# WordMat

Mikael Samsøe Sørensen

February 28, 2025

# Contents

This file has VBA-code attached. To see/edit the code press Alt+F11 (Mac: option+fn+F11)

(or Visual Basic in the developer tab. Settings | Customize toolbar | check developer)

To execute macros press Alt+F8 (Mac: option+fn+F8) or use the developer menu. *Back-upThisDocument* | ExportAllModules | ImportAllModules  GenerateKeyboardShortcutsWord-Mat |

*RunTestSequence | RunTestSequenceNonInteractive Exports all modules to folder 'VBA-modules'. VBA-modules is not overwritten, but changed to VBA-modules-Backupx*

*Backup makes a copy of this file in subfolder Backup. Any existing Backup-file gets a number attached so not to overwrite previous backups.*

*For ExportAllModules and ImportAllModules to work you need:*

- *Add reference 'Microsoft Visual Basic for Applications Extensibility 5.3' in VBA-Ide tools/references*

- *Settings | Trust center | Settings for macros | always trust VBA project object model*

*Do not add buttons inside the document, it will increase loadtime.*
*Do not upgrade this file to a newer Word-version. It will break menu compatibility.*
*Do not add buttons inside the document, it will increase loadtime.*

### *ImportAllModules*

*Imports all modules from subfolder 'VBA-modules' (Most recent backup from ExportAllModules). All existing modules in the document are deleted. Import cannot be run using a button.*

### *Word Crash*

*Sometimes this document will crash when opened. Disable all macros in security center. Open the document. Open VBE and compile (Maybe make some code changes first). Save and close. Reenable macros and open the document again will often resolve the problem. If not try other code changes. RibbonCommanders VBA Code cleaner will also solve the problem.*

### *Keyboard Shortcuts*

*Problems often occur with keyboard shortcuts. They can be in normal.dotm instead of WordMat.dotm. Also Keyboard shortcuts are not compatible with Mac because Mac uses option button instead of Alt.*

*Before a new release do this:*

1. *Run CheckKeyboardShortcuts on Windows to check if KeyBoard shortcuts are ok.*

2. *On Mac run GenerateKeyboardShortcuts and then CheckKeyboardShortcuts*

*Special Character problem when editing on Mac and Windows*

*The VBE-Codefiles on Mac and Windows are not compatible. ASCII-characters(0-127) is not a problem. The problem comes from the extended ASCII-table (128-255), since Windows uses ANSI codepages, while Mac uses xx(Unicode?).*

*ASCII-characters: Extended Characters that are compatible: £ (163), ©,*

$\mu$

$Problems both ways:$

$Problems Windows to Mac:,.$

$Problems Mac to Windows: \S There are few problems from Windows to Mac(,). Just don'tuse those characters$

$edit back to Windows ANSI, run the macro: \textbf{'ReplaceToANSI'} The character problem only affects code files$

$This must berun every time a Mac-edit has been done, or else the characters will convert to random new characters$

$sequences. You can then open the document on Windows and Mac independently. However the characters will sh$

$sequences. Before building the installer make sure to run \textbf{Replace to Extended ASCII}. Preferably independer$

$Also if you introduce more non-ascii characters, make sure to run \textbf{ReplaceToASCIIseq} again. Run'Generat$

*How to work with Git-hub and VBA-modules*

*The idea is to always end by exporting all VBA-modules to the folder 'VBA-modules'.*

*Whenever you start to code, start by importing. The advantage of this method is that Git can then track changes in the exported modules, and multiple people can work on the VBA-code. It cannot do that within a word-file. Sometimes Wordmat.dotm fails to open for unknown reasons. In that case a previous version of Wordmat.dotm can be opened and the most recent modules imported, to restore the document.*

*Don't use Export/import modules on Mac. It's not compatible with Windows export/import.*

*Functions in VBAmodul:*

- *ImportAllModules*
  *Imports all forms, classes and modules from subfolder 'VBA-modules'. Removes all existing modules before import, including VBAmodul*

- *ExportAllModules*
  *Exports all forms, classes and modules from current project to subfolder 'VBA-modules'*
  *(including VBAmodul) All current content in folder is deleted before export. A logfile with date is added to the folder.*

