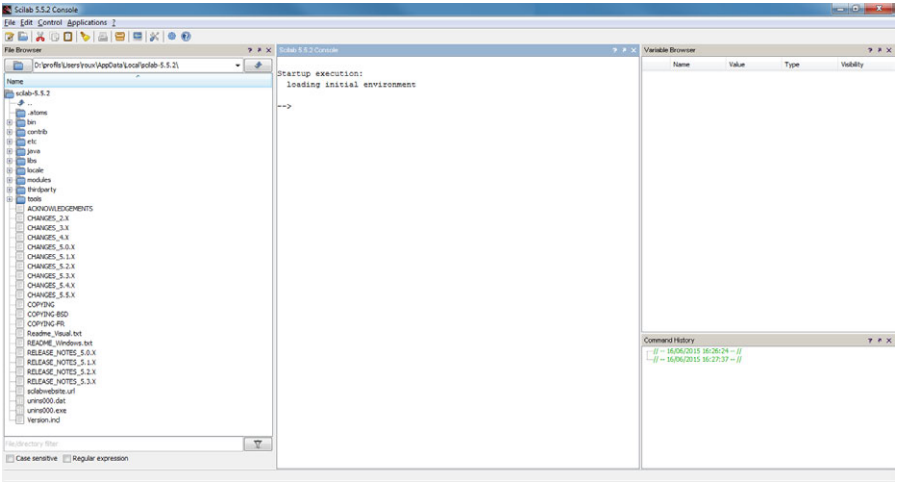
2

The Console

Launching Scilab opens up a window that consists of several elements. The first time it is opened after installation, the window should look like the one in Figure 2.1. The window's central section is the console. It allows the input of instructions next to the command prompt -->. These instructions are interpreted by Scilab following a carriage return (↵) and the result is displayed next to a new prompt.

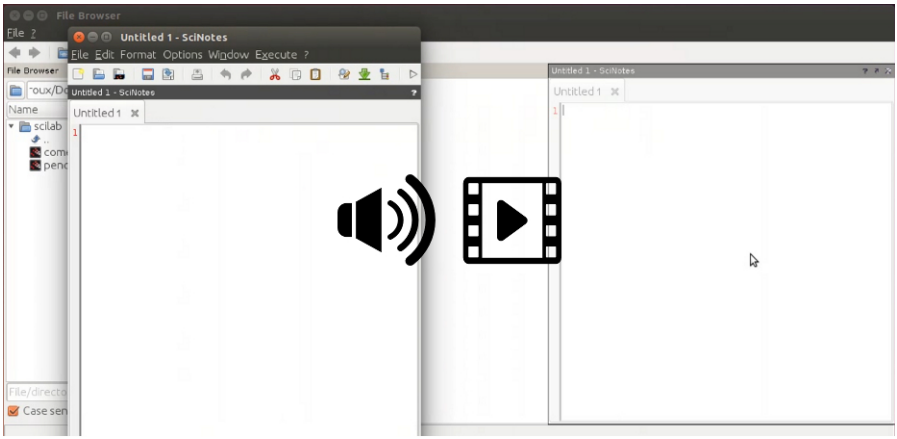
Figure 2.1 : *Scilab's main window the first time it is launched*



2.1. Taking ownership of the interface

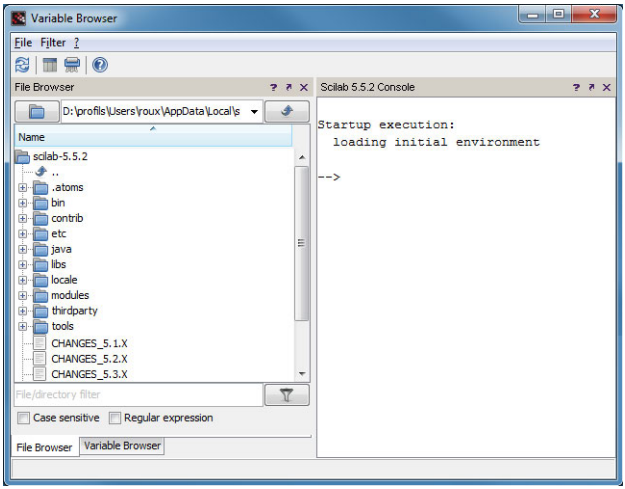
The main window's subdivisions can be resized or made to appear in a window separate from the console. Other windows can also be added to the main window, as shown in the video in Figure 2.2. This convenient attribute of Scilab's graphical interface is called *docking*. This lets the user adjust the graphical interface to his/her own preferences and habits.

