The purpose of a Document Type Definition (DTD) is to define the legal building blocks of an XML document. It defines the document structure with a list of legal elements. A DTD can be declared internally as part of the XML document or as an external reference.

Here is the syntax for declaring a DTD internally:

```
<!DOCTYPE root-element [element-declarations]>
```

And here is an example with an interpretation of each line of the code:

Code	Interpretation
`<?xml version="1.0" encoding="UTF-8"?>`	XML declaration begins the XML document
`<!DOCTYPE memo [`	Defines this as a document of the type "memo"
`<!ELEMENT memo (to,from,heading,body)>`	Defines "memo" element as having four elements: "to,from,heading,body"
`<!ELEMENT to (#PCDATA)>`	Defines "to" element as being of the type "#PCDATA"
`<!ELEMENT from (#PCDATA)>`	Defines "from" element as being of the type "#PCDATA
`<!ELEMENT heading (#PCDATA)>`	Defines "heading" element as being of the type "#PCDATA
`<!ELEMENT body (#PCDATA)>`	defines "body" element as being of the type "#PCDATA
`]>`	Closes the DTD

`<note>`
`<to>George</to>`
`<from>Jungle</from>`
`<heading>Reminder</heading>`
`<body>Watch out for that tree!</body>`
`</note>`
	XML elements and their contents

If the DTD is external to your XML source file, it must be wrapped in a DOCTYPE definition with the following syntax:

```
<!DOCTYPE root-element SYSTEM "filename">
```

And here is the example for the XML file with the external DTD linked to it:

And here is an example with an interpretation of each line of the code:

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XML File Code	Interpretation
`<?xml version="1.0" encoding=”UTF-8”?>`	XML declaration begins the XML document
`<!DOCTYPE memo SYSTEM “memo.dtd”>`	Defines this as a document of the type “memo” and links it to the file “memo.dtd” in the same directory

`<note>`
`<to>George</to>`
`<from>Jungle</from>`
`<heading>Reminder</heading>`
`<body>Watch out for that tree!</body>`
`</note>`
	XML elements and their contents

DTD File Code	**Interpretation**
`<!ELEMENT memo (to,from,heading,body)>`	Defines “memo” element as having four elements: "to,from,heading,body"
`<!ELEMENT to (#PCDATA)>`	Defines “to” element as being of the type "#PCDATA"
`<!ELEMENT from (#PCDATA)>`	Defines “from” element as being of the type "#PCDATA
`<!ELEMENT heading (#PCDATA)>`	Defines “heading” element as being of the type "#PCDATA
`<!ELEMENT body (#PCDATA)>`	defines “body” element as being of the type "#PCDATA

So why use a DTD? When you view the XML file in the browser with the DTD attached, the XML still doesn’t seem to do anything. However, the DTD is what gives meaning to the data in the XML file and it becomes useful for a wide variety of applications, not just your Web project. The DTD could be used for multiple similar XML files. Or the same XML file could use multiple DTD files as needed.