MATLAB Functions

```
Output = function(Input1,...,InputN)
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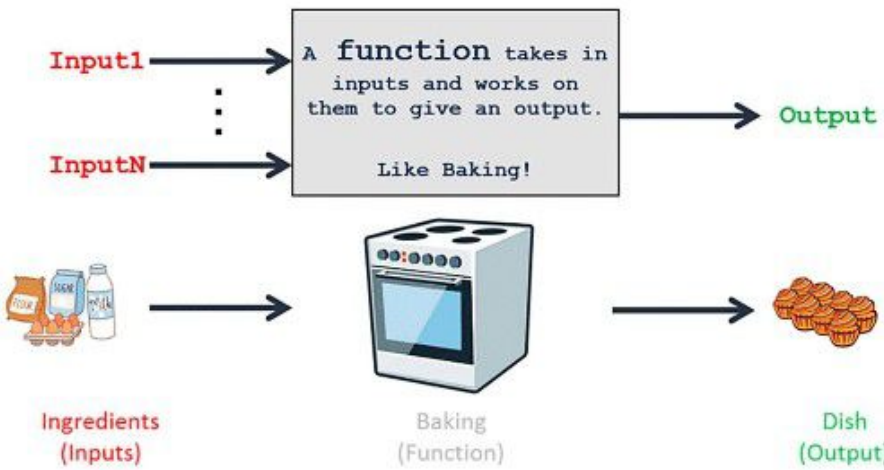

Functions can have zero or more inputs and outputs.

Function	Syntax / Usage Example	Description
General MATLAB		
clc	`clc`	Clears the Command Window
clear	`clear`	Clears variables from Workspace
uifigure	`uifigure("Name", "My figure")`	Creates a new figure window with name 'My figure'
close	`close` `close all`	Closes the last opened figure Closes all open figures
pause	`pause(0.5)`	Pauses MATLAB execution for 0.5 seconds
save	`save("MyVars.mat")`	Saves all the Workspace variables to a file named "MyVars.mat"
load	`load("MyVars.mat")`	Loads all variables from "MyVars.mat" into Workspace
Numeric and string vectors		
zeros	`X = zeros(5,1)`	Creates a column vector with five zeros in it.
join	`str = ["I","love","MATLAB"];` `joinedStr = join(str)`	Joins the strings in the input vector separating them at spaces. `joinedStr` will be "I love MATLAB"
split	`str = "I love MATLAB";` `splitStr = split(str)`	Separates a string into a vector of strings at spaces. `splitStr` will be `["I","love","MATLAB"]`
length	`l = length(X)`	Returns the length of X. If X is a vector, it returns the number of elements in it.

find	`k = find(X)`	It finds and returns the indices(positions) of non-zero elements in X.
Bytes and Beats toolbox		
playNumber	`playNumber([1 2 3])`	Plays a series of sine frequencies corresponding to the numeric input vector. In this case, the notes played will be C4, D4 and E4.
sineSound	`sineSound(440, 0.2, 0.5)`	Plays a sinusoidal note enveloped in a sine wave. It takes in an input frequency, duration(optional) and amplitude(optional). In this case, a sine tone of 440Hz will be played of 0.2s at half the maximum amplitude.
Audio processing		
sound	`sound(y, Fs)`	Plays the sound represented by vector y at a sampling frequency of Fs.
audioread	`[y, Fs] = audioread(filename)`	Reads audio from the input audio file (e.g. .WAV, .MP3) and returns the corresponding sound vector and sampling frequency.
audiowrite	`audiowrite(filename, y, Fs)`	Writes audio signal from MATLAB to an audio file specified by 'filename'