Macro Editor

Editing Equilib and Phase Diagram Macros

The **Macro Editor**

The **Macro Editor** is a text editor with custom syntax highlighting, improving the readability and interpretation of macros.

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Introduction

The following two slides show you how to access the **Macro Editor**.

Macros can be written to perform *Equilib* or *Phase Diagram* calculations and operations.

Opening the **Macro Editor**

From **Equilib** or **Phase Diagram**, in the **Reactants** window,

Click on *File > Macro processing > Edit macro...* (to edit an existing macro) or

Click on *File > Macro processing > New macro...* (to create a new macro)
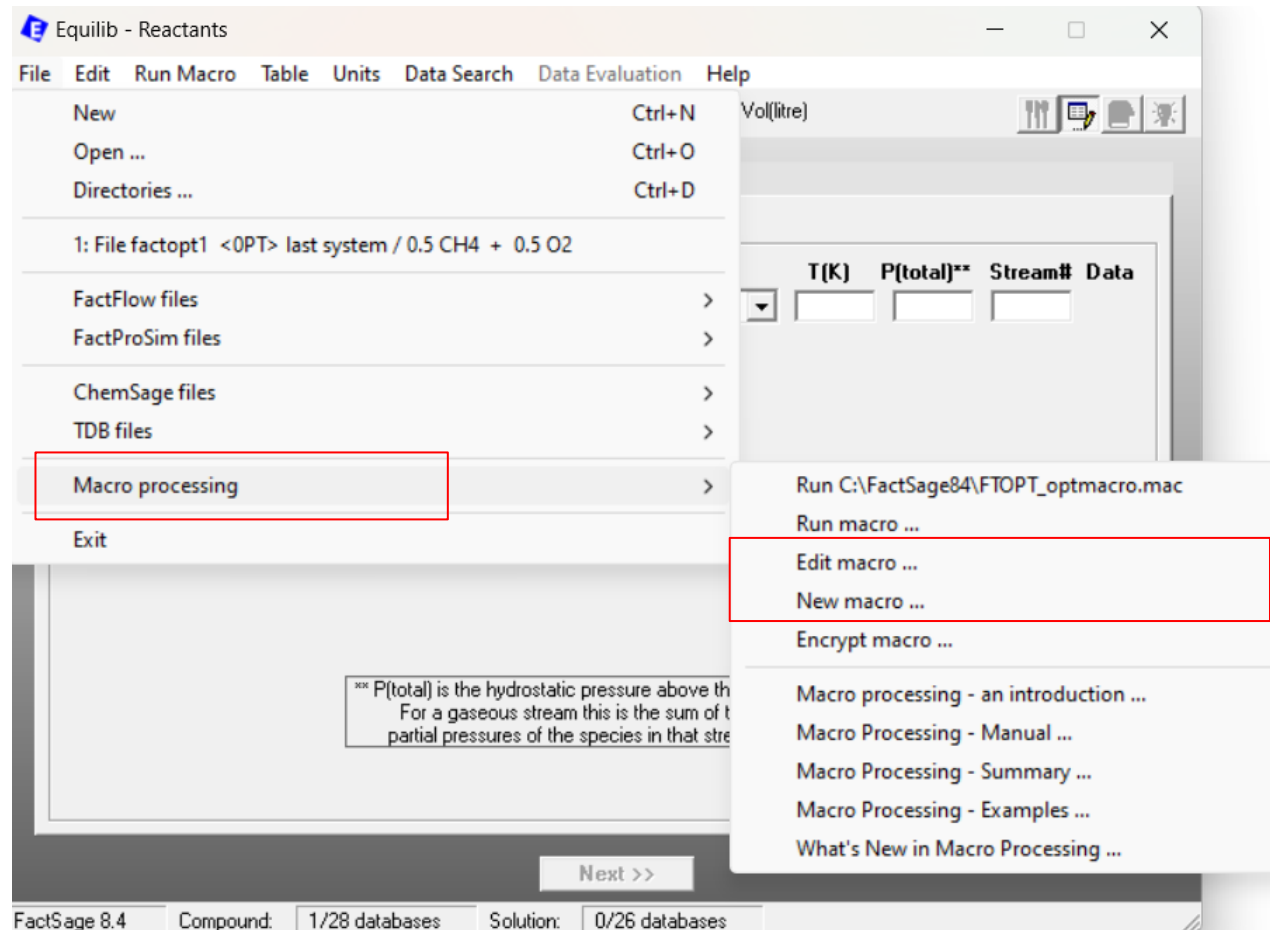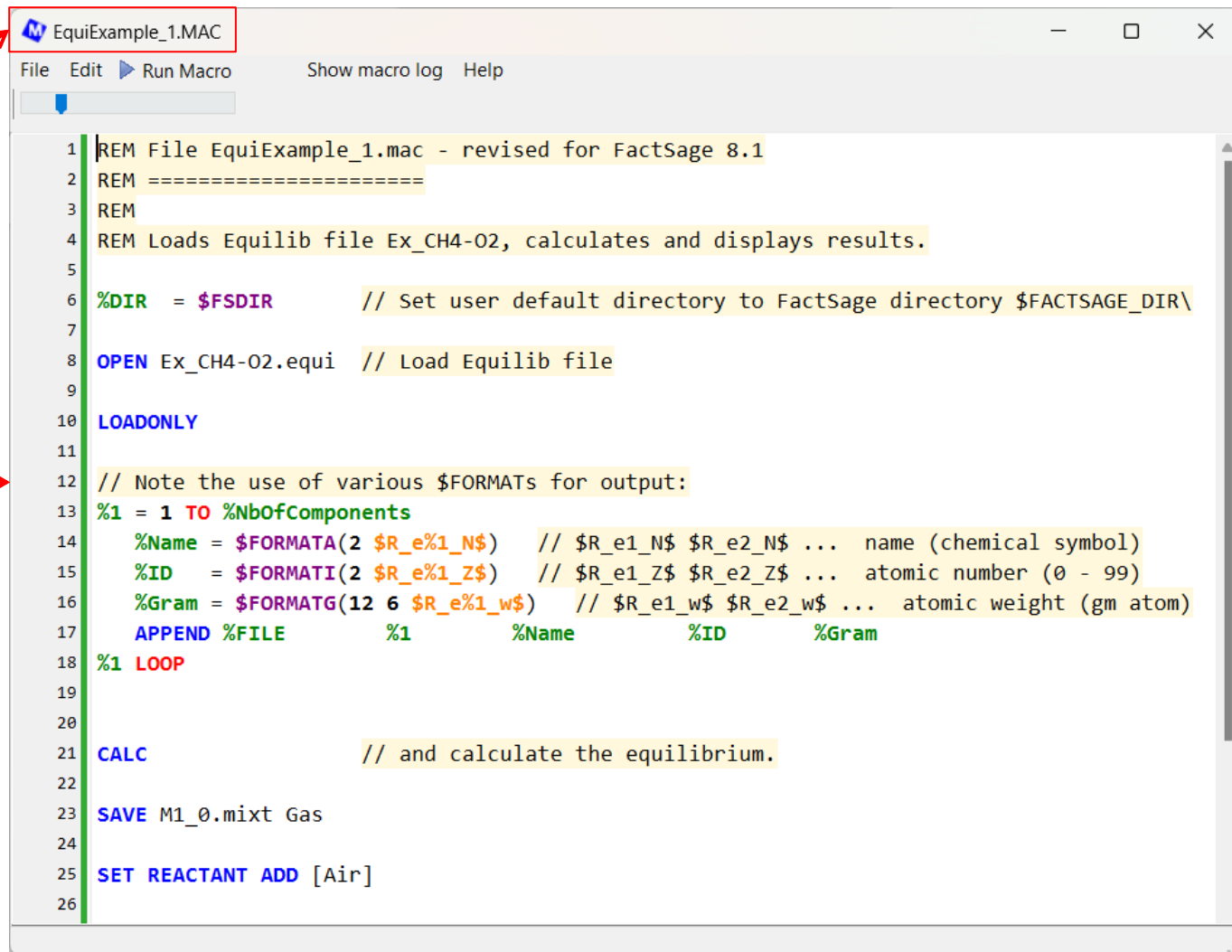
Editing a macro

Let us edit the file *EquiExample_1.mac* with the **Macro Editor**.

