

Course N°5 The For-end Loop in MATLAB



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📣 MATLAB®



1.Constructing a script (program) in MATLAB

For simple problems, entering commands at the MATLAB prompt in the command window is simple and efficient. However, when the number of commands increases, or you want to change the value of one or more variables, reevaluate a number of commands, typing at the MATLAB becomes tedious. You will find that for most uses of MATLAB.

This section covers the following points concerning script/editor; how to :

- \checkmark Open or create a script window
- ✓ Write a name of script in MATLAB
- ✓ Select a folder to save the script in MATLAB
- \checkmark Write commands and functions in script
- \checkmark Run script and display the result

Note.

- When script or editor is executed, all its variables are displayed in workspace window (see fig.9).
- It is useful to use functions such as (clc, clear all, format,...) in script file to improve the results (see fig.3).
- ✤ You can run the script from the command window by typing the script name (without the .m extension) after the MATLAB prompt (>>). For example, if the program has been saved as gr6.m, then type gr6 after MATLAB prompt (>>)(see fig.12)
- If you try to run script and your script is not in the current folder whose path is listed in the current folder toolbar, a dialog box will appear giving you the option of changing the folder listed in the current folder toolbar to the folder containing your script (see fig.10)
- Do not use a variable name that is same as a file name.
- It's important to comment extensively on a program. This helps you understand the program when you need to use it again after a long period of time. In MATLAB, a comment line begins with "%"(see fig.11).





Fig 1. Summarizes the steps for writing a script in MATLAB





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2.Loops

The loops command provides the means to repeat a series of statements with just a few lines of code. MATLAB has two ways to control number of times loop executes commands.



2.1.The For-end Loop

A for loop is a repetition control structure that allows you to efficiently write a loop that needs to execute a specific number of times. The syntax of for statement in MATLAB is:

<i>for</i> variable = start number : step : last number	r
statements/instructions	
Lend	



Note.

- There is no semicolon ";" or "." after the *for* and *end* statements.
- > Process repeats itself until k>t.
- > The loop index variable can have any variable name (i, j, k).
- > The name of the variable should not be the same as the result in the statements or the instructions.

3.List of References

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