Figure 2.2 : Docking Scilab windows (video)



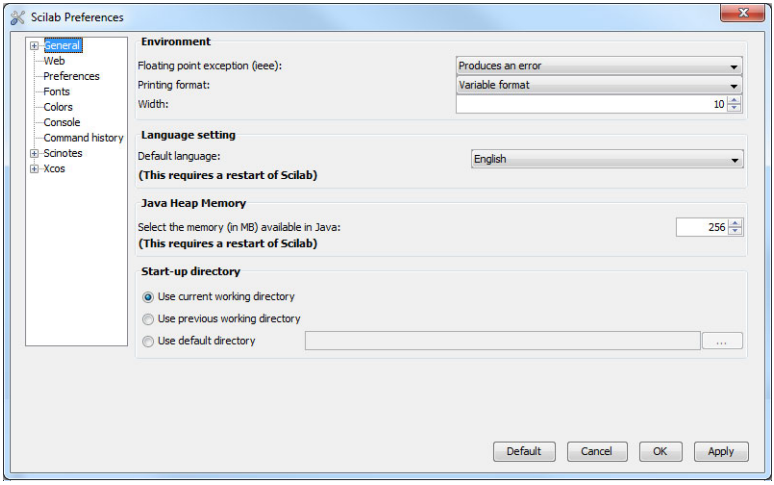
Tip *› To dock a window to Scilab's main window, select its upper title bar with the mouse (once selected, the bar's color switches from gray to blue), then move it while maintaining the mouse right button pushed and release it where you wish to dock the window.*

Caution *› When two windows are docked in the same location of the main window, they overlap and one can switch from one to the other by clicking on a tab. In the figure below, you can see that both the file browser and variable browser were docked to the same location and you can switch from one to the other by clicking on the tabs below the window.*

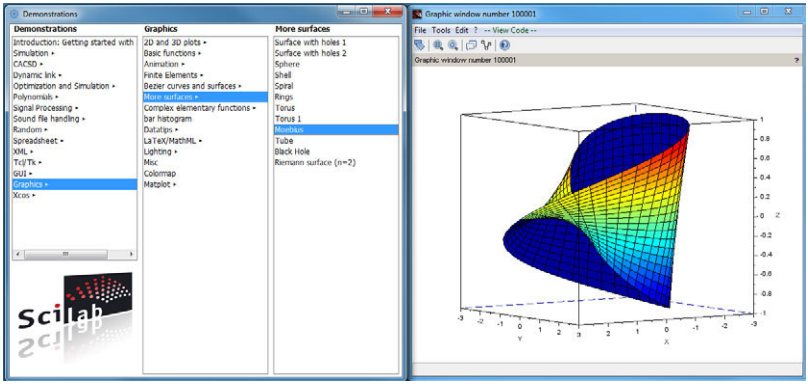


Since Scilab version 5.4.0, the preferred window configuration is saved at the end of each work session, which means that there is no need to rearrange the window each time Scilab is launched. You can also customize other interface settings by using the preference editor *via* the menu EDIT/PREFERENCES (See Figure 2.3). Among the different available parameters, you will find information on the localization (the language used for the Scilab interface).

Figure 2.3 : *Preference Editor*



Tip *› To explore the numerous possibilities Scilab offers, do not hesitate to browse the collection of demonstrations accessible from the ?/SCILAB DEMONSTRATIONS menu. A graphics window, shown in the figure below, lets you explore the different files.*



2.2. Using the console

The console is the most important Scilab window. It is a command prompt window similar to other command-line interpreters such as the Windows `cmd` or Linux `xterm`. It possesses the following list of functionalities typical of a command window.

- After the prompt `-->`, you can enter one or several commands. They are then processed after a carriage return, similar to the way a calculator operates. If you wish to write several commands on one line, they need to be separated by a comma (`,`) or a semicolon (`;`). Following a carriage return (↵), the commands are executed and the result is displayed.

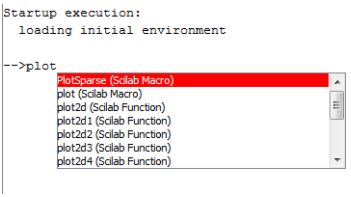
```
-->2+2
 ans  =
    4.

-->2+2,3*4
 ans  =
    4.
 ans  =
    12.

-->2+2;3*4
 ans  =
    12.

-->2+2,3*4;    // a comment
 ans  =
    4.
```

Tip › When the command you execute is followed by a semicolon, the result is not displayed in the console. The semicolon is very convenient to hide an intermediate calculation that would take up all the window space. Each time a result is displayed, the variable name in which it was stored is displayed before the equal sign (=). If no variable was specified, the result is by default stored in the variable ans*, which stands for* answer *(also see Chapter Variables, Constants and Types).*

- You can also add comments on a command line by using a double slash (`//`): anything that follows will be ignored. Comments are especially useful when writing programs, as we will see in Part Programming.
- Navigating the command history can be achieved with the `uparrow` and `downarrow` of the keyboard. If one starts entering the first characters of a command, the command history navigation is limited to the lines beginning with those characters.
- The Tab key (→) enables the autocompletion of commands, as shown in Figure 2.4. When several commands start with the same characters, a pull-down menu lets you choose the desired command. You can also keep typing characters until

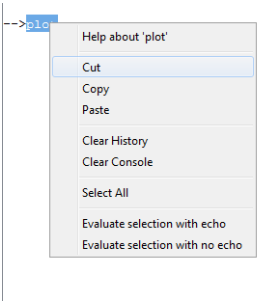
autocomplete narrows down the options. Autocompletion also works to complete a variable name or a file/directory name.

Figure 2.4 : *Autocompletion of commands with Scilab*



- It is also possible to copy/paste by right-clicking, as shown in Figure 2.5, or by using keyboard shortcuts (type `help console` to get a complete list of available keyboard shortcuts). Other functionalities can be accessed through the popup menu which appears when right-clicking.

Figure 2.5 : *Copy/paste with a right-click*



- The console can be cleared (without deleting the results of previously executed commands) by using the functions `clc` or `tohome`.