## SCRIPT FILES

## Starting with MATLAB

So far all the commands were typed in the Command Window and were executed when the Enter key was pressed. Although every MATLAB command can be executed in this way, using the Command Window to execute a series of commands-especially if they are related to each other (a program)-is not convenient and may be difficult or even impossible. The commands in the Command Window cannot be saved and executed again. In addition, the Command Window is not interactive. This means that every time the Enter key is pressed only the last command is executed, and everything executed before is unchanged. If a change or a correction is needed in a command that was previously executed and the result of this command is used in commands that follow, all the commands have to be entered and executed again. A different (better) way of executing commands with MA TLAB is first to create a file with a list of commands (program), save it, and then run (execute) the file. When the file runs, the commands it contains are executed in the order that they are listed. If needed, the commands in the file can be corrected or changed and the file can be saved and run again. Files that are used for this purpose are called script files.

## Notes About Script Files

• A script file is a sequence of MATLAB commands, also called a program.

• When a script file runs (is executed), MATLAB executes the commands in the order they are written, just as if they were typed in the Command Window.

When a script file has a command that generates an output (e.g., assignment of a value to a variable without a semicolon at the end), the output is displayed in the Command Window.

• Using a script file is convenient because it can be edited (corrected or otherwise changed) and executed many times.

• Script files can be typed and edited in any text editor and then pasted into the MATLAB editor.

• Script files are also called M-files because the extension .m is used when they are saved.

Creating and Saving a Script File In MATLAB script files are created and edited in the Editor/Debugger Window. This window is opened from the Command Window by clicking on the New Script icon in the Toolstrip, or by clicking New in the Toolstrip and then selecting Script from the menu that open. An open Editor/Debugger Window is shown in Figure below.



The Editor/Debugger Window has a Toolstrip at the top and three tabs EDITOR, PUBLISH, and VIEW above it. Clicking on the tabs changes the icons in the Toolstrip. Commonly, MATLAB is used with the HOME tab selected. The associated icons are used for executing various commands, as explained later in the Chapter. Once the window is open, the commands of the script file are typed line by line. MATLAB automatically numbers a new line every time the Enter key is pressed. The commands can also be typed in any text editor or word processor program and then copied and pasted in the Editor/Debugger Window. An example of a short program typed in the Editor/Debugger Window is shown in Figure below The first few lines in a script file are typically comments (which are not executed, since the first character in the line is %) that describe the program written in the script file.



Running (Executing) a Script File A script file can be executed either directly from the Editor Window by clicking on the Run icon (see Figure above) or by typing the file name in the Command Window and then pressing the Enter key. For a file to be executed, MATLAB needs to know where the file is saved. The file will be executed if the folder where the file is saved is the current folder of MATLAB or if the folder is listed in the search path, as explained next.



Current Folder The current folder is shown in the "Current Folder" field in the desktop toolbar of the Command Window, as shown in Figure above. If an attempt is made to execute a script file by clicking on the Run icon (in the Editor Window) when the current folder is not the folder where the script file is saved, then the prompt shown in Figure below. The user can then change the current folder to the folder where the script file is saved, or add it to the search path. Once two or more different current folders are used in a session, it is possible to switch from one to another in the Current Folder field in the Command Window. The current folder can also be changed in the Current Folder Window, shown in Figure below, which can be opened from the Desktop menu. The Current Folder can be changed by choosing the drive and folder where the file is saved.

Ų	File C\k 5th Edition\Chapter 1\Chap1_Examp_1.m is not found in the current folder or on the MATLAB path.
	To run this file, you can either change the MATLAB current folder or add folder to the MATLAB path.

