



KIDS & TEENS FREELANCING TRAINING INSTITUTE

XML Course Outline

Module 1: What is XML?

- Introduction to XML as a markup language for storing and transporting data
 - Real-life example: Using XML for data exchange between different applications (e.g., mobile apps and servers)
 - The basic structure of XML: Elements, attributes, and tags
 - Installing and setting up XML editor tools (e.g., Notepad++, Visual Studio Code)
 - Activity: Write your first simple XML document
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Module 2: XML Syntax and Structure

- Understanding the rules for writing valid XML (case sensitivity, nesting, and closing tags)
 - Real-life example: Structuring a list of books with titles and authors
 - Common XML elements and attributes
 - Activity: Create an XML document with a list of your favorite books or movies
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Module 3: XML Namespaces and Schema

- Introduction to XML namespaces and their purpose in avoiding naming conflicts
 - Validating XML documents with XML Schema (XSD)
 - Real-life example: Defining product information with specific data types (like prices, dates)
 - Activity: Create an XML Schema and validate an XML document
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Module 4: XPath – Navigating XML Documents

- Introduction to XPath for navigating XML documents

- Real-life example: Searching for a specific element (like a product name) in an XML file
 - Using XPath to filter and extract data from XML
 - Activity: Write XPath queries to extract information from an XML document
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Module 5: XSLT – Transforming XML Data

- Introduction to XSLT (Extensible Stylesheet Language Transformations)
 - Using XSLT to transform XML data into HTML, plain text, or other formats
 - Real-life example: Displaying product data in a readable format on a webpage
 - Activity: Transform an XML document into an HTML page using XSLT
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Module 6: Working with XML in Programming Languages

- Using XML in programming languages (Java, Python, PHP)
 - Real-life example: Reading and writing XML files in an application
 - Introduction to DOM (Document Object Model) and SAX (Simple API for XML) for XML parsing
 - Activity: Write a Python script to parse an XML file and extract data
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Module 7: XML and Web Services (SOAP and REST)

- Introduction to XML in web services (SOAP, REST APIs)
 - Real-life example: Sending and receiving data in XML format through web services
 - Using XML for data exchange in RESTful APIs
 - Activity: Create a simple SOAP or RESTful web service using XML for communication
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Module 8: Best Practices for Working with XML

- XML naming conventions and formatting best practices
 - Ensuring XML data consistency and integrity
 - Real-life example: Organizing large XML documents for better readability and management
 - Activity: Clean up and optimize an XML file with proper formatting and organization
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Bonus Materials

- XML syntax cheatsheet and XPath guide
- Mini projects: Create an XML-based configuration file, XML to JSON conversion tool
- Free resources for learning XML and XSLT
- Certificate of Completion for XML Mastery