

Microsystems - THE document experts  
3025 Highland Parkway, Suite 450  
Downers Grove, IL 60515  
Phone: 630-598-1100  
Fax 630-598-9520  
<http://www.microsystems.com/>



# List Template

## What is it and why should I care?

**by:**  
**The Solutions Center**

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## Overview

List Templates remain a mystery to most users. In the process of delivering our Document Forensics classes, we have found that even among document experts familiar with this term, the definitions provided will be as numerous as the number of people polled. List Templates are often confused with a document template. And, to add to this confusion, the List Template is one of the least documented features of Word! Our focus in writing this article is to define the term, eliminate incorrect information and share the functionality and use of this very important Word feature.

## Word's Object Model

Word manages formatting and layout of a document through the Object Model. There, commands that determine how text will appear and behave are embedded within the appropriate Word object (in Word, they are said to be the object's properties). There are no "codes" to be revealed, because the instructions don't exist in a sequential order in a particular location on the page. Instead, they are embedded within an object.

The most important object in Word is the document itself—the file "container." This is the level in which a List Template lives. It is embedded in the document container. The other levels in the Word object model are the Section, Paragraph and Character objects. This concept is key for understanding how Word collects formatting information and embeds it within the appropriate object. All of these objects work together inside of a healthy document.

## List Template, a Definition

A List Template is a single numbering scheme present in a document. If a document contains a bulleted list, a numbered list and an outline numbered list, all in use, this would be defined as having three "active" List Templates. In addition, other List Templates may be present but not currently in use. A List Template contains the "instructions" as to how a particular numbering definition (bulleted, single list or outline) will behave and be displayed within the document.

There are several List Template issues which impact Word 97, Word 2000 and Word 2002 documents:

First, there is no easy method to determine the number of List Templates present in a document.

Second, once a List Template is part of a document, it cannot easily be deleted or removed.

Third, it is easy to inadvertently add additional, unnecessary list templates to your document.

Finally, this build-up of List Templates can negatively impact the overall health and stability of your document.

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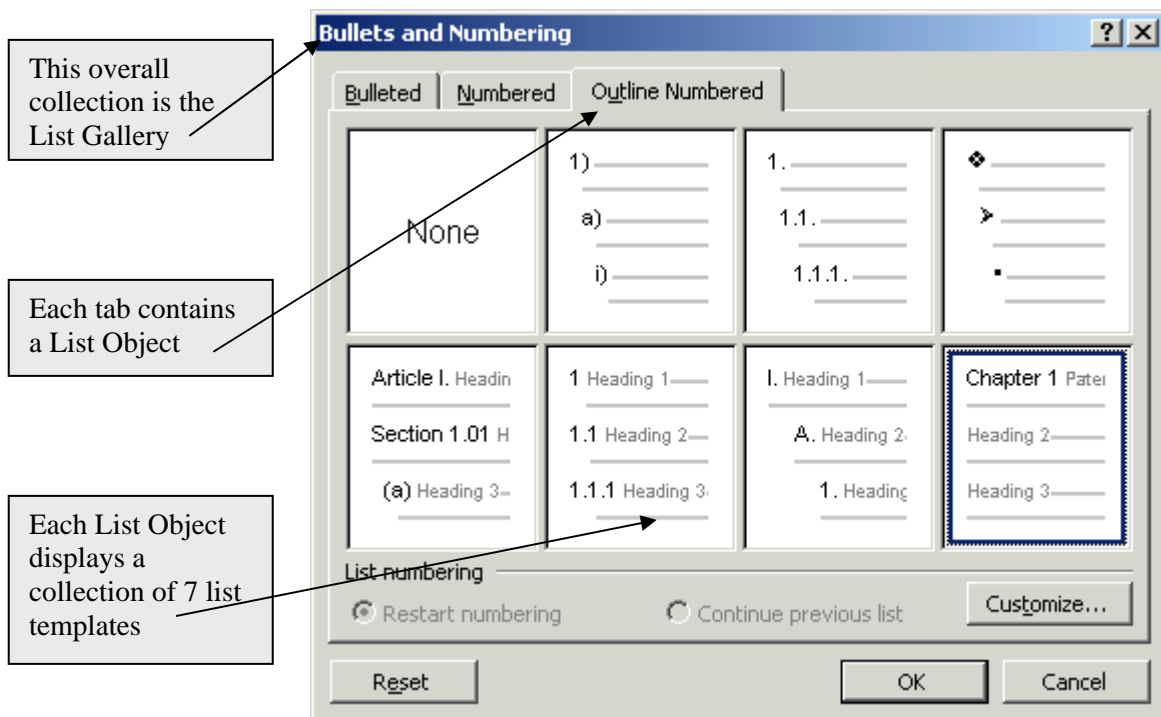
**NOTE:** *The build up of excess list templates is an issue only in Word 97 and Word 2000. Word 2002 manages list templates effectively.*

---

## The List Gallery

Templates are the base of all Word documents. By default, even in a blank document, the template in use is the Normal template. The List Template Object, the programmatic term referring to a List Template, is a member of the List Template Collection. Each of the seven formats (excluding None) found on each of the three tabs in the Bullets and Numbering dialog box corresponds to a List Template object.

One place to keep a List Template object is in a List Gallery object. This is viewed when you select **Format > Style > (select or create a style name) > Modify > Format > Numbering** to define or edit a numbering scheme. There are three List Gallery objects represented by three tabs within the Bullets and Numbering dialog box. The collection of these three List Gallery objects, Bulleted, Numbered and Outline Numbered, is the List Gallery collection.



