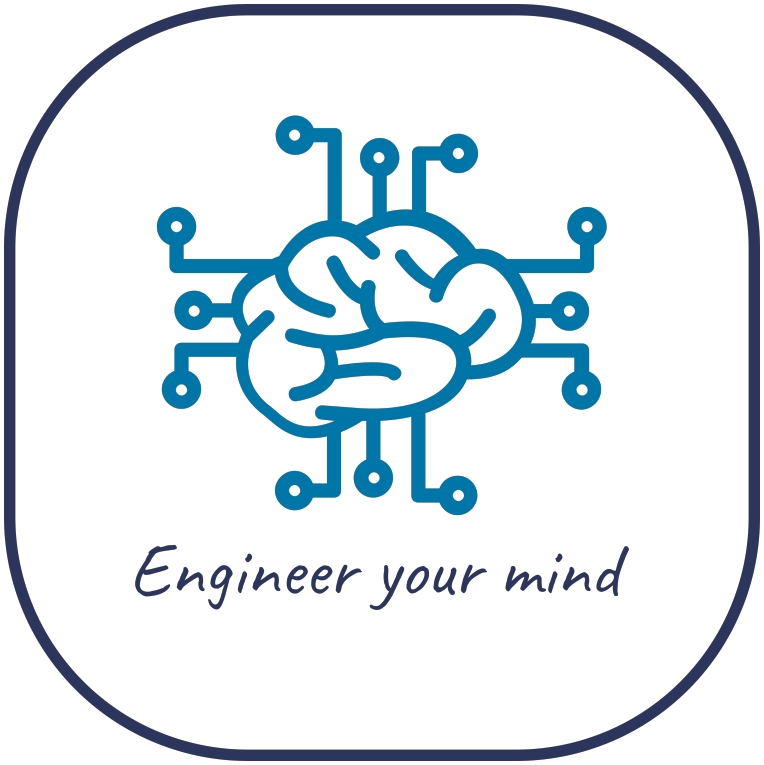

The MATLAB Mega Course

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August 13, 2019

Content

1 Introduction

Thanks to the great feedback of many people I decided to start a MATLAB series which will not only help students in classes from my university but hopefully all students all over the world to get started with their MATLAB journey.

Documents like these are here to solidify your knowledge in MATLAB but programming as well. It is my duty to help as many people as possible and reach 1 million people worldwide! The goal for this series is to take you from **Zero** to **Hero** to make you feel confident enough to perform challenging programming tasks. If you have any questions regarding the course, want to make suggestions or simply give me feedback on how to improve the series in terms of video quality or content, please drop me a message on **Instagram** where I am most active on.

The more people will follow and ask the more I am willing to do live sessions from time to time as I am a firm believer that interaction with the community will strengthen the relationship and makes videos more enjoyable to watch once you know who is behind the project. So do not hesitate to contact me and let's get in touch! :)

You can find the whole structure of the course on my website **TO-DO**

Start engineering your mind today!

2 Introduction Video - First Steps

2.1 Starting and Ending MATLAB

You can start MATLAB by clicking on the symbol on your computer or by searching for the program and using the **RETURN** key.

