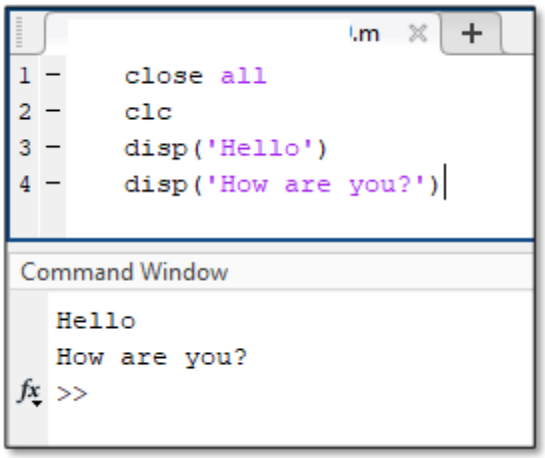
The Display Command (disp)

The display command (typed “disp”) allows the user to instruct the program to display a message in the command window. The display command is an excellent way to give instructions or other information in the command window for the user of the code. This can include instructions about the code’s function that appear when the user runs the code, greetings for the user, error messages, or conclusions determined by the code.

The display command appears in the following format in MATLAB. To use the display command, type disp followed by a set of parentheses with single quotations inside of them. Everything else in the quotations will be displayed in the command window by the program.
disp (‘Message Here.’)



The fprintf Command

The disp and input functions enable the user to display information and input information into the code. However, these functions will be insufficient if the user wants to output information that changes based on inputs or other values in a script. As an example, let’s say a code was written to find the square of user input. The code may use a display function to inform the user of the code’s function and an input function to prompt the user to input a value. However, since the output changes depending on the input, a display value is unable to update to show this calculated output. The function fprintf is designed to display the value assigned to a variable inside of a text output message. The format for the fprintf is as follows:
>>fprintf ('Text text text %f text text text %f text text text %f \n',x,y,z)
Place a “%f” in each location where the value assigned to a variable should be displayed amongst a fixed message. The values of each variable input by the user are listed at the end of the function in a list separated by commas. Note that the included example is with three variables that happen to be named x, y, and z, respectively. fprintf follows the same format as the example when different numbers of variables are present.
The following example demonstrates input, and fprintf functions used together to provide the user instructions, allow the user to input data, and to output the processed data in a text message.
clc
clear

```
a=input('insert a:   ');
b=input('insert b:   ');
p=a*b;
n=a/b;
fprintf('%f multiplied by %f is %f \n and \n %f divided by %f is %f \n', a,b,p,a,b,n)
```