How to Create a Custom Ribbon Bar in Microsoft Excel

Purpose and Objectives

This document details the steps to take to create a Custom Ribbon Bar in Microsoft Excel.



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1. Overview of the Office Fluent ribbon

https://docs.microsoft.com/en-us/office/vba/library-reference/concepts/overview-of-theoffice-fluent-ribbon

1.1 [MS-CUSTOMUI]: Custom UI XML Markup Specification

https://docs.microsoft.com/en-us/openspecs/office_standards/ms-customui/31f152d6-2a5d-4b50-a867-9dbc6d01aa43

2. Excel Open XML File Format

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Starting with the 2007 Microsoft Excel uses the XML-based file formats, such as .xlsx. Excel workbooks are really just a collection of XML files, all zipped together. To create a custom ribbon, we edit some of the XML files and also add to them.

https://support.microsoft.com/en-us/office/open-xml-formats-and-file-name-extensions-5200d93c-3449-4380-8e11-31ef14555b18

3. imageMSO (image Microsoft Office)

imageMSO's are built in icons used in the ribbon. They can be browsed using a suitable ImageMSO browser add-in.

3.1 imageMSO Browser Add-in

Excel Coding - imageMSO Browser

The imageMSO icon FileSave is currently highlighted.



4. Creating a Custom Ribbon Bar

4.1 Notepad ++

It is recommended to use Notepad++ to edit and create the required XML files.

Notepad++ is a free (as in "free speech" and also as in "free beer") source code editor and Notepad replacement that supports several languages. Running in the MS Windows environment, its use is governed by GNU General Public License.

https://notepad-plus-plus.org/

4.2 custom_ribbon.xlsm

custom_ribbon.xlsm is the accompanying workbook for which we will be creating the custom ribbon.

4.3 Change Extension of custom_ribbon.xlsm to .zip

Change the extension of custom_ribbon.xlsm to .zip and open the file.



You should see three folders...

🗁 -rels

C docProps

🗁 xl

And one XML Document File...

□ [Content_Types].xml

4.4 Edit the .rels (Relationships) XML File in Notepad++

The .rels file is found in folder \bigcirc _rels.

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The default file looks like the following...

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<Relationships
xmlns="http://schemas.openxmlformats.org/package/2006/relationships"><Relationship
Id="rId3"
Type="http://schemas.openxmlformats.org/officeDocument/2006/relationships/extended
-properties" Target="docProps/app.xml"/><Relationship Id="rId2"
Type="http://schemas.openxmlformats.org/package/2006/relationships/metadata/coreproperties" Target="docProps/core.xml"/><Relationship Id="rId1"
Type="http://schemas.openxmlformats.org/officeDocument/2006/relationships/metadata/coreproperties" Target="docProps/core.xml"/><Relationship Id="rId1"
Type="http://schemas.openxmlformats.org/officeDocument/2006/relationships/officeDocument" Target="xl/workbook.xml"/><Relationships>

The following line needs to be added to point to your custom ribbon .xml file in folder \bigcirc customUI i.e. customUI/custom ribbon.xml ...

<!-- Change the customUI/file_name.xml to suit your application -->

```
<Relationship Id="customUIXML"
Type="http://schemas.microsoft.com/office/2007/relationships/ui/extensibility"
Target="customUI/custom ribbon.xml"/>
```

So that the file looks like this...

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

```
<Relationships
xmlns="http://schemas.openxmlformats.org/package/2006/relationships">
<!-- Change the customUI/file_name.xml to suit your application -->
```

```
<Relationship Id="customUIXML"
Type="http://schemas.microsoft.com/office/2007/relationships/ui/extensibility"
Target="customUI/custom_ribbon.xml"/>
```

<Relationship Id="rId3" Type="http://schemas.openxmlformats.org/officeDocument/2006/relationships/extended -properties" Target="docProps/app.xml"/>

<Relationship Id="rId2" Type="http://schemas.openxmlformats.org/package/2006/relationships/metadata/coreproperties" Target="docProps/core.xml"/>

<Relationship Id="rId1" Type="http://schemas.openxmlformats.org/officeDocument/2006/relationships/officeDo cument" Target="xl/workbook.xml"/>

</Relationships>

Once the file has been edited replace the default .rels file with the edited .rels file.



4.5 Create the customUI Folder 🗁 and Sub Folders _rels and Images

Create the customUI folder \bigcirc and Sub Folders _rels and Images. This is where the XML file for the custom ribbon, the custom .rels (Relationships) file and any custom images will be stored.

Note: Create the folders on your C:/Drive and then copy to custom_ribbon.zip.

4.5.1 🗁 customUI



4.5.2 \bigcirc _rels and \bigcirc images

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4.6 Copy Required Custom Icons / Images to Folder 🗁 images

Copy required custom icons / images to folder \boxdot images, below we have copied images broom.png and information png.

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Note: icons / images should be 32 x 32 pixels.

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4.7 Create the Custom .rels (Relationships) XML File

Create the custom .rels (Relationship) file adding the image Relationships

<Relationship Id="broom" Type="http://schemas.openxmlformats.org/officeDocument/2006/relationships/image" Target="images/broom.png"/>

as follows...