This overall collection of 21 list templates is the List Gallery. These predefined List Templates can be accessed through the three List Gallery Objects (tabs in the Dialog box) held in the List Galleries collection. Documents and templates may also contain a collection of list templates.

Each List Gallery object contains exactly seven List Template objects, which must be of a specific gallery type: bulleted, numbered single-level, or outline numbered. Word has not supplied any method for removing a List Template object from a List Template collection. If you change the formatting of an existing list in a document, *and fail to follow Word's best practices*, Word will add a new List Template to the document's List Template collection. However, if you delete a numbered style, or simply replace the applied numbered style with another style, Word 97 and Word 2000 do *not* remove the List Template object which was created when the numbering was originally defined in your document. It remains there, unused.

As stated above, the build up of excess List Templates is an issue only in Word 97 and Word 2000. Word 2002 will recognize if a documents collection of List Templates becomes too high and will remove the excess List Templates from the document.

The Template Gallery is Word's offering to eliminate some of the initial set-up in using a single-level bulleted list, a single-level numbered list or a multi-level, outline numbered list. The goal of the List Gallery was to expand the range of templates available to Word users, starting in Word 97, and make it easier to design new documents without starting from scratch.

## Single and Multi-level Lists

As stated above, there are three types of lists in Microsoft Word: single-level bulleted, single-level numbered and multi-level outline numbered. The term outline numbered is a bit misleading, since an outline numbered list can include either bullets or numbers on various levels, but it need not include any numbers at all. But, since these are Microsoft terms, we will use them in this article.

	Can Be Numbered	Can Be Bulleted	Typical Use
Single-level bulleted		X	Bulleted list in body of document, and can also be located inside a table.
Single-level numbered	X		Single-level numbered list in body of document, and can also be located inside a table. A single-level numbered list is often used in the following scenarios: <ul style="list-style-type: none"> <li>• In conjunction <i>with</i> a multi-level outline numbered list to supplement available levels.</li> <li>• Preceding the start of a multi-level outline numbered list as in Recitals.</li> <li>• Following a multi-level outline numbered list as in Schedules.</li> <li>• In simple documents not requiring a multi-level outline numbered scheme.</li> </ul>

**Multi-level  
outline numbered**

X

X

Multi-level outline numbered list which is typically located in the body of a document, but can also be located inside a table. Various levels in this type of list can be numbered, bulleted, or neither.

A complex document can contain more than one multi-level outline numbered scheme. It is common to find one scheme applied in the body of the document, with a separate scheme applied in the schedules following the main body of the document.

## How do numbered lists differ from bulleted lists?

In the case of numbered lists (single and multi-level), there are options to either restart the numbering or continue the numbering started in a previous list. If there is text between the list you are creating and a previous list, Word's default behavior is to continue the numbering from the previous list.

For numbered lists, you can customize the numbering by setting the number format, the amount of indent, and so on. For multi-level lists, this can be done for each level separately, but operating within the scheme. Word does not think of lists in the same way as we might. To Word, a document has some paragraphs that are formatted with a list format and some paragraphs that are not. These paragraphs may or may not be consecutive.

The Word object model has a List object, which you might think represents a straight list. However, according to the Microsoft Word Help documentation, a List object represents "a single list format that's been applied to specified paragraphs in a document." In other words, a List object represents a list format.

The Word object model also has a List Format object, which, according to the Microsoft Help documentation, represents "the list formatting attributes that can be applied to the paragraphs in a range." Word considers a single-bullet list format as a single list object. This is in keeping with the information in the Help documentation that says a List object represents a list format that has been applied to a document. Translated, this means a single list object may contain paragraphs that are not contiguous and can run throughout a document.

Consider now the case of numbered lists. When a numbered list is involved, it is the *restarting of the numbering* that determines a new List object, not a change in the list format, as shown in the following graphics:

```

1.→The·quick·brown·fox·jumps·over·the·lazy·dog·..The·quick·brown·fox·jumps·
over·the·lazy·dog.¶
      |
2.→The·quick·brown·fox·jumps·over·the·lazy·dog·..The·quick·brown·fox·jumps·
over·the·lazy·dog.¶

The·quick·brown·fox·jumps·over·the·lazy·dog·..The·quick·brown·fox·jumps·over·
the·lazy·dog.¶

3.→The·quick·brown·fox·jumps·over·the·lazy·dog·..The·quick·brown·fox·jumps·
over·the·lazy·dog.¶

4.→The·quick·brown·fox·jumps·over·the·lazy·dog·..The·quick·brown·fox·jumps·
over·the·lazy·dog.¶

```

The above example continues the single numbered list and uses one List Template.

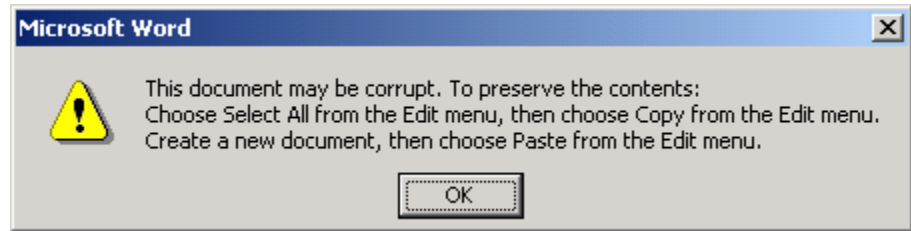
List Number		1.→The·quick·brown·fox·jumps·over·the·lazy·dog·..The·quick·brown·fox·jumps· over·the·lazy·dog.¶
List Number		2.→The·quick·brown·fox·jumps·over·the·lazy·dog·..The·quick·brown·fox·jumps· over·the·lazy·dog.¶
Body Text		The·quick·brown·fox·jumps·over·the·lazy·dog·..The·quick·brown·fox·jumps·over· the·lazy·dog.¶
List Number		1.→The·quick·brown·fox·jumps·over·the·lazy·dog·..The·quick·brown·fox·jumps· over·the·lazy·dog.¶
List Number		2.→The·quick·brown·fox·jumps·over·the·lazy·dog·..The·quick·brown·fox·jumps· over·the·lazy·dog.¶

Numbering restarted for List Number style

The number in the above list is restarted following a body text paragraph. This adds an additional List Template to the document.

