



# Inheritance in DTDs

## Introduction

One of the stated aims of DTDs (and the newer Schemas) is to allow a form of inheritance and hence foster reuse. This exercise will explore this idea a little.

## Setting Up

Make a new directory for this exercise. Call this directory *Inherit*. For example:

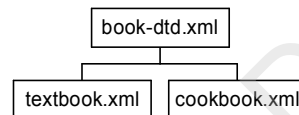
```
C:\> mkdir Inherit
C:\> cd Inherit
```

All the files that you subsequently create as you do this exercise should be contained in this directory.

You will need to obtain the files *Validate.htm* and *Msxml.exe* from your instructor before undertaking this exercise.

## The Exercise

You will make three xml documents that together comprise a hierarchy as illustrated below:



The file 'book-dtd.xml' will contain the 'base' elements of the hierarchy: the basic definitions of what a book is. The other two files will provide additional definitions of required by textbooks and cookbooks.

## Create the 'Base' Document

Create the following in *book-dtd.xml*:

```
<?xml version="1.0" ?>
<!ELEMENT NumberOfChapters (#PCDATA)>
<!ELEMENT CoverColour (#PCDATA)>
```

## Create the Two 'Extensions'

The file *textbook.xml* should contain the following:

```
<?xml version="1.0" ?>
<!DOCTYPE TEXTBOOK SYSTEM "book-dtd.xml" [
<!ELEMENT TEXTBOOK (NumberOfChapters, CoverColour, Glossary)>
<!ELEMENT Glossary (#PCDATA)>
]>
<TEXTBOOK>
  <NumberOfChapters>1</NumberOfChapters>
  <CoverColour>Blue</CoverColour>
  <Glossary>Learning: A little knowledge is a dangerous thing!</Glossary>
</TEXTBOOK>
```

The file *cookbook.xml* should contain:

```
<?xml version="1.0" ?>
<!DOCTYPE COOKBOOK SYSTEM "book-dtd.xml" [
<!ELEMENT COOKBOOK (NumberOfChapters, CoverColour, Recipe)>
<!ELEMENT Recipe (#PCDATA)>
]>
<COOKBOOK>
  <NumberOfChapters>10</NumberOfChapters>
  <CoverColour>Red</CoverColour>
```



```
<Recipe>Buy everything from supermarket</Recipe>
</COOKBOOK>
```

## Explore

7

Try the following:

1. Use the Microsoft *Validate.htm* file to validate and browse the three files.
2. Use the Microsoft tool *msxml.exe* as follows:

```
C:\Inherit> .\Msxml.exe -dl cookbook.xml
```

Repeat for the other two files.