Faculty of information
Brno university of technology

User manual
Calculator

2016 Happy Potatoes

1 Install and launch the program

1.1 Install

1.1.1 Automatic

Installs the deb package.

1.1.2 Manual

For manual instalation use this manual:

First you need install dependecy:
Open terminal and install dependencies
for example: sudo apt-get install python2.7
- *python2.7*
- *python-matplotlib*
- *python-numpy*
- *python-gtk2*
- *pygtk - http://ftp.gnome.org/pub/GNOME/sources/pygtk/2.24/*

Second:
Create new folder, where you want install The Calculator.Move to new folder.vOpen terminal: git clone https://github.com/barvirm/ivs_projekt2

Installing using sudo .
Create directory thecalculator at /usr/share/
sudo mkdir /usr/share/thecalculator

copy Glades.glade to /usr/share/thecalculator
copy main.py to /usr/share/thecalculator
copy plot.py to /usr/share/thecalculator
copy my_math.py to /usr/share/thecalculator
copy transform_string.py to /usr/share/thecalculator
copy directory logo to /usr/share/thecalculator/

copy thecalculator-icon.png to /usr/share/pixmaps
copy thecalculator.desktop to /usr/share/applications

You can copy thecalculator.desktop to desktop if you want desktop icon.

You install your application to menu.

1.2 Uninstall

It's performed using the command: *sudo apt -get -remove dcalculator*

1.3 Launch

After starting the program will be displayed Classic version of the calculator .

2 Program Control

2.1 Menu

Between bookmarks calculators you can toggle on the top bar of the window. You can choose between the modes classic, science, programing, plot, history a autors.

2.2 Inserting data

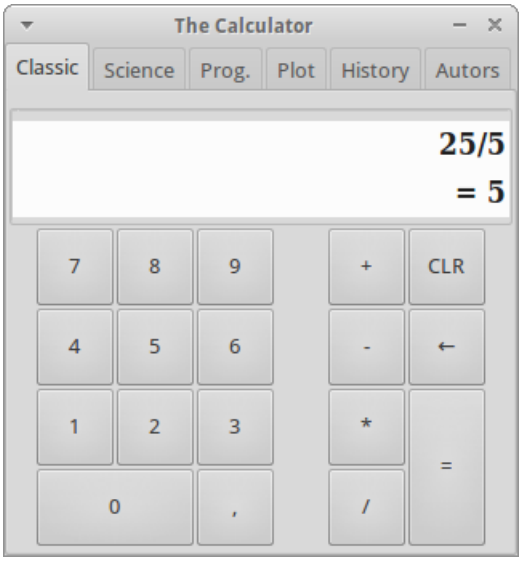
In the window for the input data you can insert in a two ways. Either by using buttons or by using keyboard. In each of the modes can be performed only operations that has meant using the buttons.

3 Mods

Individual modes have their own functions that you can use. Next you will learn more about functions.

3.1 Classic

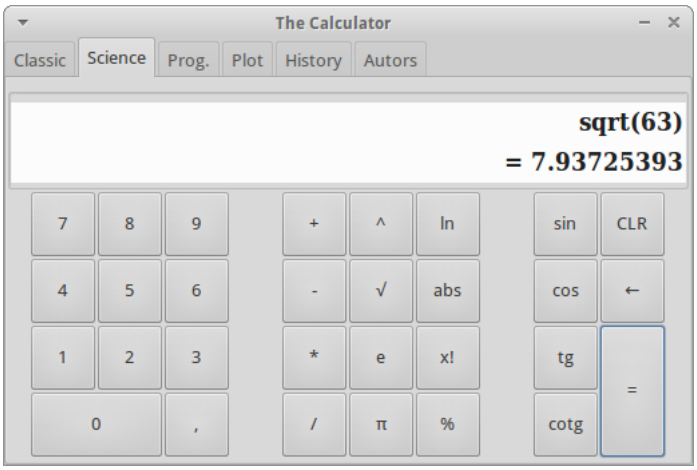
There are basic maths operations like count(+), subtraction(−), multiplication(∗), division(/) and the button for calculation(=). There are buttons for delete one character(⟵) or all characters in window(CLR).