## How many List Templates are too many?

The goal is to keep the number of List Templates in a document as small as possible. They continue to build in a Word 97 or Word 2000 file, until they become problematic. Even before the point where you receive warning messages regarding the number of List Templates attached to a file, the overhead is adding unnecessary complexity to your document. The number of List Templates in a document which warrants a warning begins at 1100. More than 1100 List Templates in a document will cause a warning to display upon opening. An example of such an error message follows:



Following the suggested steps in the warning message will not stop the error message if List Templates are the cause, as they will travel with the content into the new document.

## Determining the Number of List Templates in a Document

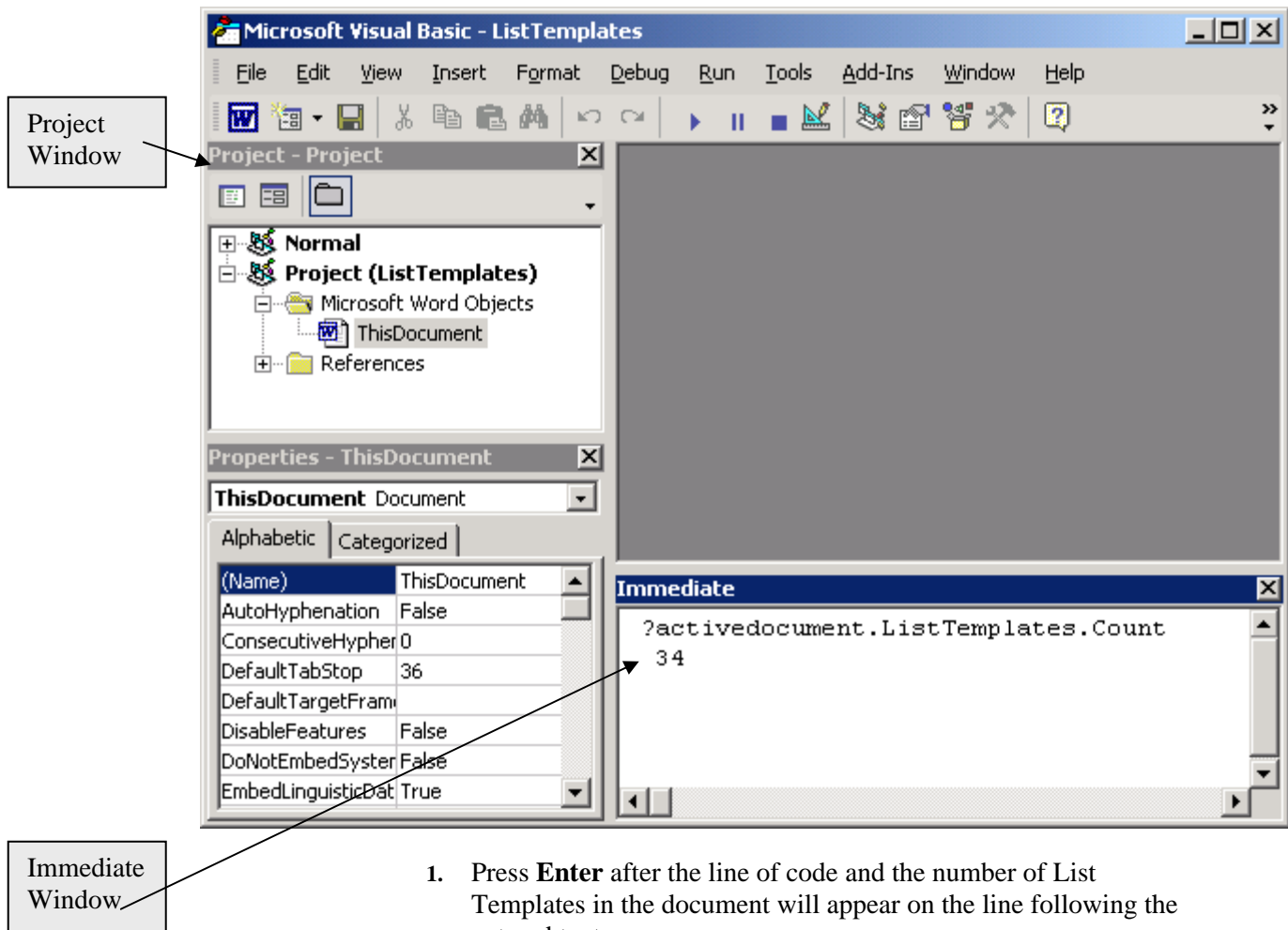
This is probably the largest contributing factor to the confusion surrounding List Templates. There is no place within a Word document where you can go to determine the number of List Templates present. It is not available through a menu option, document properties or Recover Text from Any File. It is simply there and monitored only by Word.