The active file name is indicated in the title bar

The macro is presented with syntax highlighting

```
EquiExample_1.MAC                                                      —    □    ×

File   Edit  ▶ Run Macro          Show macro log   Help

 1  REM File EquiExample_1.mac - revised for FactSage 8.1
 2  REM ======================
 3  REM
 4  REM Loads Equilib file Ex_CH4-O2, calculates and displays results.
 5
 6  %DIR  = $FSDIR        // Set user default directory to FactSage directory $FACTSAGE_DIR\
 7
 8  OPEN Ex_CH4-O2.equi  // Load Equilib file
 9
10  LOADONLY
11
12  // Note the use of various $FORMATs for output:
13  %1 = 1 TO %NbOfComponents
14     %Name = $FORMATA(2 $R_e%1_N$)   // $R_e1_N$ $R_e2_N$ ...  name (chemical symbol)
15     %ID   = $FORMATI(2 $R_e%1_Z$)   // $R_e1_Z$ $R_e2_Z$ ...  atomic number (0 - 99)
16     %Gram = $FORMATG(12 6 $R_e%1_w$)   // $R_e1_w$ $R_e2_w$ ...  atomic weight (gm atom)
17     APPEND %FILE        %1         %Name           %ID         %Gram
18  %1 LOOP
19
20
21  CALC                 // and calculate the equilibrium.
22
23  SAVE M1_0.mixt Gas
24
25  SET REACTANT ADD [Air]
26
```
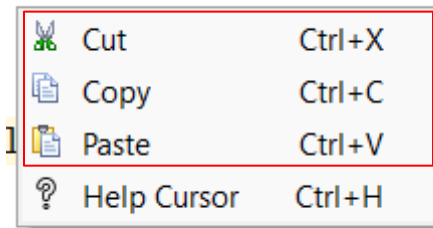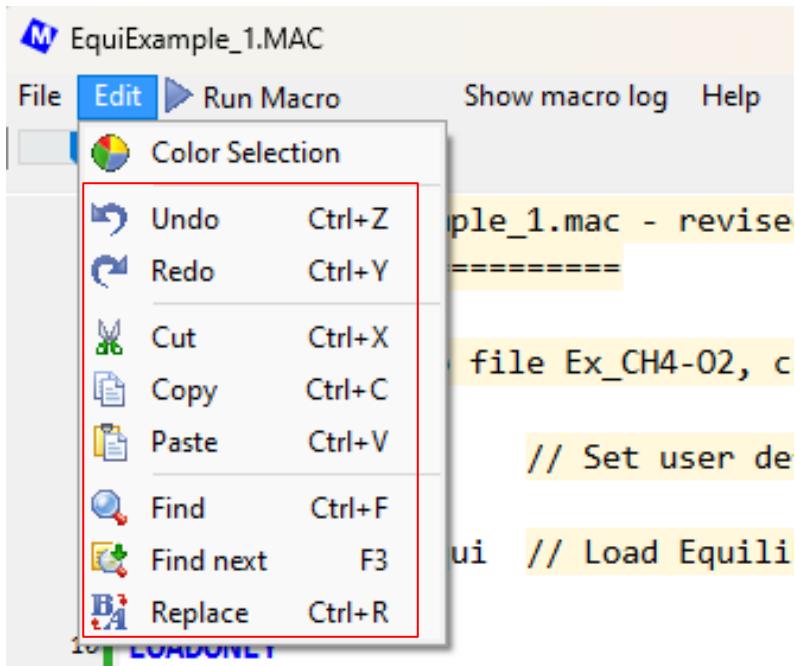
File options

