

The XSLT Paradigm

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Nuts and bolts of an XSLT stylesheet

- `<xsl:stylesheet>`
- `<xsl:output>`
- `<xsl:template>`
- `<xsl:apply-templates>`
- Creating the XHTML output framework

`<xsl:stylesheet>`

```
<xsl:stylesheet xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
  xmlns="http://www.w3.org/1999/xhtml"
  xpath-default-namespace="http://www.tei-c.org/ns/1.0"
  version="2.0">
```

Wrapper element that contains the entire stylesheet

```
xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
```

Always required

```
xmlns="http://www.w3.org/1999/xhtml"
```

Required if the output is XHTML

```
xpath-default-namespace="http://www.tei-c.org/ns/1.0"
```

- Optional, but useful when transforming TEI input documents
- Tells the stylesheet to assume input is in the TEI namespace unless specified otherwise

```
version="2.0"
```

Required

<xsl:output>

```
<xsl:output method="xhtml" indent="yes" encoding="utf-8"/>
```

Empty element; describes output formatting

```
method="xhtml"
```

May be `xhtml`, `xml`, `text`, `html` (but we sneer at `html`; use `xhtml` instead)

```
indent="yes"
```

Set to `yes` to wrap long lines and indent nested elements for ease in reading the output

<xsl:template match="XPath">

Contains instructions to be executed when the template fires

```
<xsl:template match="div">
```

The `match` attribute specifies an XPath to which the template will be applied. This examples matches any `<div>` element.

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

When you encounter a `<div>`, create a `<p>`. Then process the contents of the `<div>`, putting any output of those template rules inside the `<p>`.

<xsl:apply-templates select="XPath" />

- Empty element.
- The `select` attribute identifies the XPath of the nodes to process at this point.
- What *process* means is determined by the template rule for the node selected.

```
<xsl:apply-templates select="head"/>
```

Process all of the <head> children of the context node.

```
<xsl:apply-templates select="//body/div/div/sp[1]"/>
```

Process the first speech (<sp>) of the first <div> that is immediately under another <div> immediately under the <body>. In *Hamlet*, this is the first speech of each scene.

```
<xsl:apply-templates/>
```

Process all of the children of the context node.

Creating the XHTML output framework

```
<xsl:stylesheet
  xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
  xmlns="http://www.w3.org/1999/xhtml"
  xpath-default-namespace="http://www.tei-c.org/ns/1.0"
  version="2.0">
  <xsl:output method="xhtml" indent="yes"/>
  <xsl:template match="/">
    <html>
      <head>
        <title>Title goes here</title>
      </head>
      <body>
        <xsl:apply-templates/>
      </body>
    </html>
  </xsl:template>
  <!-- other template rules go here -->
</xsl:stylesheet>
```

Stepping through the stylesheet (1)

<xsl:stylesheet

```
xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
xpath-default-namespace="http://www.tei-c.org/ns/1.0"
xmlns="http://www.w3.org/1999/xhtml"
version="2.0">
<xsl:output method="xhtml" encoding="UTF-8" />
<xsl:template match="/">
  <html>
    <head><title>Title goes here</title></head>
    <body>
      <xsl:apply-templates />
    </body>
  </html>
</xsl:template>
</xsl:stylesheet>
```

Stepping through the stylesheet (2)

```
<xsl:stylesheet
  xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
  xpath-default-namespace="http://www.tei-c.org/ns/1.0"
  xmlns="http://www.w3.org/1999/xhtml"
  version="2.0">
  <xsl:output method="xhtml" encoding="UTF-8" />
  <xsl:template match="/">
    <html>
      <head><title>Title goes here</title></head>
      <body>
        <xsl:apply-templates />
      </body>
    </html>
  </xsl:template>
</xsl:stylesheet>
```

Stepping through the stylesheet (3)

```
<xsl:stylesheet
  xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
  xpath-default-namespace="http://www.tei-c.org/ns/1.0"
  xmlns="http://www.w3.org/1999/xhtml"
  version="2.0">
  <xsl:output method="xhtml" encoding="UTF-8" />
  <xsl:template match="/">
    <html>
      <head><title>Title goes here</title></head>
      <body>
        <xsl:apply-templates />
      </body>
    </html>
  </xsl:template>
</xsl:stylesheet>
```

Stepping through the stylesheet (4)

```
<xsl:stylesheet
  xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
  xpath-default-namespace="http://www.tei-c.org/ns/1.0"
  xmlns="http://www.w3.org/1999/xhtml"
  version="2.0">
  <xsl:output method="xhtml" encoding="UTF-8" />
  <xsl:template match="/">
    <html>
      <head><title>Title goes here</title></head>
      <body>
        <xsl:apply-templates />
      </body>
    </html>
  </xsl:template>
</xsl:stylesheet>
```


Stepping through the stylesheet (5)

```
<xsl:stylesheet
  xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
  xpath-default-namespace="http://www.tei-c.org/ns/1.0"
  xmlns="http://www.w3.org/1999/xhtml"
  version="2.0">
  <xsl:output method="xhtml" encoding="UTF-8" />
  <xsl:template match="/">
    <html>
      <head><title>Title goes here</title></head>
      <body>
        <xsl:apply-templates />
      </body>
    </html>
  </xsl:template>
</xsl:stylesheet>
```