### Visual Basic Editor

Within VBA code, you are able to determine the number of List Templates attached to a document. In any file, to programmatically query the number of List Templates in a document, complete the following steps:

1. In your Word document, select **Tools > Macro > Visual Basic Editor** or simply **<Alt+F11>**.
2. In the Visual Basic Editor, select your document in the Project Window.
3. Choose **View > Immediate Window**, or **<Ctrl+G>**.
4. In the Immediate Window, type in the following:

**?Activedocument.ListTemplates.Count**



1. Press **Enter** after the line of code and the number of List Templates in the document will appear on the line following the entered text.

## Using VBA

To make the task of determining the number of list templates present in a given document a little easier, the following VBA code will count the number of List Templates in a document. This code can be added as a toolbar button for easy access or to run as a macro.

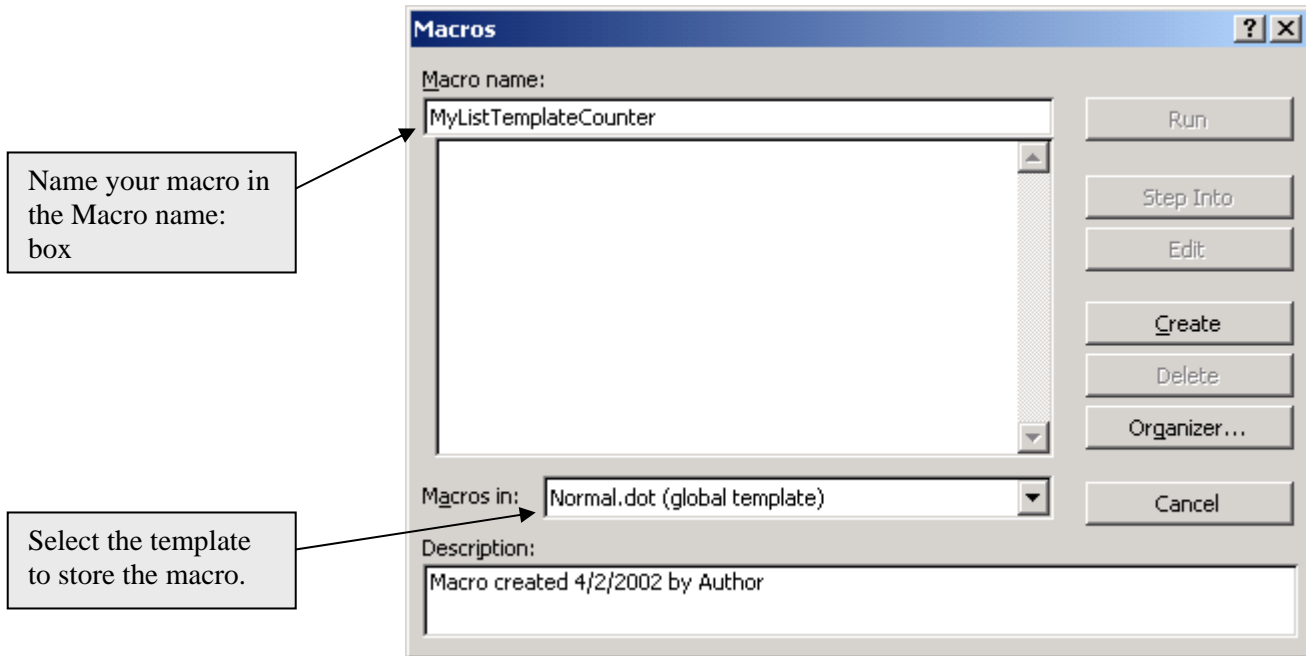
```
Sub MyListTemplateCounter()
    \ *****
    \ Counts defined List Templates in the active document
    \ *****

    MsgBox "This document has:" & vbCrLf & _
        "    " & ActiveDocument.ListTemplates.Count & vbCrLf & _
        "defined List Templates.", vbOKOnly + vbInformation, "List
Template Counter"
End Sub
```

## Steps to Add Macro to the Document:

If you would like to add this code as a stored macro, follow the steps below:

1. **Copy** the macro text that is listed above.
1. Go to **Tools > Macro > Macros**.
2. Choose which template you would like to store the macro in and select it from the **Macros in:** field.
3. Type a name for the macro in the **Macro name:** box.



