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XML Validator (Xmllint)

xmllint is a command line tool for parsing and validating XML files. It can be used to check an XML file for syntax errors, print the XML document with proper indentation, or validate the XML file against a DTD or XML Schema. xmllint is widely used in shell scripts and other automation tools to process XML data. It is often used in conjunction with other XML processing tools, such as xsltproc and libxml2, to perform complex XML transformations.

Commands:

Here are some common xmllint commands:

1. Validate an XML file against a DTD or XML Schema:

```
xmllint --valid --noout myfile.xml
```

2. Print the well-formed XML file with proper indentation:

```
xmllint --format myfile.xml
```

3. Validate an XML file against a DTD specified in the XML file:

```
xmllint --valid --noout --dtdvalid mydtd.dtd myfile.xml
```

4. Validate an XML file against a specified XML Schema:

```
xmllint --schema myschema.xsd --noout myfile.xml
```

5. Extract the value of a specific XML element:

```
xmllint --xpath "string(/path/to/element)" myfile.xml
```

Examples:

Here are some examples of using xmllint:

1. Validate an XML file against a DTD:

```
xmllint --valid --noout myfile.xml
```

2. Print the well-formed XML file with proper indentation:

```
xmllint --format myfile.xml
```

3. Validate an XML file against a XML Schema:

```
xmllint --schema myschema.xsd --noout myfile.xml
```



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4. Extract the value of a specific XML element:
`xmllint --xpath "string(/path/to/element)" myfile.xml`
5. Extract the number of elements in an XML document:
`xmllint --xpath "count(/path/to/elements)" myfile.xml`
6. Validate an XML file against a DTD specified in the XML file:
`xmllint --valid --noout --dtdvalid mydtd.dtd myfile.xml`
7. Validate an XML file against a XML Schema and extract values of specific elements:
`xmllint --schema myschema.xsd --xpath "string(/path/to/element1) | string(/path/to/element2)" myfile.xml`

xml example:

Here is a simple example of an XML file:

```
<bookstore>

<book>

  <title>The Great Gatsby</title>

  <author>F. Scott Fitzgerald</author>

  <year>1925</year>

  <price>9.99</price>

</book>

<book>

  <title>Pride and Prejudice</title>

  <author>Jane Austen</author>

  <year>1813</year>

  <price>12.99</price>

</book>

</bookstore>
```



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This XML file represents a bookstore with two books in its inventory. Each book is represented by a `<book>` element, and the details of the book, such as title, author, year, and price, are stored as child elements of the `<book>` element.

dtd for bookstore example

Here is a DTD that can be used to validate the XML file representing a bookstore:

```
<!ELEMENT bookstore (book+)>
```

```
<!ELEMENT book (title, author, year, price)>
```

```
<!ELEMENT title (#PCDATA)>
```

```
<!ELEMENT author (#PCDATA)>
```

```
<!ELEMENT year (#PCDATA)>
```

```
<!ELEMENT price (#PCDATA)>
```

```
<!ATTLIST book isbn CDATA #IMPLIED>
```

This DTD defines the structure of the XML file representing a bookstore. It specifies that a `<bookstore>` element can contain one or more `<book>` elements, and a `<book>` element must contain `<title>`, `<author>`, `<year>`, and `<price>` elements, in that order. The `<title>`, `<author>`, `<year>`, and `<price>` elements must contain character data, represented by `#PCDATA`. Additionally, the `<book>` element can optionally contain an "isbn" attribute.



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