- *RemoveAllModules*
  *Removes all forms, classes and modules from current project, except VBAmodul.bas.*

*The work process is*

1. *You have a WordMat.dotm file you are working on in folder Word-Mat/Windows*

2. *When done coding run 'ExportAllModules'*

3. *Push to github origin*

4. *When resuming coding start by pulling from github*

5. *Open your WordMat.dotm file and start by running 'ImportAllModules'*

6. *Run 'GenerateKeyBoardShortcuts' as these are lost when importing*

*Before Building installer*

1. *Run 'ReplacetoExtendedASCII' (if using strategy 2)*

2. *Run 'GenerateKeyboardShortcutsWordMat'*

1 *2 must be run separately on Windows and Mac*
*. ??$^{123}$??????????????????????????????????????????????????????????????????????????????????????????????????????*
*????????????????????* $\frac{113}{214}$*????????????????? ? ?????? ? ? ???? .*

$$K?$$

*"K" VBA.ChrW(8345)*

# 1 Test section

————————————————*Quick test*———————————————

| $x$ | $y$ |
|-----|-----|
| *1* | *2* |
| *2* | *5, 2* |
| *3* | *6* |

*Skrivligningenher.*

*Sletdefinitioner :*

————————————————*Work in progress*———————————————

–

*Sletdefinitioner :*

*Skal med i Test; Den virker nu, men ikke tidligere. Denne Differential-ligning skal løses med bibetingelsen* $N(30) = 103$:

$$N^{'} = 0,00526 \cdot N \cdot (209 - N)$$

*Med GeoGebra kan man ikke løse denne ligning.*

$$Definer: \vec{a} = \begin{pmatrix} 1 \\ 2 \end{pmatrix}, \vec{b} = \begin{pmatrix} 7 \\ -2 \end{pmatrix}$$

$$\cos(v) = \frac{dot\left(\vec{a}; \vec{b}\right)}{|\vec{a}| \cdot |\vec{b}|}$$

———————————- *Not in testmodule* ———————————

$$\left| \begin{pmatrix} \frac{100}{61} \\ \frac{791}{61} \end{pmatrix} - \begin{pmatrix} c \\ \frac{43}{3} - \left(\frac{5}{6}\right)c \end{pmatrix} \right|$$

$$Hovedstol = Ydelse \cdot 1 - (1+r)^{-n}$$

$\bar{r}$

**Løs ligningssystem. Skal have to løsninger.**

$$(x - 38)^2 + (y - 18)^2 = 17,5^2$$
$$(x - 27)^2 + (y - 33)^2 = 9,4^2$$

**⇕ Ligningssystemet løses for x,y vha. WordMat's 'Løs Ligninger' funktion,**

$$(x = 21,9832 \land y = 25,05068) \lor (x = 36,08966 \land y = 35,39542)$$

$$Sletdefinitioner:$$

$$8 = \frac{\log(2)}{\log(a)}$$

**⇕ Ligningen løses for a vha. WordMat.**

$$a = 2^{\frac{1}{8}}$$

*fullratsimp(ConvertLog(ConvertToDegr(ev(*
**denne giver ikke samme resultat på Win og Mac. Det er funktionen simplifynum, der ændrer udtrykket på Windows.**

$$\int_{1}^{10} \sqrt{x^{-2} + 1}\, dx$$

————————————-*Run testmodule here*—————————————

**Alt+F8: RunTestSequence**

**Hvis denne løses med alt + L, så siger den ingen løsning. Hvis den løses med 'numeriske løsninger', så kommer den rigtige løsning x=144,87. Problemet skal undersøges i solvereal, der ikke skal returnere [], men gå til nsolve.**

$$Definer : f(x) = \begin{matrix} 100 \cdot 1,03^{x}, 0 \le x \le 72 \\ 33743 \cdot 0,95^{x}, 72 < x \le 150 \end{matrix}$$

*Sletdefinitioner* :

$$2 + x =$$

$$a = 12 + 34$$

$$Skrivligningenher. \tag{1}$$