Usual functionalities can be found in the *File* menu item, such as *New*, *Open*, *Save* and a list of recent file.
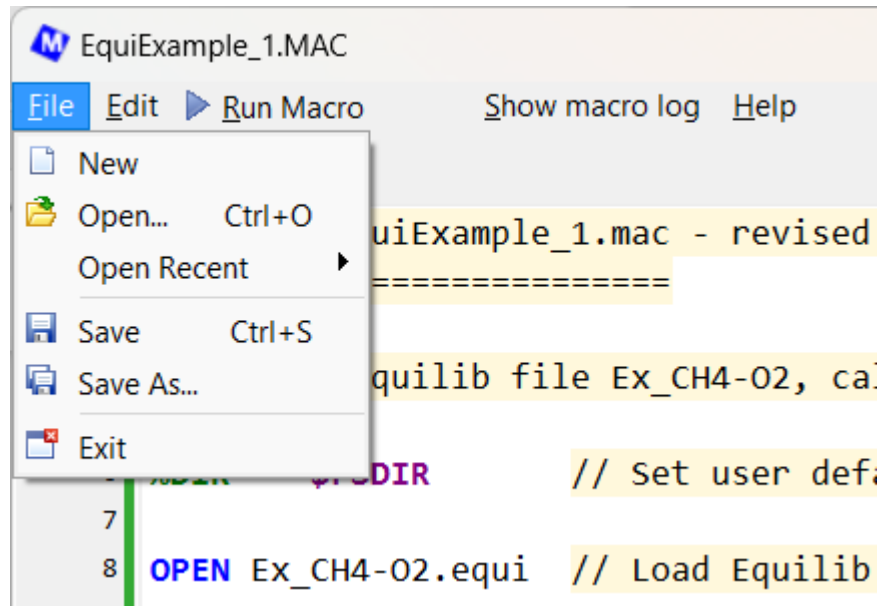
Editing options

Usual functionalities can be found in the *Edit* menu item, such as *undo*, *redo*, *cut*, *copy* and *paste*, and *search* options. Some of these functions can also be found in a popup menu when right clicking in the editor.

Right click in the editor

Zooming

The zoom slider can be used to magnify the text :

Slide to the right to zoom in and to the left to zoom out

Syntax highlight

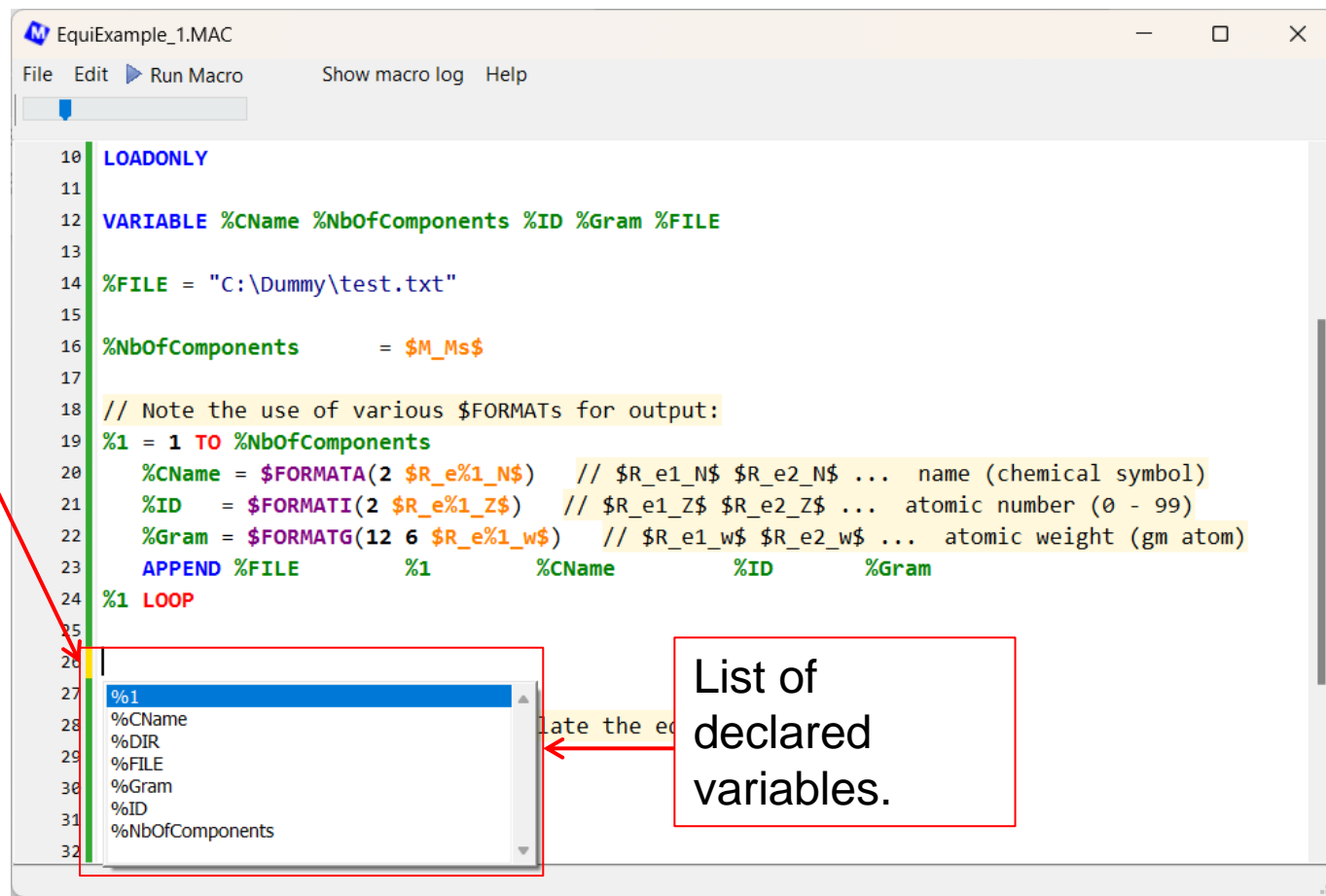The syntax highlight colors can be easily changed by clicking, in the menu bar, on *Edit > Color Selection*.

