SCILAB. CREATING GRAPHICAL APPLICATIONS

Rubtsova A. A., Korolev V. D.

National University of Pharmacy, Kharkiv, Ukraine

veganez@mail.ru

Introduction. Scilab - a package of applied mathematical software provides an open environment for engineering and scientific calculations. It is the most complete publicly available free alternative to MATLAB and Mathcad. Scilab includes hundreds of mathematical functions, and also have the opportunity to add new, written in different languages (C +, C ++, Fortran, Turbo Pascal, Visual Basic). There are a variety of data structures, an interpreter and a high level language.

Aim. In this article, we consider using of Scilab for creating graphical window using the appropriate command-line, the main purpose of which is to call a function that responds to a mouse button.

Materials and methods. Personal computer and Scilab v.5.2.2 program.

Results and discussion. As an example, in this work were created programs that allow you to create windows with different buttons, when you click on that box to run the window with the schedule of function. All this is exemplified by features such as: $y = \sin 2x$, $y = \cos x / 3$, $y = \text{arctg} 3x$.

Also in this program provides the creation of labels, tags and switching component, which are used for displaying character information, switching between states or turning off one of the properties. Example shows the use of switches on the program in which you can select the function by a switch, whose graph is reproduced in a separate graphic window, by clicking on created button.

Conclusions. As a result of work, some conclusions can be drawn. At first, the program is completely free. Next - it is compatible with different operating systems (such as Windows, Linux and Mac OS). The program has small size, depending on the version (from 20 to 117 MB). This program is very easy to use.

Input language of Scilab allows using not only the built-in commands, but also developing their own visual applications. Creating windows, buttons, checkboxes and labels facilitates solving mathematical and engineering equations of any complexity.