

SCILAB/SCICOS

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RTAI: Características Principales

- Software Libre
- Herramienta de Cálculo Numérico, programación, simulación y entorno gráfico.
- Basada en el lenguaje MATRIX (igual que MATLAB)
- SCILAB puede ejecutarse en UNIX, Linux, Windows(9X/2000/XP), etc

Línea de Comando

```
-->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

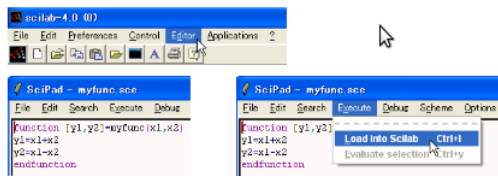
-->w($,:)
ans =

    0.5442573    0.2164633    0.3076091    0.312642
```

★ Tips:

- Scilab es case-sensitive.
- // se usa para comentarios
- % es usado adelante para definir variables
- El símbolo \$ se usa como índice en las matrices.
- El símbolo : indica todas las filas o columnas

El editor



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

```
-->[a b]
ans =
    15.    - 1.
```

★ Tips:

- Cuando se guarda un archivo hay que usar las extensiones (*.sce , *.sci)
- Los archivos .sce se usan para ejecutables
- Los archivos .sci son los fuentes

Scicos

The screenshot displays the Scicos software interface with several windows and menus open:

- scilab-4.0 (0)**: The main window shows a menu bar (File, Edit, Preferences, Control, Editor, Applications, ?) and a toolbar. The code editor contains:

```
-->W=rand(3,4)
W =
```
- Applications ?**: A dropdown menu with options: Scicos, EditGraph, m2sci, and Browse Variables.
- Diagram**: A block diagram showing a **sinusoid generator** block connected to a clock block, which is connected to a sine wave block.
- Palettes**: A menu listing various blocks such as Context, Smart Move, Move, Copy, Copy Region, Replace, Align, Link, Delete, Delete Region, Add new block, Flip, Undo, and Pal editor.
- Choose a Palette**: A dialog box listing categories like Sources, Sinks, Linear, Non_linear, Events, Threshold, Others, Branching, Electrical, ThermoHydraulics, OldBlocks, and DemoBlocks.
- Simulate**: A menu with options: Setup, Compile, Eval, Debug Level, and Run.
- Sim Block properties**: A dialog box for configuring simulation parameters:

Parameter	Value
Final integration time	30
Final time scaling	0
Final time absolute tolerance	0.0001
Final time relative tolerance	0.00001
Final time on time	1.0000e+00
max integration time interval	100000
cover (blocks/1000bars)	0
max time step size (seconds or less)	0
- Simulation Plot**: A graph showing a sine wave with a peak value of 6. The plot has axes ranging from -10 to 10 on the y-axis and 0 to 30 on the x-axis.