1. Choose **Create**.
2. Paste the copied text from above into the Visual Basic Editor as shown below:

```
(General) MyListTemplateCounter
Option Explicit

Sub MyListTemplateCounter()

' *****
' Counts defined List Templates in the active document
' *****

MsgBox "This document has:" & vbCrLf & _
    " " & ActiveDocument.ListTemplates.Count & vbCrLf & _
    "defined List Templates.", vbOKOnly + vbInformation, "List Template Counter"

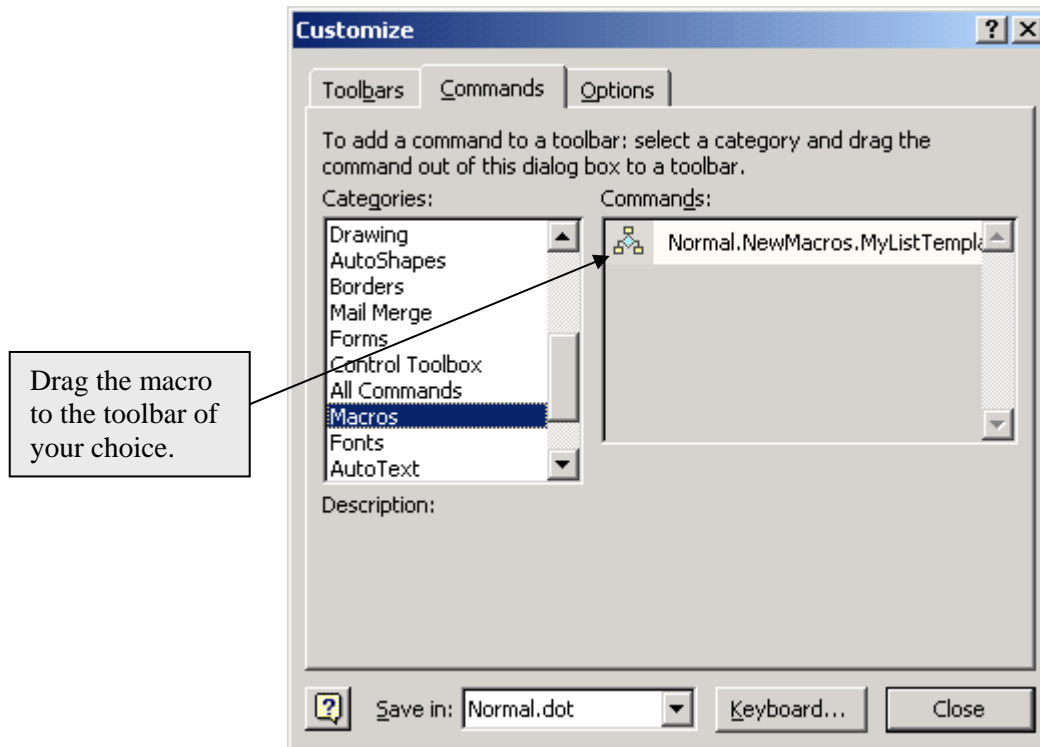
End Sub
|
```

1. **Close** the Visual Basic Editor.
2. **Save** the template.

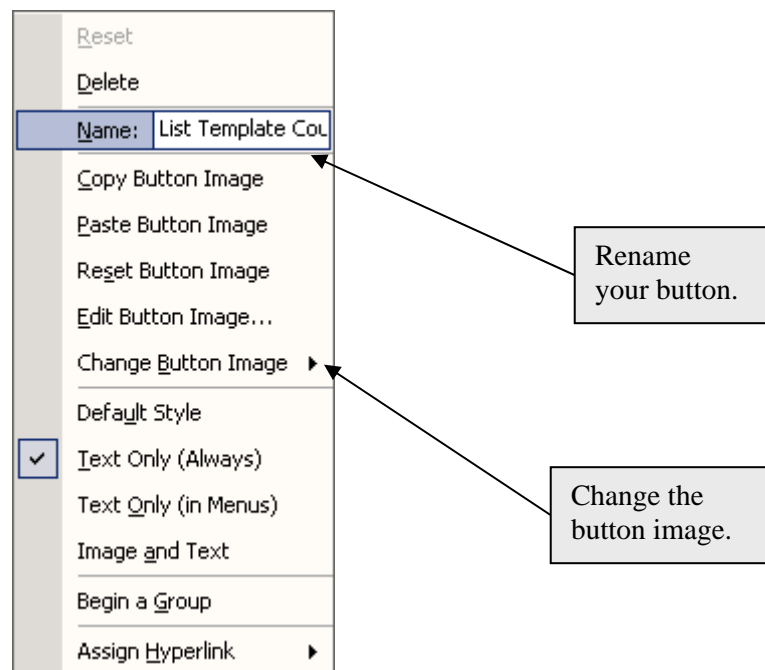
### **To Add the Macro as a Toolbar Button:**

To add this macro as a toolbar button, complete the following steps:

1. Navigate to **Tools > Customize**.
2. On the **Commands** tab, in the **Categories:** field, choose **Macros**.
3. Drag your List Template macro that is listed in the **Commands:** box onto the toolbar on which you would like to have the button available.

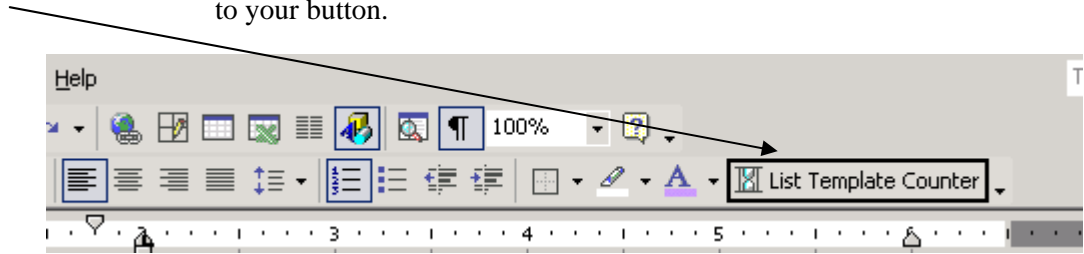


1. To change the name of the button, with the Customize dialog box still open, right-click on the new button as it is displayed on the toolbar.
2. Type in the name of the button in the **Name:** box as shown below:

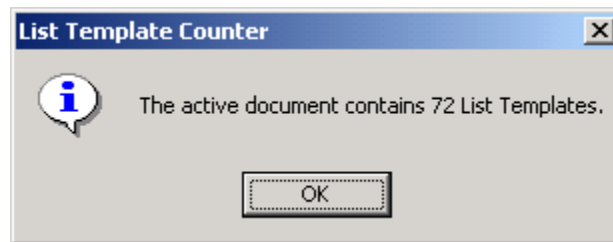


Changed button name and icon.

