

# Word Content Control Schema Validation Tutorial

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[Word 2007 Content Control Toolkit](#)

## 1. Start Word 2007

## 2. Add a Schema to the Schema Library

*The schema library is a global cache of schemas that Word documents can use for XML validation. It is a legacy feature introduced pre-Office 2007, before XML data binding – originally purposed to validate and structure XML tags in Word documents. In Word 2007 the feature can now be used for another purpose: validating XML data bound content controls.*

- a. On the Developer tab, click the **Schema** button
- b. Click the **Schema Library...** button
- c. Click the **Add Schema...** button
- d. Browse to the *contentcontroltoolkit.xsd* file and click **Open**
- e. Click **OK** to the Schema Settings dialog (the *Alias* field can be left empty)
- f. Click **OK** to close the Schema Library dialog
- g. Click **OK** to close the Templates and Add-ins Dialog

## 3. Open the document '*instanceDocument.docx*'

*This Word document contains XML bound content controls that are validated against the schema added in step 2. Above each content control in the document is a screenshot of the schema element that is linked to the XML instance element bound to the content control. For each content control, there is a unique validation enforced by the schema. If the content control is edited in such a way as to violate the schema declaration, then Word will provide some UI to indicate the error – it does so in a user friendly way, even going so far as to infer from the schema to make the error message more specific.*

*Note: you can use the Word 2007 Content Control Toolkit to view the XML document that has its nodes bound to content controls on the Word surface. Additionally you can see the link between the XML document and its schema. This happens in the XMLNS attribute. For your reference, the XML document is provided below:*

```
<?xml version="1.0"?>
<form xmlns="http://ContentControlToolkit">
  <age />
  <browser />
  <initials />
</form>
```

*How does this connect together? When the instance document is opened, Word will try to resolve the schema referenced by the XMLNS attribute. It can resolve it if the schema is in the Schema Library – completed in step 2.*

- a. In the first content control in *instanceDocument.docx*, replace 35 with 355, and click out. Observe the error UI and fix it to verify the UI goes away. The schema enforces the number is from 1 to 150.
- b. In the second content control, select Opera. This causes an error because the schema only contains enumeration for the other browsers listed. This highlights an interesting Word behavior because you can observe that Word will actually populate a combo list content control in two distinct ways: one is by iterating through the linked schema enumeration, the other is via the Word UI: select the content control, go to its properties, and you can manually add items. Note that the schema enforces its restriction by using the enumeration declaration.
- c. In the third content control, remove a letter, or change a letter to lower case. This violates the schema restriction set by the regular expression. After observing the error, fix it, to see the error go away. Note that advanced regular expressions do not work due to a Word bug - the Word team is aware of this issue (tracked by Offbug/37484).