Write, Run, and Publish Script M-Files

1 Create m-files

1. Open Matlab. Notice the sections of the window: editor, command line, history, data window, etc.

2. Create a new folder and change the MATLAB current directory to the folder you created.

3. There are three ways to open a new m-file:

   (1) Find and click this icon 
   (2) Go to File − New − Blank M-File
   (3) Type `edit filename.m` in the Command Window

2 Write script m-files

1. Now create another blank M-file to read and plot the function you just wrote:

   - In this file, you need to
     (a) generate a vector x, e.g. `x = linspace(-1, 1, 200);`
     (b) generate a number y, e.g. `y = 5;`
     (c) generate a vector *out* to be a function of x and y, e.g. `out = x.*x + y;`
     (d) make a plot of *out* vs. x, e.g. `plot(x, out)`
   - You can also add documentation for your plot using `xlabel`, `ylabel`, `title`, or `legend`.

2. Save this file. This time, name your M-file something like "myPlot.m" or "myScript.m", whatever you want, but NOT "plot.m" since "plot" is already a MATLAB internal function.

3 Run script m-files

- There are three ways to test your script M-file:
  (1) Type `myPlot` or `myScript` (whatever your filename is) at the command line
  (2) Go to Cell − Evaluate Current Cell
  (3) Find and click this icon  on the Toolbar in the Editor window
- Do you see a figure window popping up?

4 Publish script m-files

MATLAB Product Documentation: MATLAB software enables you to publish your MATLAB code quickly, so you can describe and share your code with others, even if they do not have MATLAB software. You can publish in various formats, including HTML, XML, and LaTeX. *(Typically, the default output file format is HTML)*

There are two ways to publish your script M-file:

- Go to File − Publish *filename*.m
- Find and click this icon  on the Toolbar in the Editor window

Both the MATLAB code in your script M-file and the results of running the code (e.g., output to the Command Window, figures created or modified by the code) will be included in the published file. Therefore, this is convenient for handing in your lab assignments!