1. Choose **Change Button Image** if you would like to add an icon to your button.



1. After changing the button name and image, choose **Close** on the Customize dialog box.
2. Select the button to run the macro. You will receive a message similar to this:



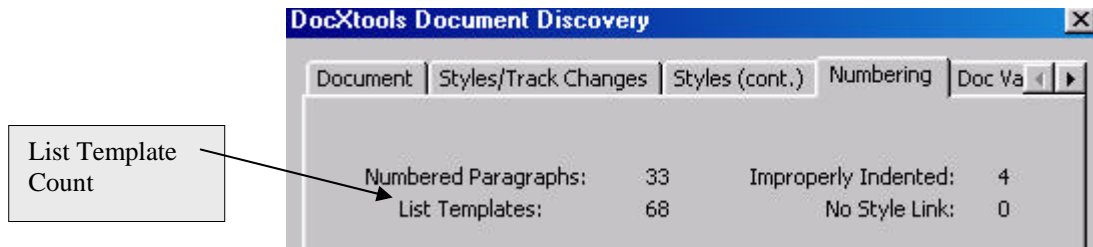
## DocXtools and List Template Information

### Am I A Bad Document?

Am I A Bad Document? will display a notification if there are 500 or more List Templates in your document. We provide this information because any build up of List Templates adds to the complexity and overhead of a document, even though they do not cause errors to be generated until the number of List Templates contained in a document reaches 1100.

### Document Discovery Report

The Document Discovery Report (**DocXRx > Document Discovery Report**) also reports the number of List Templates present in a given document.



## How List Templates are Added to a Document

There are several ways in which a List Template will be added to a document. The table below explains the various ways in which this can occur:

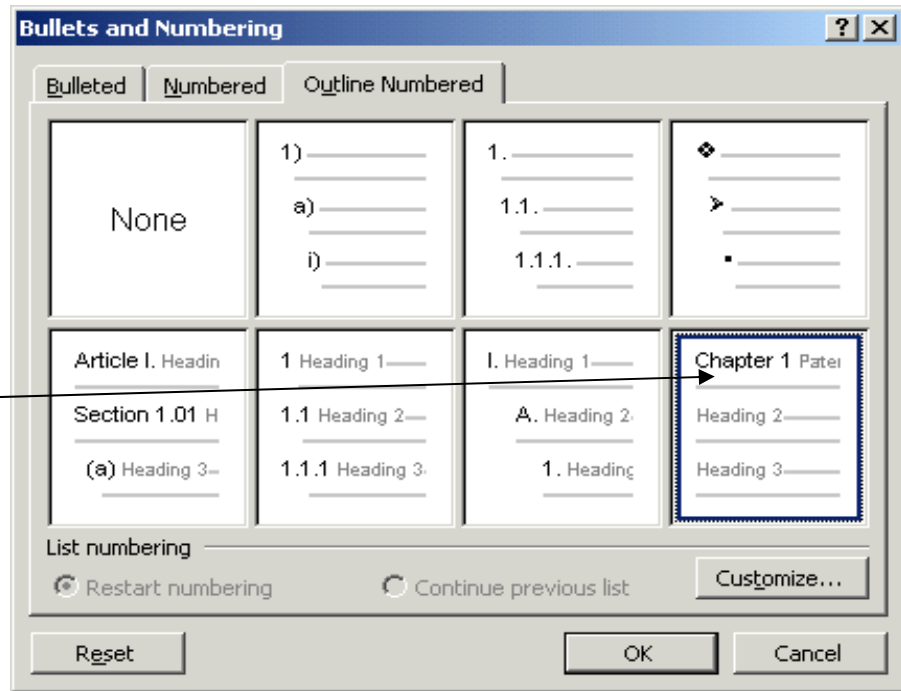
---

Choosing the wrong rabbit hole:

---

Editing a numbered style, once you are at the Customize Numbering dialog box. If you select a gallery view other than the one that is active, you will add an additional List Template to your document. The active List Template will be the one in the view that has the border highlighted. In the graphic below, this would be the last scheme in the second row:

The “rabbit hole” is surrounded by a dark border



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Switching between bulleted and numbered lists:

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Navigating between bulleted and outline styles can add a List Template. This is a documented issue in Word 97, although an error message is never displayed. See Microsoft TechNet Article [“This Document May Be Corrupt” After Switching Between Bullet and Number List Format](#)

---

Restart a list

---

When a numbered list is involved, it is the *restarting of the numbering* that determines a new List object, not a change in the list format.

---

Updating styles:

---

If you update a document with styles, either through the use of Style Gallery or the Organizer, don't count on it updating the List Template you desire. It may add one or more List Templates, in addition to any currently in use.

---

{ ListNum } field:

---

Inserting a “LISTNUM” field code into a document can be another source. This is particularly true when there wasn't a { ListNum } field or an outline list in the document previously.

---

Automation:

---

Another source of unwanted List Templates is automation of any type, the purpose of which is to introduce List Templates into the document. Since they can't be deleted, the more often the user does this, the more List Templates that are likely to be added.