Stepping through the stylesheet (6)

```
<xsl:stylesheet
  xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
  xpath-default-namespace="http://www.tei-c.org/ns/1.0"
  xmlns="http://www.w3.org/1999/xhtml"
  version="2.0">
  <xsl:output method="xhtml" encoding="UTF-8" />
  <xsl:template match="/">
    <html>
      <head><title>Title goes here</title></head>
      <body>
        <xsl:apply-templates />
      </body>
    </html>
  </xsl:template>
</xsl:stylesheet>
```

Stepping through the stylesheet (7)

```
<xsl:stylesheet
  xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
  xpath-default-namespace="http://www.tei-c.org/ns/1.0"
  xmlns="http://www.w3.org/1999/xhtml"
  version="2.0">
  <xsl:output method="xhtml" encoding="UTF-8" />
  <xsl:template match="/">
    <html>
      <head><title>Title goes here</title></head>
      <body>
        <xsl:apply-templates />
      </body>
    </html>
  </xsl:template>
</xsl:stylesheet>
```

Stepping through the stylesheet (8)

```
<xsl:stylesheet
  xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
  xpath-default-namespace="http://www.tei-c.org/ns/1.0"
  xmlns="http://www.w3.org/1999/xhtml"
  version="2.0">
  <xsl:output method="xhtml" encoding="UTF-8" />
  <xsl:template match="/">
    <html>
      <head><title>Title goes here</title></head>
      <body>
        <xsl:apply-templates />
      </body>
    </html>
  </xsl:template>
</xsl:stylesheet>
```

Stepping through the stylesheet (9)

```
<xsl:stylesheet
  xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
  xpath-default-namespace="http://www.tei-c.org/ns/1.0"
  xmlns="http://www.w3.org/1999/xhtml"
  version="2.0">
  <xsl:output method="xhtml" encoding="UTF-8" />
  <xsl:template match="/">
    <html>
      <head><title>Title goes here</title></head>
      <body>
        <xsl:apply-templates />
      </body>
    </html>
  </xsl:template>
</xsl:stylesheet>
```

Stepping through the stylesheet (10)

```
<xsl:stylesheet
  xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
  xpath-default-namespace="http://www.tei-c.org/ns/1.0"
  xmlns="http://www.w3.org/1999/xhtml"
  version="2.0">
  <xsl:output method="xhtml" encoding="UTF-8" />
  <xsl:template match="/">
    <html>
      <head><title>Title goes here</title></head>
      <b>body</b>
      <xsl:apply-templates />
    </body>
  </html>
</xsl:template>
</xsl:stylesheet>
```

Stepping through the stylesheet (11)

```
<xsl:stylesheet
  xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
  xpath-default-namespace="http://www.tei-c.org/ns/1.0"
  xmlns="http://www.w3.org/1999/xhtml"
  version="2.0">
  <xsl:output method="xhtml" encoding="UTF-8" />
  <xsl:template match="/">
    <html>
      <head><title>Title goes here</title></head>
      <body>
        <xsl:apply-templates />
      </body>
    </html>
  </xsl:template>
</xsl:stylesheet>
```

Stepping through the stylesheet (12)

```
<xsl:stylesheet
  xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
  xpath-default-namespace="http://www.tei-c.org/ns/1.0"
  xmlns="http://www.w3.org/1999/xhtml"
  version="2.0">
  <xsl:output method="xhtml" encoding="UTF-8" />
  <xsl:template match="/">
    <html>
      <head><title>Title goes here</title></head>
      <body>
        <xsl:apply-templates />
        </body>
      </html>
    </xsl:template>
  </xsl:stylesheet>
```


Stepping through the stylesheet (13)

```
<xsl:stylesheet
  xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
  xpath-default-namespace="http://www.tei-c.org/ns/1.0"
  xmlns="http://www.w3.org/1999/xhtml"
  version="2.0">
  <xsl:output method="xhtml" encoding="UTF-8" />
  <xsl:template match="/">
    <html>
      <head><title>Title goes here</title></head>
      <body>
        <xsl:apply-templates />
      </body>
      </html>
    </xsl:template>
  </xsl:stylesheet>
```

Stepping through the stylesheet (14)

```
<xsl:stylesheet
  xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
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  version="2.0">
  <xsl:output method="xhtml" encoding="UTF-8" />
  <xsl:template match="/">
    <html>
      <head><title>Title goes here</title></head>
      <body>
        <xsl:apply-templates />
      </body>
    </html>
  </xsl:template>
</xsl:stylesheet>
```

Stepping through the stylesheet (15)

```
<xsl:stylesheet
  xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
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  version="2.0">
  <xsl:output method="xhtml" encoding="UTF-8" />
  <xsl:template match="/">
    <html>
      <head><title>Title goes here</title></head>
      <body>
        <xsl:apply-templates />
      </body>
    </html>
  </xsl:template>
</xsl:stylesheet>
```

Stepping through the stylesheet (16)

```
<xsl:stylesheet
  xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
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  xmlns="http://www.w3.org/1999/xhtml"
  version="2.0">
  <xsl:output method="xhtml" encoding="UTF-8" />
  <xsl:template match="/">
    <html>
      <head><title>Title goes here</title></head>
      <body>
        <xsl:apply-templates />
      </body>
    </html>
  </xsl:template>
</xsl:stylesheet>
```