



# SNS COLLEGE OF TECHNOLOGY

Coimbatore-37.

An Autonomous Institution



**COURSE NAME : 19CSE301 INTRODUCTION TO DATA SCIENCE**

**III YEAR/ V SEMESTER**

**UNIT – III**

**Topic: Xpath**

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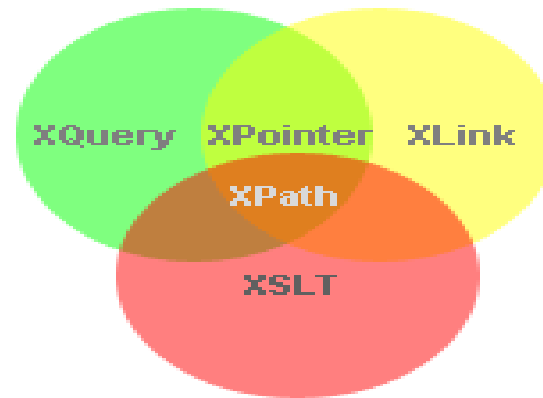
# Introduction

- XPath is a major element in the XSLT standard.
- XPath can be used to navigate through elements and attributes in an XML document.
- 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 is a major element in the XSLT standard
- XPath is a W3C recommendation



# Xpath Expression

- XPath defines a pattern or path expression to select nodes or node sets in an XML document.
- These patterns are used by XSLT to perform transformations.
- The path expressions look like very similar to the general expressions we used in traditional file system.





# Various Process

XPath specifies seven types of nodes that can be output of the execution of the XPath expression.

- Root
- Element
- Text
- Attribute
- Comment
- Processing Instruction
- Namespace



## Important Feature

- **XPath defines structure:** XPath is used to define the parts of an XML document i.e. element, attributes, text, namespace, processing-instruction, comment, and document nodes.
- **XPath provides path expression:** XPath provides powerful path expressions, select nodes, or list of nodes in XML documents.
- **XPath is a core component of XSLT:** XPath is a major element in XSLT standard and must be followed to work with XSLT documents.
- **XPath is a standard function:** XPath provides a rich library of standard functions to manipulate string values, numeric values, date and time comparison, node and Q Name manipulation, sequence manipulation, Boolean values etc.



# Function & Program

- XPath includes over 200 built-in functions.
- There are functions for string values, numeric values, booleans, date and time comparison, node manipulation, sequence manipulation, and much more.
- Today XPath expressions can also be used in JavaScript, Java, XML Schema, PHP, Python, C and C++, and lots of other languages.
- `<?xml version = "1.0"?>`
- `<?xml-stylesheet type = "text/xsl" href = "employee.xsl"?>`
- `<class>`
- `<employee id = "001">`
- `<firstname>Aryan</firstname>`
- `<lastname>Gupta</lastname>`
- `<nickname>Raju</nickname>`
- `<salary>30000</salary>`
- `</employee> </class>`



# Program



```
<html>
<body>
<h2> Employees</h2>
<table border = "1"
<tr bgcolor = "pink">
<th> ID</th>
<th> First Name</th>
<th> Last Name</th>
<th> Nick Name</th>
<th> Salary</th>
</tr>
<xsl:for-each select = "class/employee">
<tr>
<td> <xsl:value-of select = "@id"/> </td>
<td> <xsl:value-of select = "firstname"/> </td>
<td> <xsl:value-of select = "lastname"/> </td>
<td> <xsl:value-of select = "nickname"/> </td>
<td> <xsl:value-of select = "salary"/> </td>
</tr> </table>
</body> </html>
```



# References

- Tom M. Mitchell, “Machine Learning”, McGraw-Hill Education (India) Private Limited, 2013.
- Gareth James, Daniela Witten, Trevor Hastie, Robert Tibshirani, “An Introduction to Statistical Learning: with Applications in R”, Springer; First Edition 2013.





Thank  
You