MATLAB is a proprietary multi-paradigm programming language and numeric computing environment developed by MathWorks. MATLAB allows matrix manipulations, plotting of functions and data, implementation of algorithms, creation of user interfaces, and interfacing with programs written in other languages

Mat Lap notes:

* V = [1 2 3 4] row-based vector
* V = [1; 2; 3; 4] column-based vector
* V = 1: 5; row-based vector from 1 to 5
* V ` reverse matrix;

C = [1 2 3; 1 1 2]

Or

C = [1 2 3

4 5 6

7 8 9]

Two ways to define matrix

And applying the next code on the previous matrix

A = c ([1 2], [2 3])

It will give

2 3

5 6

To get summation of two dimension matrices

sum (sum (c)) or use sum (c (:))

As sum of two-dimension matrix gives us the sum of the columns

Mean2 (c) 🡪 gives us the average of two-dimension matrix

Stdw (c) 🡪 gives us the standard deviation of two dimension matrix

To concatenate two matrices

X = [ c b] were c and b are two matrices of the same size ( row-based operation)

Or x = [ c b ] 🡪 column-based operation

To define function

Function [results] = funName (parameters)

… function code

end

// we should make the name of the file of the function the same as the name of the function to be able to use it

If function returns more than one argument

[f, u] = add (5, 9)

The folder my document / mat lap 🡪 is a global folder of the mat lap any file or data in it can be accessed in anywhere working with mat lap

To define class in mat lap

classdef class name

//we can define functions inside classes

Properties // we define parameters before functions

end

methods ( static) // we define functions inside it

Function res = sum (a , b)

res = a + b ;

end

end

end // the end of class

We save the class file with the class name

We can call function in class by className.funcName