

EGR111

MATLAB Script Files vs Functions

The table below lists the differences between MATLAB script files and functions.

| Script Files | Functions |
|--|---|
| Usually begin with the “clear” command to clear the workspace variables. Do NOT use the “clear” command in MATLAB Grader script files. | Must start with the keyword “function”. Never contains the “clear” command. |
| Uses the workspace variables, which remain after the script is finished. | Variables inside the function are private to the function and are deleted when the function is finished. The variables inside a function are not available in the workspace or in other functions. The variables inside the function can have the same name as variables in the workspace or in other functions, but changing the value of the variables inside the function has no effect on the variables elsewhere with the same name. |
| Inputs and outputs are not formally defined. | The inputs and outputs of a function are defined in the “function” command on the first line of the function. All the output variables must be assigned a value inside the function. |
| A script file can be executed by clicking on the Run button or by typing the filename without the “.m” into the Command Window. Both of these methods are equivalent to typing or pasting the contents of the script file into the Command Window. | To execute a function, it must be called by a command that specifies the inputs. A function cannot be executed by clicking on the Run button because that method does not specify the inputs to the function. |