)
 - Plain text, CSV, whatever else your evil brain can dream up.

What you need

- “Source” XML
- “Target” document (or a sense of what you want to turn your source into)
- “XSLT engine”
 - Software that applies the stylesheet you create to your source to make (you hope) your desired target
 - If your target is HTML, most browsers can do this! I’ll show you how.
- Your XML/XSLT/text editor of choice (which may include an XSLT engine)

The magic trick for HTML

```
<?xml-stylesheet type="text/xsl" href="{URL}"?>
```

- Put this in your source XML document, right under the XML declaration.
- URL for the stylesheet can be absolute or relative.
 - So if it's relative, you can do this from your desktop.
- Open your source document in a browser, and voilà!

The skeleton

```
<?xml version="1.0" encoding="UTF-8"?>
```

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

```
  <xsl:output method="html"/>
```

```
</xsl:stylesheet>
```

- You may need to add more `xmlns:` attributes if you're using other namespaces
- Other output methods: `xml`, `text`

Push and pull

- Two basic ways to get something done in XSLT.
- “Push:” take the source as it comes, transforming as needed
 - Works from the outside in and the top down.
 - But what if your target is organized very differently from your source?
- “Pull:” build your target, pulling out the bits of the source you need as you need them

So let's try this!

- Go to <http://misc.yarinareth.net/653/resource.xml> and save it somewhere, then open it in whatever you're using.
- Go to <http://misc.yarinareth.net/653/skeleton.xsl> and save it to the same folder. Rename it to "push.xsl". Copy it to "pull.xsl" for later.