

XSLT

XSL stands for **EX**tensible **Style sheet** Language, and is a style sheet language for XML documents.

XSLT stands for XSL Transformations.

XSLT

- **XSLT** stands for XSL Transformations.
- **XSLT** is used to transform an XML document into another XML document, or another type of document that is recognized by a browser, like HTML and XHTML.
- With **XSLT** you can add/remove elements and attributes to or from the output file. You can also rearrange and sort elements, perform tests and make decisions about which elements to hide and display, and a lot more.

XSLT

Need for XSL ?

In case of HTML document, tags are predefined such as table, div, and span; and the browser knows how to add style to them and display those using CSS styles.

But in case of XML documents, tags are not predefined.

In order to understand and style an XML document, World Wide Web Consortium (W3C) developed XSL which can act as XML based Stylesheet Language.

An XSL document specifies how a browser should render an XML document.

XSLT

XSL consists of four parts:

- XSLT - a language for transforming XML documents
- XPath - a language for navigating in XML documents
- XSL-FO - a language for formatting
- XQuery - a language for querying XML Documents

XSLT

- XSLT uses XPath to find information in an XML document.
- XPath is a major element in the XSLT standard.
- XPath is used to navigate through elements and attributes in XML documents.
- In the transformation process, XSLT uses XPath to define parts of the source document that should match one or more predefined templates. When a match is found, XSLT will transform the matching part of the source document into the result document.

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XSLT



- XPath stands for XML Path Language
- XPath uses "path like" syntax to identify and navigate nodes in an XML document
- XPath contains over 200 built-in functions
- XPath uses path expressions to select nodes or node-sets in an XML document.


```
1 <?xml version="1.0" ?>
2
3 <?xml-stylesheet href="book.xsl" type="text/xsl" ?>
4 <srkr>
5 <cse>
6     <title>Mr</title>
7     <name>Pavan</name>
8     <number>9959XXXXXX</number>
9     <qualification>M.Tech</qualification>
10    <email>abc@gmail.com</email>
11    <college>Annamalai University</college>
12 </cse>
13 <cse>
14     <title>Mr</title>
15     <name>SIVA</name>
16     <number>9959XXXXXX</number>
17     <qualification>M.Tech</qualification>
18     <email>xyz@gmail.com</email>
19     <college>Annamalai University</college>
20 </cse>
21 </srkr>
```



11:12 / 27:50



XSLT

How to transform XML into XHTML using XSLT?

- The root element that declares the document to be an XSL style sheet is `<xsl:stylesheet>` or `<xsl:transform>`.

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

Or

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

XSLT

Link the XSLT Document to the XML Document

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

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

```
<srkr>
```

```
...
```

```
</srkr>
```

XSLT

```

1 <xsl:stylesheet version="1.0" xmlns:xsl="http://www.w3.org/1999/XSL/Transform" >
2 <xsl:template match="/">
3 <html>
4 <body>
5 <table border="2" bordercolor="black" cellspacing="0" align="center"
6 style="font-family:calibri;text-align:center">
7 <tr style="background-color:gray;text-transform:uppercase;">
8 <th>title</th>
9 <th>Name</th>
10 <th>Phone Number</th>
11 <th>Qualification</th>
12 <th>email</th>
13 <th>College</th>
14 </tr>
15 <xsl:for-each select="srkr/cse">
16 <tr>
17 <td><xsl:value-of select="title" /> </td>
18 <td><xsl:value-of select="name" /> </td>
19 <td><xsl:value-of select="number" /> </td>
20 <td><xsl:value-of select="qualification" /> </td>
21 <td><xsl:value-of select="email" /> </td>
22 <td><xsl:value-of select="college" /> </td>
23 </tr>
24 </xsl:for-each>
25 </table>
26 </body>
27 </html>
28 </xsl:template>
29 </xsl:stylesheet>

```

XSLT



File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?



```
book.xml book.xsl cse.xml cse.xsl employee.xml employee.dtd employee.xsd employee.xsl employee.xml cse.xml cse.xsl
1 <xsl:stylesheet version="1.0" xmlns:xsl="http://www.w3.org/1999/XSL/Transform" >
2 <xsl:template match="/">
3 <html>
4 <body>
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21   <td><xsl:value-of select="email" /> </td>
22   <td><xsl:value-of select="college" /> </td>
23 </tr>
24 </xsl:for-each>
25 </table>
26 </body>
27 </html>
28 </xsl:template>
29 </xsl:stylesheet>
```

XSLT

The `<xsl:template>` element is used to build templates.

The `match` attribute is used to associate a template with an XML element.

The `match` attribute can also be used to define a template for the entire XML document.

The value of the `match` attribute is an XPath expression (i.e. `match="/"` defines the whole document).

XSLT

The `<xsl:for-each>` element allows you to do looping in XSLT.

The XSL `<xsl:for-each>` element can be used to select every XML element of a specified node-set

The `<xsl:value-of>` element is used to extract the value of a selected node.

The `<xsl:value-of>` element can be used to extract the value of an XML element and add it to the output stream of the transformation

The `select` attribute, in the example above, contains an XPath expression. An XPath expression works like navigating a file system; a forward slash (/) selects subdirectories.

XSLT

Some Important XSLT Element

for-each : Loops through each node in a specified node set

Stylesheet : Defines the root element of a style sheet

Template : Rules to apply when a specified node is matched

value-of : Extracts the value of a selected node

When : Specifies an action for the <choose> element

If : Contains a template that will be applied only if a spec condition is true