
Script M-Files

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What is a Script M-File?

Before we proceed further consider that when you're writing a Matlab project which involves typing a bunch of commands you probably don't want to type them over and over. In other words it would be helpful to create a "project" which contained all the commands you wished to execute. This would also be convenient for handing in homework assignments (hint hint!) Script M-files allow us to do this. Simpler than the function M-files we'll look at later, script M-files are just text files with a .m extension which contain Matlab code that you want to run.

A Simple Script M-File

Suppose you want to write a series of commands to demonstrate your fantastic Matlab knowledge. You wish to put those in a file and then turn it in to your teacher. Simple! First create your first script. The following can be done either from within Matlab (which will open its own editor for you) or with any text editor you prefer.

```
edit firstscript.m
```

In this file type the following. This is simply a giant collection of a bunch of commands you've already learned. Nothing will happen as you type these into the file, they'll just sit there.

```
3+5
sqrt(10)
gcd(120,90)
date
format long
1/7
format short
1/7
x=3.1
x^2
syms t
factor (t^3-5*t^2-6*t)
syms f(t)
f(t) = t^3+2*t^2
f(3)
f(t+2)
solve(f(t)==3*t)
simplify(f(t)*f(t))
expand(f(t)*f(t))
pretty(f(t)^3)
```

Save this file. Now the file is available and as long as it is available you can run those lines of code simply by typing the following into Matlab.

```
firstscript
```

```
ans =
```

```
8
```

```
ans =
```

```
3.1623
```

```
ans =
```

```
30
```

```
ans =
```

```
13-Jul-2014
```

```
ans =
```

```
0.142857142857143
```

```
ans =
```

```
0.1429
```

```
x =
```

```
3.1000
```

```
ans =
```

```
9.6100
```

```
ans =
```

```
t*(t + 1)*(t - 6)
```

```
f(t) =
```

```
t^3 + 2*t^2
```

```
ans =
```

```
45
```

```
ans =
```

```
2*(t + 2)^2 + (t + 2)^3
```

```
ans =
```

```
0
```

```
1
```

```
-3
```

```
ans =
```

```
t^4*(t + 2)^2
```

```
ans =
```

```
t^6 + 4*t^5 + 4*t^4
```

```
      3      2 3  
(t + 2 t )
```

Note: When you run your script do not add the .m extension! If you do the script will run but then you'll get a peculiar error.

A Note about Script M-Files

Just for the record, script M-files do not take parameters and do not return values. They simply contain lists of commands which are executed sequentially. For this reason they're perfect for doing a homework assignment which will be handed in. Moreover as we'll see in a subsequent lesson, M-files can be published to create html code which contain the commands and all the output (including graphs!) as well as comments. That's coming up shortly!

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