

Lab 2. Coding conventions and source code documentation

Introduction

The aim of this lab session is to put into practice the programming style guidelines presented in the lectures. To this end, you are asked to program a simple piece of code to sort the elements of an array and explore MATLAB's automatic documentation capabilities.

Objectives

By the end of the session, the student should be able to:

- Write and comment source code following a good programming style.
- Use MATLAB's most common automatic documentation features.

1. Sorting algorithm

1.1. Script

Develop a MATLAB script to sort the elements of a numeric array without using the `sort` built-in function. Implement at least two different algorithms following the coding conventions and the commenting guidelines presented in the lectures. Do not forget to use the double percentage sign `%%` to divide the script in sections. You may want to check http://en.wikipedia.org/wiki/Sorting_algorithm for inspiration.

When you are done, run the `publish` command with different options to see how you can easily transform source code into a formatted report. You can also try `grabcode`, which performs the opposite operation.

1.2. Functions

Now convert the script you have developed into functions. Do not forget to modify the comments as required. Then run the `help`, `doc`, and `publish` commands to see how the information included in your comments is displayed.

2. M2HTML (Optional)

If you have some spare time you might want to try M2HTML (<http://www.artefact.tk/software/matlab/m2html/>), which can parse MATLAB code to generate HTML documentation (including dependencies) for a complete project.