Custom colors can be selected in the Colors Selection Window. Click on Save when finished.

To revert to Default colors, click on the Default button.

Shortcut to the list of variables

When typing in the **Macro Editor**, use the shortcut **Ctrl + Space** to get a list of declared variable. Click on one item in the list to insert it in the text.

Note the different color in the margin when lines are modified, allowing a quick glance at latest modifications. They turn green when the file is saved.

List of declared variables.

Help cursor

To obtain help on functions and commands, click on *Help > Help cursor* from the menu bar, or from the popup menu when right-clicking in the main window. To deactivate the help cursor, press the **Esc** key or click again on the *Help cursor* menu item.
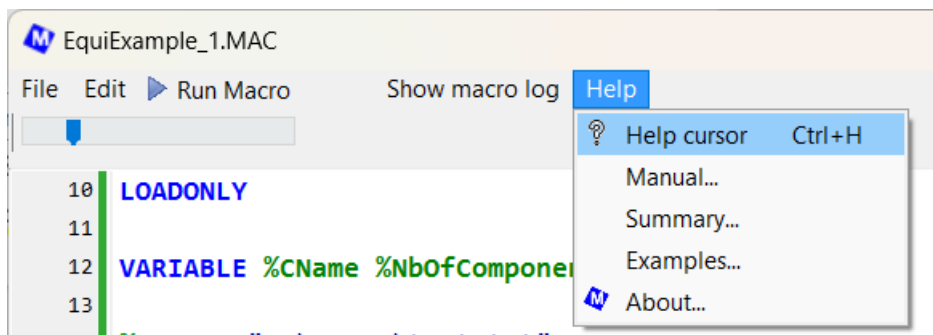
After activating the Help cursor, the mouse cursor turns to ⬦? . Moving the mouse over functions and commands provides more information.
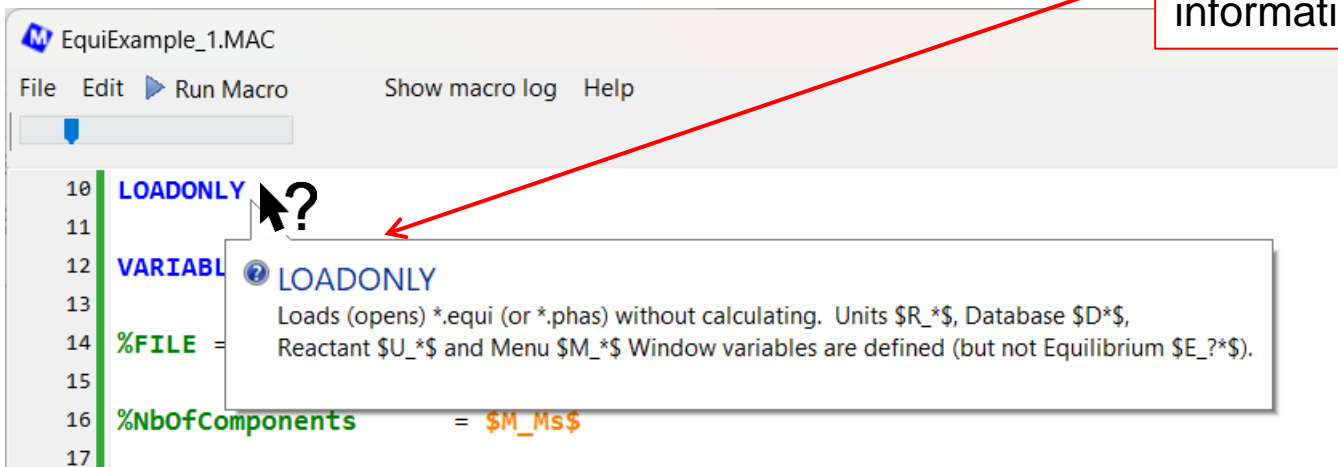
Running a macro

