SCILAB

Glance and demonstration

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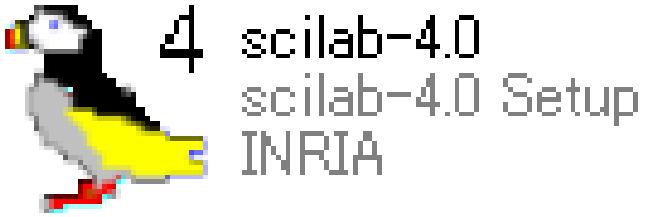
Main features

- Free software
- http://www.scilab.org/
- For calculation numerical, programming, simulation and graphics environment.
- Base on MATRIX (like MATLAB)
- SCILAB can be run on UNIX, Linux, Windows(9X/2000/XP), etc.
- Latest version: SCILAB 4.0

How to install

- For the binary version, the minimum volume for running SCILAB is about 40 MB when decompressed.
- The simplest way to install and use SCILAB is download scilab-4.0.exe, run and follow its steps.



How to use:

Command lines

- enter a command line by typing after the prompt

```
-->a=1;

-->A=2;

-->a+A
 ans  =

    3.

-->//Two commands on the same line

-->c=[1 2];b=1.5
 b  =

    1.5
-->W=rand(3,4)
 W  =

    0.7263507    0.2320748    0.8833888    0.9329616
    0.1985144    0.2312237    0.6525135    0.2146008
    0.5442573    0.2164633    0.3076091    0.312642

-->W($,$)
 ans  =

    0.312642

-->W($,:)
 ans  =

    0.5442573    0.2164633    0.3076091    0.312642
```

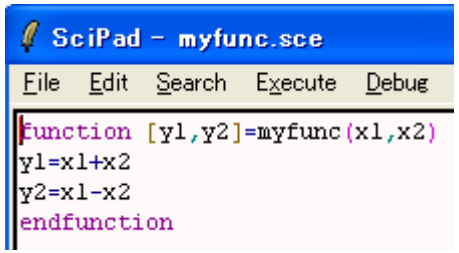
★**Hints:**

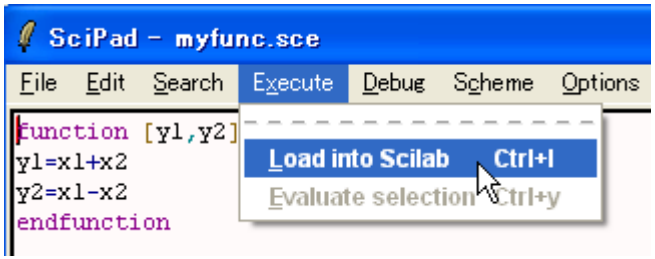
- Scilab is case-sensitive.
- // is not interpreted (it is a comment line)
- % is used in front of defined keywords (e.g. %e = 2.718)
- The $ symbol stands for the last row or last column index of a matrix or vector.
- The colon symbol stands for “all rows” or “all columns”

How to use:

Editor

- Programming: You can open SCIPAD to write your program






```
-->[a b]=myfunc(7,8);

-->[a b]
 ans  =

    15.   - 1.
```

★**Hints:**

➢When save file, remember write filename + extension (*.sce , *.sci)