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

<Relationships

xmlns="http://schemas.openxmlformats.org/package/2006/relationships">

<Relationship Id="broom" Type="http://schemas.openxmlformats.org/officeDocument/2006/relationships/image" Target="images/broom.png"/>

<Relationship Id="information" Type="http://schemas.openxmlformats.org/officeDocument/2006/relationships/image" Target="images/information.png"/>

</Relationships>

Save the file as

custom_ribbon.xml.rels

Note: It is important to end the file name with .xml.rels otherwise the file can't be located.

4.8 Create the Custom Ribbon XML File

Create the custom ribbon XML file as follows...

<customUI onLoad="CustomRibbonRibbonOnLoad" xmlns="http://schemas.microsoft.com/office/2006/01/customui">

<ribbon startFromScratch="false">

<tabs>

<tab id="custom_ribbon" label="Custom Ribbon">

<proup id="Group01" label="Custom Ribbon Group 1">

</group>

<group id="Group02" label="Custom Ribbon Group 2">

</group>

<group id="Group03" label="Custom Ribbon Group 3">

</group>

</tab>

</tabs>

</ribbon>

</customUI>

Note: The built in imageMso icons are defined as imageMso =, custom icons are defined as image =.

Save the file as custom_ribbon.xml i.e. the file name that was used in the .rels (Relationships) file.

<!-- Change the customUI/file_name.xml to suit your application -->

<Relationship Id="customUIXML"

Type="http://schemas.microsoft.com/office/2007/relationships/ui/extensibility"
Target="customUI/custom_ribbon.xml"/>

Copy the file to folder 🗁 customUI in custom_ribbon.zip.

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4.9 Rename custom_ribbon.zip to custom_ribbon.xlsm

Rename custom_ribbon.zip to custom_ribbon.xlsm.

4.10 Open custom_ribbon.xlsm

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Open custom_ribbon.xlsm

Note: You will get the following error, this is because the macro CustomRibbonRibbonOnLoad has not yet been created.



4.10.1 Custom Ribbon Bar

You should see the following Custom Ribbon bar...

File Home	Insert Page Layou	t Formulas	Data	Review	View	Developer	Help	Custom Ribbon
Custom Ribbon Form Custom Ribbon Group 1	Broom Custom Ribbon Group 2	Custom Ribbon Information Custom Rib	Unload Custom Ribl bon Group 3	oon				

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4.11 Add the VBA Macros / Code

Insert a Module modCustomRibbon and add the VBA macros / code for the following ribbon onload and onAction's...

onLoad="CustomRibbonRibbonOnLoad"

onAction="rbnRunCustomRibbonForm"

onAction="rbnRunCustomRibbonBroom"

onAction="rbnCustomRibbonInformation"

onAction="rbnUnloadCustomRibbon"

In declarations...

' Ribbon Bar. Public objRibbon As IRibbonUI

Add the following Subs.

```
Public Sub CustomRibbonRibbonOnLoad(objIRibbonUI As IRibbonUI)
Set objRibbon = objIRibbonUI
' Add any code that is required to be run once the custom ribbon has been loaded.
End Sub
Public Sub rbnCustomRibbonBroom(Optional objRibbonControl As IRibbonControl)
strMsg = "You clicked the broom icon in the custom ribbon bar"
lngStyle = vbOKOnly + vbInformation
strTitle = "Broom Icon Clicked"
Веер
intResponse = MsgBox(strMsg, lngStyle, strTitle)
End Sub
Public Sub rbnCustomRibbonInformation(Optional objRibbonControl As IRibbonControl)
strMsg = "Title : Custom Ribbon" & vbCrLf &
         "Version : Version 1.0 [28/02/2022]"
lngStyle = vbOKOnly + vbInformation
strTitle = "Add-In Information"
Веер
intResponse = MsgBox(strMsg, lngStyle, strTitle)
End Sub
Public Sub rbnRunCustomRibbonForm(Optional objRibbonControl As IRibbonControl)
frmVBACustomRibbon.Show
```

End Sub

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Public Sub rbnUnloadCustomRibbon(Optional objRibbonControl As IRibbonControl)
strMsg = "Do you want to unload Custom Ribbon"
lngStyle = vbYesNo + vbDefaultButton2 + vbQuestion
strTitle = "Unload Custom Ribbon ?"
Beep
intResponse = MsgBox(strMsg, lngStyle, strTitle)
If intResponse = vbYes Then
ThisWorkbook.Close SaveChanges:=False
End If
End Sub

5. Trouble Shooting

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If your Custom Ribbon Bar is not displayed it is usually due to a mistake in editing or creating the necessary XML files, or the XML is invalid. You can validate your XML files at.

https://www.xmlvalidation.com/

6. Acronyms and Abbreviations

GNU	General Public License
imageMSO	image Microsoft Office
XML	Extensible Markup Language

7. References



8. Revision Log

Date	Amendments	Updated by
19/04/2022	Initial release.	T.J.Rowe