



# Course N°06

## For-end loop

### in MATLAB

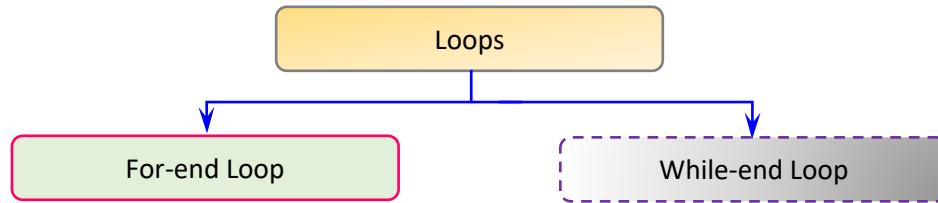


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## 1. Loops

The loops command provides the means to repeat a series of statements with just a few lines of code. MATLAB has two ways to control number of times loop executes commands.



### 1.1. The For-end Loop

A for loop is a repetition control structure that allows you to efficiently write a loop that needs to execute a specific number of times. The syntax of for statement in MATLAB is:

```

for variable = start number : step : stop number
    .....statements/instructions/operations .....
end
    
```

*Note.*

- There is **no semicolon “;” or “.”** after the **for** and **end** statements.
- Process repeats itself until  **$k > t$** .
- The loop index variable can have any variable name (***i,j,k and so on***).
- The **name** of the **variable** should **not** be the **same** as the **result** in the **statements** or the **instructions**.



The screenshot shows the MATLAB R2014a interface. In the Editor window, a script named 'tp06.m' is open with the following code:

```

1 clc
2 clear
3 for i = 1 : 10
4     m = 5 * i
5 end

```

The Command Window displays the output of the script:

```

m =
45
m =
50

```

The Workspace browser on the right shows variables *i* and *m* with their current values: *i* = 10 and *m* = 50.

Fig 1. An example of using for-end loop

The screenshot shows the MATLAB R2014a interface. In the Editor window, a script named 'tp06.m' is open with the following code:

```

1 clc
2 clear
3 for i = 1 : 10
4     m = 5 * i ;
5     disp([i m])
6 end

```

The Command Window displays the output of the script, showing the values of *i* and *m* for each iteration:

```

1 5
2 10
3 15
4 20
5 25
6 30

```

The Workspace browser on the right shows variables *i* and *m* with their current values: *i* = 10 and *m* = 50.

Fig 2. An example of control print result when using the loop



```

MATLAB R2014a
HOME PLOTS APPS EDITOR PUBLISH VIEW
FILE New Open Save Print Comment % Breakpoints Run Run Section Advance Run and Time
Current Folder tp06.m
Editor D:\Université Biskra\1er doctorat\Teaching\Course MATLAB (2LS1)\Dr. Salah\2025-2026\LM0\tp06.m
1- clc
2- clear
3- for i = 1 : 10
4- m = 5 * i ;
5- end
6- disp([i m])

```

Command Window

```

10      50
fx >>

```

Workspace

Name	Value
i	10
m	50

Fig 3. An example of changing the command of the print result

```

MATLAB R2014a
HOME PLOTS APPS EDITOR PUBLISH VIEW
FILE New Open Save Print Comment % Breakpoints Run Run Section Advance Run and Time
Current Folder tp06.m
Editor D:\Université Biskra\1er doctorat\Teaching\Course MATLAB (2LS1)\Dr. Salah\2025-2026\LM0\tp06.m
1- clc
2- clear
3- for i = 1 : 10
4- m = 5 * i ;
5- end

```

Command Window

```

fx >>

```

Workspace

Name	Value
i	10
m	50

Fig 4. An example of using the ";" to control the results



## 2. List of References

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