---

File > Open a

---

**File > Open** a WordPerfect 6.x level document into Word. If the original file contained automated numbering (Para or Outline), you will have introduced

## What does this mean to your document?

So, now that you know the technical side of things, you are most likely asking yourself, what does this mean to your document? When a scheme is edited, Word actually adds another List Template to your document, **if you fail to faithfully follow Word's best practices for working with a numbered document**. When you edit a scheme, you may actually be creating a new scheme, not replacing the old scheme. Therefore, when you access the Customize Numbering dialog box again, a new List Template suddenly appears in the gallery. It looks exactly like the old one. This also explains why the rabbit hole moves. The scheme you were editing previously is still in your document, but it is no longer the active scheme because you have made improper edits to it. Where Word places the 'new' active scheme is random, to the best of our knowledge. We have never detected a pattern.

The scenario described above can only occur if you do not follow the correct editing rules for outline numbered schemes. If you "dig to China" (**Format > Style > Modify > Format > Numbering > Customize**) and then select the correct "rabbit hole" each time you change information in the scheme, a new template is **not** added. Define indents through the paragraph dialog box or choose the wrong rabbit hole, and suddenly a new List Template is in the document to stay. We have seen Word files with upwards of 2,000 List Templates present in a single file. Imagine the stories that document could tell!

This is why it is absolutely crucial that you only choose the highlighted rabbit hole. Word is *telling you* which of the List Templates are active in your document. Failure to choose the correct List Template is where the link back to the styles is broken. Only the active List Template contains the necessary links.

When a numbered list is involved, it is the restarting of the numbering that determines a new List object, not a change in the list format. For more information regarding proper numbering practices, refer to [The Seven Laws of Word's Outline Numbering](#).

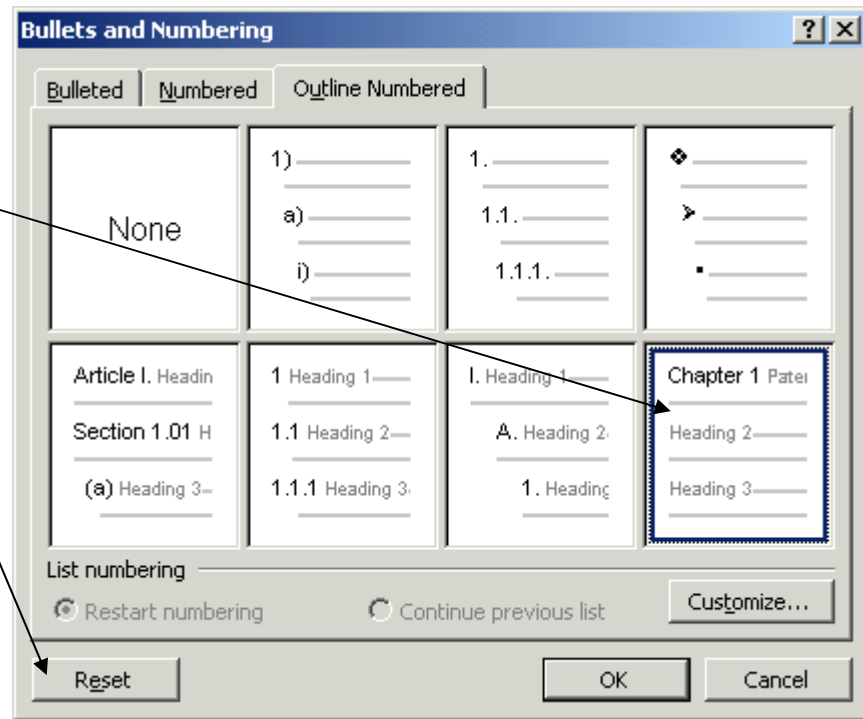
## Resetting the List Gallery Views

Have you ever gone into the List Gallery and found that all of the views appear the same? How can you get them back to the "original" view where you have a choice when you come into this screen?

The List Gallery object retains the recently used List Templates in the Customize Numbering Dialog box, even when they are not present in the current document that is open. If you want to clear the seven views and default back to the basic Word List Template views, simply select each view and then choose the Reset button on the bottom of the Customize Numbering Dialog box.

By doing this, you are simply resetting the 'view'. You are not adding List Templates to the document.

**Steps To Reset a List Template:**  
1. Select a List Template  
2. Select Reset



If this is less confusing, especially in a new document, you can do this as a standard practice.

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*Please note: We do not recommend resetting the List Gallery view when a 'rabbit hole' is already selected. Ensure that the style has not been previously setup with outline numbering and the None option is highlighted.*