One can run the macro directly from the **Macro Editor**, by clicking on *Run Macro* in the menu bar. Note: on confirming to run the macro, the file is saved and the full path is displayed in the status bar, for example : File C:\FactSage83\MACROS\EquiExample_1.MAC saved.
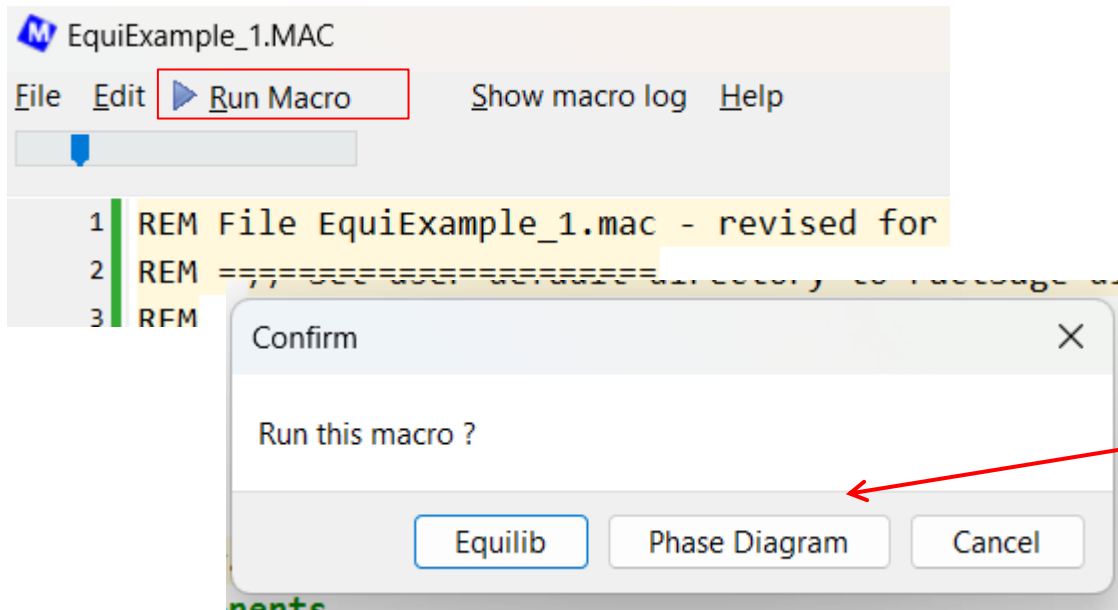
Here one can choose to run the macro in **Equilib** or **Phase Diagram**.

Viewing the macro log

After running a macro, the log file can be displayed by clicking on *Show macro log* in the menu bar:

Double click on a line in the left pane to find the corresponding line in the log on the right pane.