

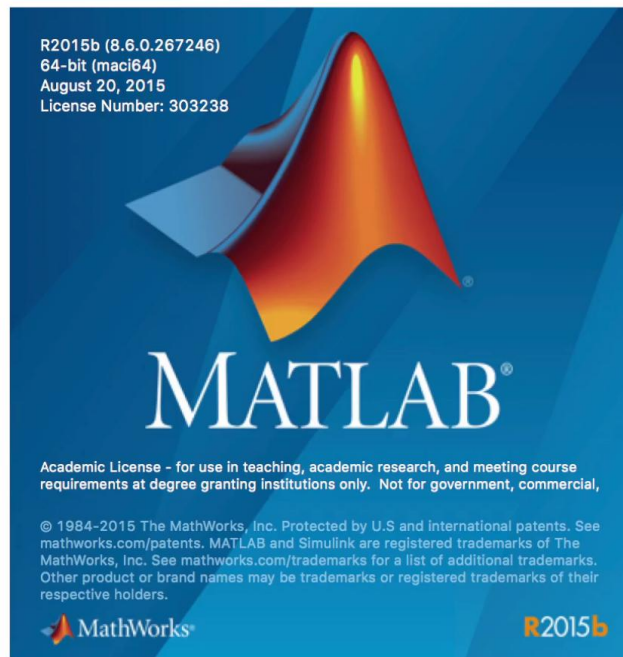
Hello, My name is Simone Deparis. I'm a Mathematician at EPFL. In teaching and research, I often use MATLAB and Octave. But what is Octave, MATLAB? These are Mathematical software's that has to do simple calculations but also to solve complex problems. In this course, you will learn out to get started with this software. Why to introduce two software's at the same time? For most common task, Octave and MATLAB are very similar.

Notes

Summary



0m 05s



MATLAB and Octave for beginners

They use the same language. MATLAB is a commercial software developed and sort by MathWorks.

Notes

Summary





GNU Octave, version 4.0.1-rc1 Copyright (C)
2015 John W. Eaton and others.
This is free software; see the source code for
copying conditions.
There is ABSOLUTELY NO WARRANTY; not
even for MERCHANTABILITY or FITNESS FOR
A PARTICULAR PURPOSE.

Octave was configured for "x86_64-apple-
darwin14.5.0".

Additional information about Octave is
available at <http://www.octave.org>.

Please contribute if you find this software
useful. For more information, visit
<http://www.octave.org/get-involved.html>

Read <http://www.octave.org/bugs.html> to
learn how to submit bug reports.

OK

MATLAB and Octave for beginners

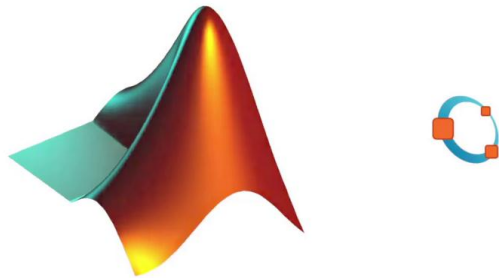
Where as Octave is developed by passionate people who distributed
freely under gpl License.

Notes

Summary



0m 37s



MATLAB and Octave for beginners

These two characteristics make one company or school, choose one or the other.

Notes

Summary



0m 43s

```
Command Window
>> a = 5 % scalar
a =
    5
>> b = [4 6] % row vector
b =
     4     6
>> c = [-5; 2] % column vector
c =
    -5
     2
>> d = [2 3; -1 7] % 2x2 matrix
d =
     2     3
    -1     7
>> |
```

MATLAB and Octave for beginners

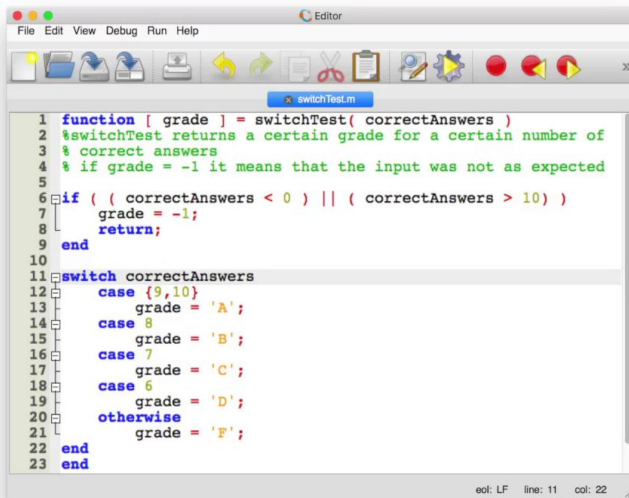
Both are able to handle very complex problems and are keep this many tool boxes that is complementary tools for solving specific problems. In this course, we will not study them but we will rather focus on basics of the software. So thereafter, you can continue to learn by yourself.

Notes

Summary



Contents



```
1 function [ grade ] = switchTest( correctAnswers )
2 %switchTest returns a certain grade for a certain number of
3 % correct answers
4 % if grade = -1 it means that the input was not as expected
5
6 if ( ( correctAnswers < 0 ) || ( correctAnswers > 10 ) )
7     grade = -1;
8     return;
9 end
10
11 switch correctAnswers
12     case {9,10}
13         grade = 'A';
14     case 8
15         grade = 'B';
16     case 7
17         grade = 'C';
18     case 6
19         grade = 'D';
20     otherwise
21         grade = 'F';
22 end
23 end
```

- First hands on
- Use of scripts and fonctions
- Work with vectors and matrices
- Handling data files
- Plots and saving to pdf or jpeg
- Write little interactive programs

MATLAB and Octave for beginners

At the end of this course, I expect that you know, how to handle the software, use scripts and functions, work with vectors and matrices. Three data files generate drafts and save them in pdf or jpeg formats and write small interactive programs, to first introduce to choose between MATLAB or Octave.

Notes

Summary





Installing MATLAB

<http://ch.mathworks.com>

- Trial version
- buy MATLAB
- Install the EPFL version

Installing Octave

- <http://octave.sourceforge.net/>

MATLAB and Octave for beginners

I cannot do the choice for you. But you can also change your mind or use both depending on the circumstances. Discuss with your friends or browse internet to make your choice. If the software is not yet installed, visit one of these sites.

Notes

Summary