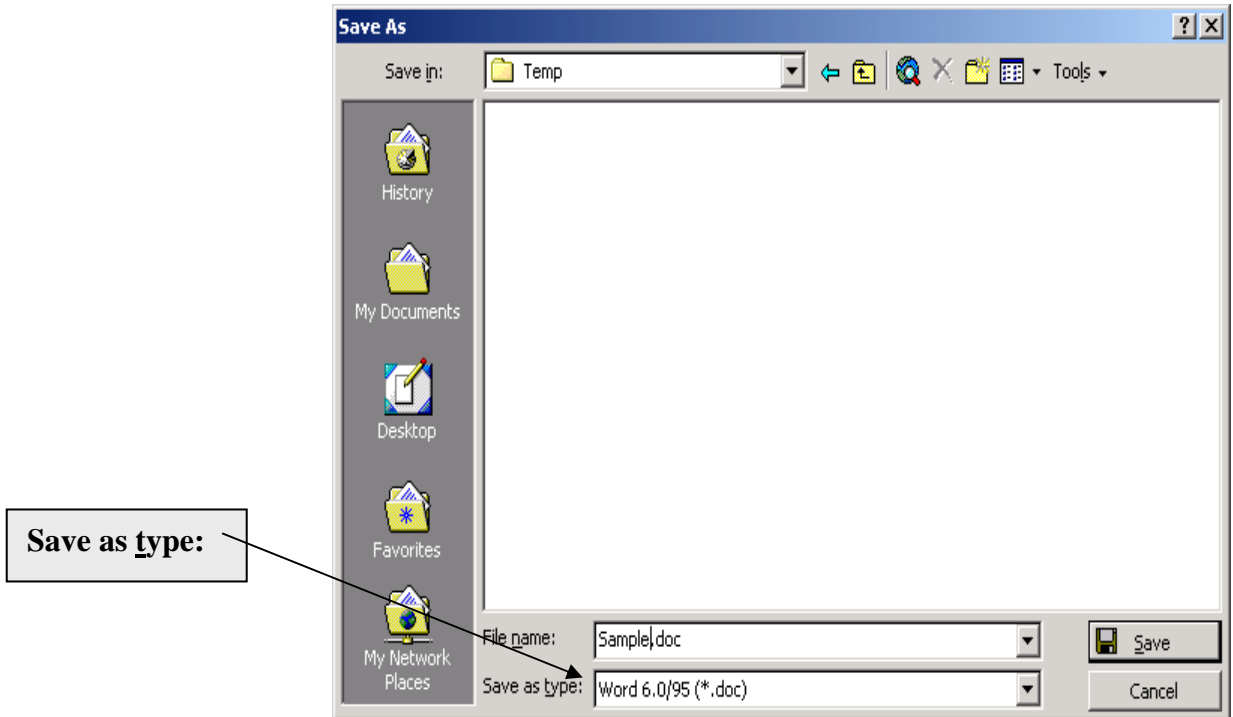
---

## How to remove List Templates from a Document

### Word 97 and Word 2000

Previously, the only known way to remove List Templates from a document is to bring the document back down to Word 6/95. Word 6/95 does not support List Templates. Therefore, when the document is brought back down to Word 6/95 the List Templates are removed.

To save the document down to Word 6/95, simply choose Word 6.0/95 (\*.doc) in the Save as type dropdown box when saving the document.



If you choose this method, however, you must be aware that many features commonly used in Word 97 or Word 2000 will not operate properly, if at all, in a Word 6/95 document. This would include, but is not limited to, the following:

Table formatting capabilities.

Graphics

Picture bullets.

Numbering

In addition, you will have to completely renumber your document when you open it back in Word 97 or Word 2000.

## Word 2002

Editing a Word 97 or Word 2000 document in Word 2002 now removes List Templates! Excess List Templates which reside in a document can be removed by opening and saving the document in Word 2002. Next, bring the document back to Word 97 or Word 2000, unburdened of any List Template build up. An awareness after doing this task would be resetting the compatibility options appropriately back to Word 97 or Word 2000. For information regarding sharing documents between versions of Word, read [Doing the Word 97 and Word 2000 Shuffle](#) and [WD2002: A Document Forensics Discussion](#)

## Questions and Answers

### Multiple Outline Schemes

#### Question

**How many different Outline schemes can you have in a document? Will too many lead to corruption? Can you have an Outline within an Outline?**

We do not recommend inserting an outline within an outline. We have always recommended the use of a List Number style or a List Bullet style if you have a special need in one area of a numbered document which cannot be handled within a multi-level outline numbered scheme.

One of the most important things to remember is that a firm document is an integral part of a firm's identity. When anyone outside your firm reviews a document, they are also able to judge your understanding of and ability to work in Word. When reviewed by a client, they know that a document that is not streamlined and created using straight-forward methods will cost more because editing time will be lengthened.

Similarly, a well constructed document conveys a firm's knowledge and skill to the world. This translates to less focus on the document construction and more focus on the document content. The end result, which benefits both your firm and the client, are reliable documents that are filed on time, without issue.

Another issue to consider is the sheer complexity of the numbering in documents where this may be implemented. Word is very unforgiving when it comes to best practices in numbering. Failure to follow the rules will result in unexpected results. These results could cause numbers to disappear or increment outside the expected pattern, collapsing indents, unreliable results using restart or continue and failed comparison sessions.

Another disadvantage comes from the labor involved in maintaining such documents. This will impact your internal staff, as well as clients and others with whom you may share your documents. It is almost guaranteed that any documents which return to your firm will have broken numbering, resulting in increased labor costs to repair the damage. Further, your end-users will be extremely frustrated.

### Multiple Numbered Lists

#### Question:

**How many numbered lists can you have in a document? And can the lists fall within the chosen Outline scheme? Will too many independently numbered lists lead to corruption?**

Numbered lists are designed to be used alone or in conjunction with outline numbered lists. It is acceptable practice to use them in conjunction with outline lists to fit special document needs. This can include, but is not limited to, areas such as Definitions and Recitals. It is also common to see numbered

lists in Schedules where there is a straight-forward, single numbered list in place.

The one caution on too many lists is simply confusion to the users that have to edit the document, internally and externally. When numbering is not edited using the correct method, it will be much harder to troubleshoot with multiple lists. Also, as noted above, the restarting of a numbered list will cause an additional List Template to be introduced into your document.

## Acknowledgements

Thank you to all of our clients for asking the hard questions and going the extra mile to create documents the right way. Making a change is not easy. Though the path is hard, the results will be worth the effort.

In particular, we would like to thank the staff at Peck Shaffer & Williams for their candid sharing through the often painful migration into Word. Their search for answers was the inspiration in writing this document.

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