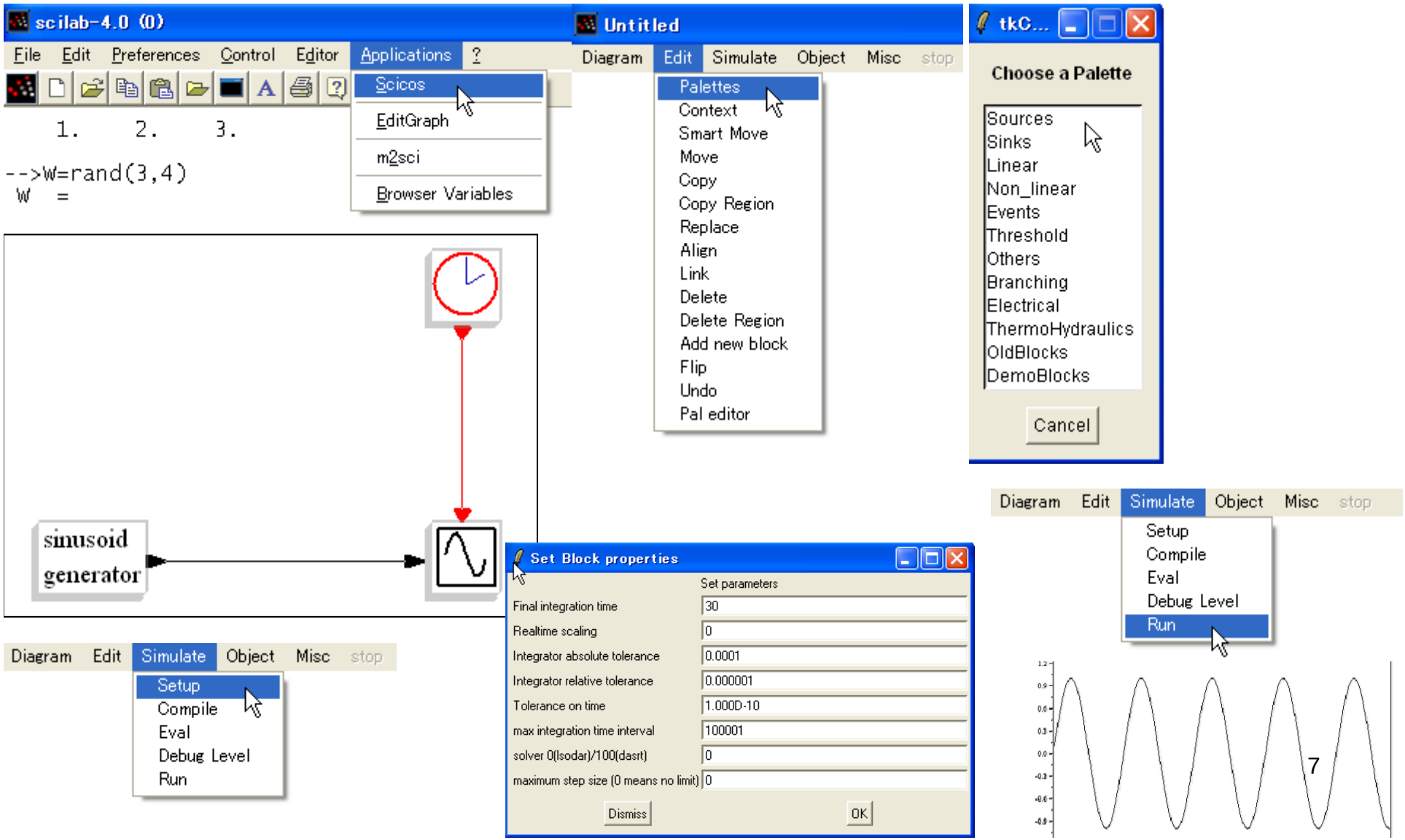
➢.sce files are executed

➢.sci files are loaded to be used when we need them

How to use:

Scicos

- Scicos is a SCILAB toolbox, having function as Simulation tool.



Practice

- 0) Setup SCILAB in your computer and Try page 5 and 6.
- 1) Try the following command to make plot
  - -->Fs=1/16
  - -->n=0:Fs:10
  - -->x=cos(2*%pi*n)
  - -->plot2d(n,x)
- 2) Try the following command to make plot
  - -->Fs=1/16
  - -->n=0:Fs:8-Fs
  - -->zero=[0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0]
  - -->one=[1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1]
  - -->phi=%pi*[zero one zero one one one zero zero]
  - -->subplot(2,1,1)
  - -->plot2d(n,phi)
  - -->subplot(2,1,2)
  - -->x=cos(2*2*%pi*n+phi)
  - -->plot2d(n,x)