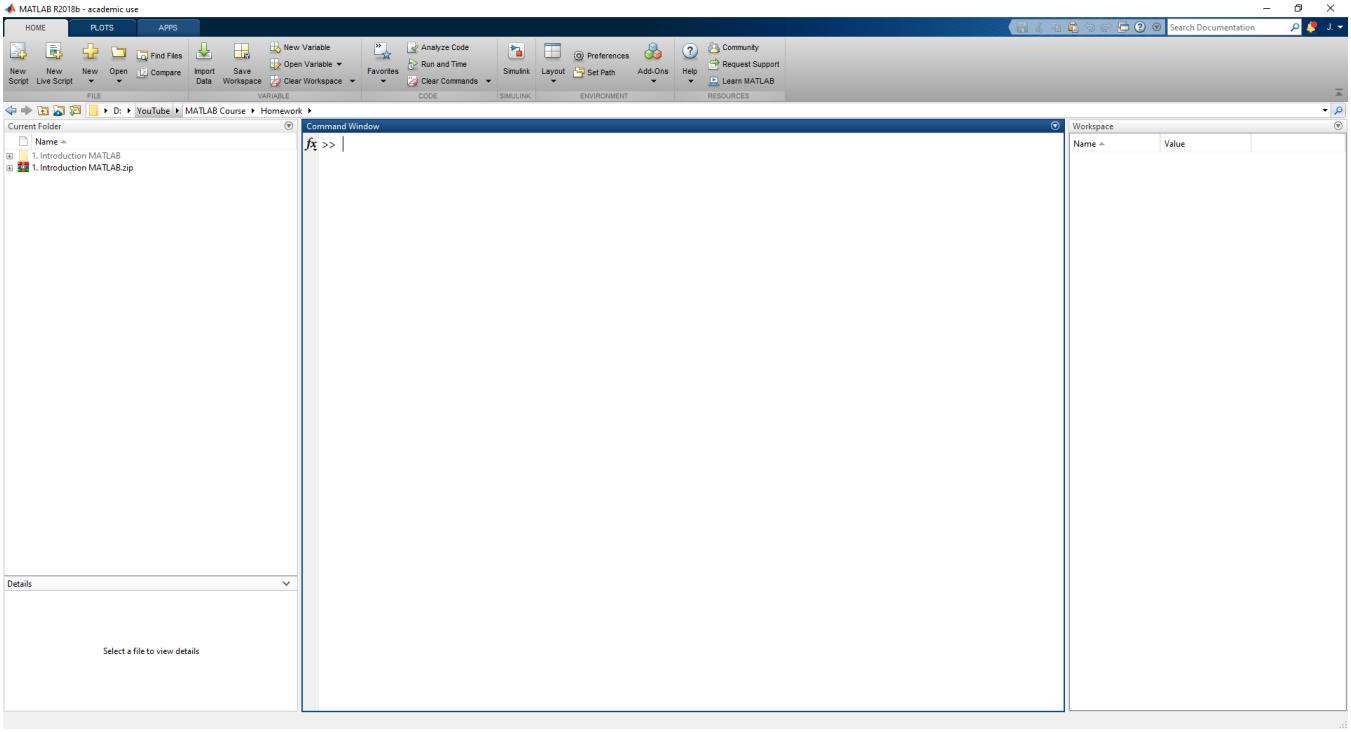

Figure 1: The MATLAB Graphical User Interface (GUI)

On the top you can find three tabs - the number might change depending on which module you are using but this is the standard setting where you can set your layout, import data and perform many more tasks (as shown in the video).

On the left-hand side you find the **current directory**, in the middle is the so called **command window** and the **workspace** on the right-hand side where all your variables are stored. You can always change the layout of your GUI and get back to the default view by clicking on the layout button as depicted below and choose **Default**.

I personally like to use the default settings in MATLAB but when using scripts I am **undocking** them by clicking the small upside down triangle button on the top right corner of each window even when not working with two screens which gives me the freedom to watch plenty of output from my script in the command window but that is just a personal preference. :)

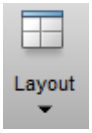

Figure 2: The layout button for personalized GUI settings

2.2 First Steps in the Command Window

What you see in the command window is the so called **Command Prompt** indicated by (>>). If we type in a number we see that MATLAB is not compiling anything as in other languages but executes the commands as an interpreter.

You can test this by typing in a random operation like $15 \cdot 8$:

```
>> 15 * 8

ans =
    120
```

Exercise: Do you know what **ans** means? If not make sure to use Google, do a little bit of research!

We can now see that the variable **ans** is saved in our workspace and holds the value 120!

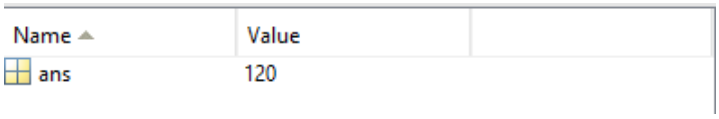

Figure 3: The workspace

You can perform further operations by double-clicking on the variable in the workspace or use the context menu for the variable using the right mouse key.

As for the command window you can bring commands back by using the **UP** or **DOWN** keys on the keyboard.

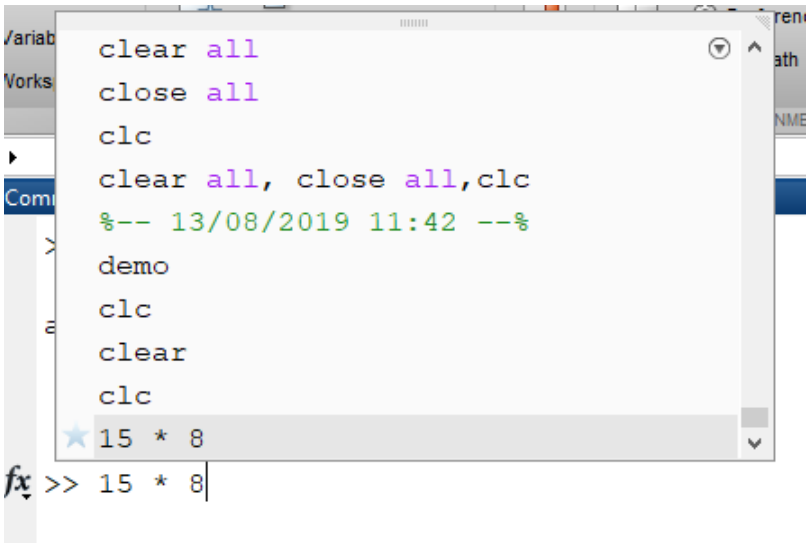

Figure 4: The command history

Exercise: Type some commands into the command window and try using the **UP** and **DOWN** keys and confirm your selection by using **RETURN**!

2.3 Help & Documentation

The nice thing about MATLAB is that it has an extensive documentation and you can literally find everything in the internet.

In order to to call the help for a function name you simply type:

$$>> \textbf{help} \quad functionname$$

where **functionname** is the name of the function you want to investigate.

Exercise: You can quit MATLAB by typing **exit** or **quit** into the command window. Now let's try to find out what the help says about these functions.

Exercise: You can also use the command **doc** and then the function name. Try this and see what it does. What happens if you click on the word **exit** and click **F1**?

Exercise: MATLAB offers another function to search for specified keywords by using **lookfor** followed by the **name**, try it out!

If you have some spare time feel free to check out the **demo** command to find some nice demos from MATLAB.