# What's New in Maple 2016



# The Workbook File Format

#### Introduction

The Workbook <u>file format</u> lets you collect:

- Maple worksheets, library archives and language files,
- Data (such as images or spreadsheets), and
- Other items

into a single file. This helps you organize your Maple-based projects.

When you organize a Maple project with multiple files into a single Workbook, you only have to keep track of one file, rather than several. This eliminates the risk of losing file dependencies when moving Maple projects between locations.

Workbooks can be opened inside Maple, and all of the data and attachments can be accessed and manipulated.



## **Workbook Explorer**

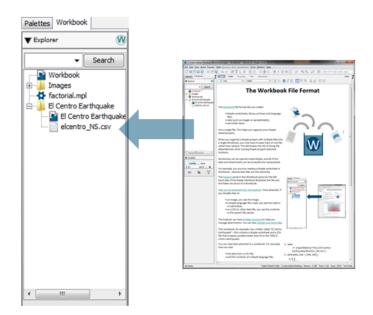
The <u>Explorer</u> palette in the Workbook pane (on the left-hand side of the Maple interface) illustrates the file and the folder structure of a Workbook.

Files can be attached from the Explorer. Once

attached, if you double-click on:

- An image: You will see the image,
- A Maple language file (.mpl): You will see the code in a Code Editor,
- Or a CSV or other data file: You will see the contents in the system file viewer.

The Explorer can have a <u>folder structure</u> to help you manage attachments. You can also <u>reorder and move files</u>.



### **Reading Attachments**

You can read data attached to a workbook. For example, here we read:

- The data from a CSV file,
- And the contents of a Maple language file.

Note that the CSV file is shared with another Maple worksheet in this workbook ("El Centro Earthquake.mw").

The file path to an attachment is known as a <u>Workbook URI</u>. Right-click on an attachment in the Explorer and select "Copy Path" to copy its URI into the clipboard (or one of several other file operations).

> data
:= ImportMatr

 $:= ImportMatrix("this:///El Centro Earthquake/elcentro_NS.csv"):$ 

> plot (data, size = [600, 200], color = ColorTools:-

$$Color\left("RGB", \left[0, \frac{79}{255}, \frac{121}{255}\right]\right), thickness$$

0.1 - 0.1 - 0.1 - 0.2 - 0.1 - 0.2 - 0.1 - 0.2 - 0.1 - 0.2 - 0.1 - 0.2 - 0.1 - 0.2 - 0.2 - 0.2 - 0.3 - 0.2 - 0.3 - 0.2 - 0.3 - 0.2 - 0.3 -

- > read "this:///factorial.mpl"
- > f(4)

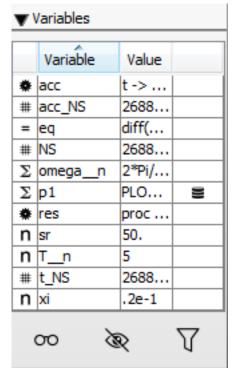
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#### **Variables Palette**

The Variables palette in the Workbook pane lists the assigned names in the current worksheet, together with the type and value.

To see the value of a variable, double-click on the appropriate item.

Any item in the Variables palette can be shared between worksheets in workbook. To share a variable, simply right-click on the variable and select Save.



## **Saved Variables**

Items saved in the Variables palette are automatically available for use after restarts and reloads - they don't need to be redefined.

The "El Centro Earthquake Analysis.mw" worksheet has a saved variable assigned to a plot.

To view the plot, just execute p1.

#### > p1