Obrázek 1: Classic mode layout

3.2 Science

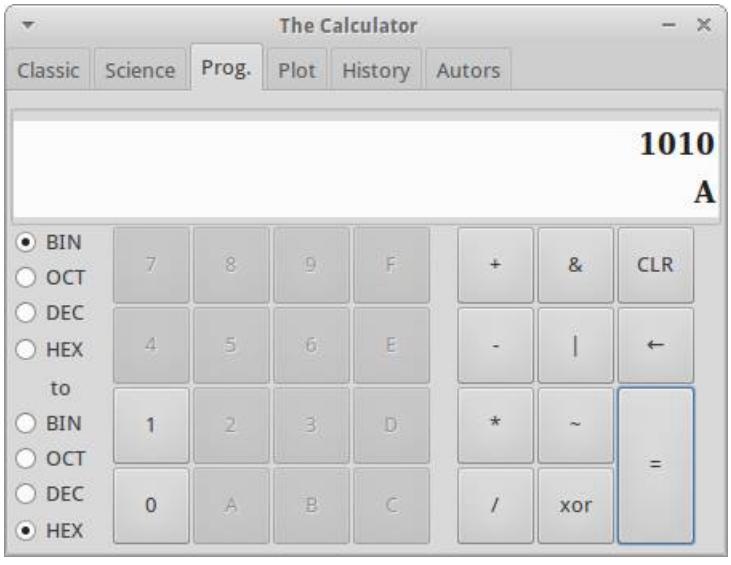
Mode Science includes Classic mode, which is expanded into an other operations. These operations are factorial(x!), logarithm(ln), absolute value(abs), square root($\sqrt{}$), power($\wedge$), modulo(%) and then goniometrical functions like sinus(sin), cosinus(cos), tangens(tg) and cotangens(cotg).



Obrázek 2: Science mode layout

3.3 Programing

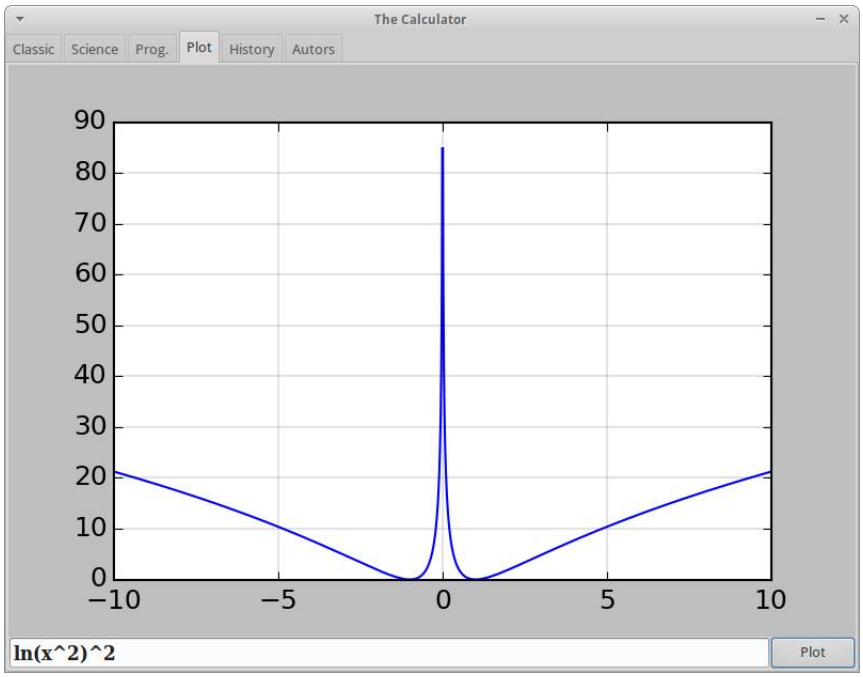
The mode Programing an important part,there are switch between numbers systems like binary(BIN), octal(OCT), decadic(DEC) and hexadecimal(HEX). When switching from different number systems are key numbers, or letters are deactivated, so we can not enter it. Math operations are counting, subtraction, multiplication and division. It also contains logical operations such as and(&), or(|), not($\sim$) and xor(xor).



Obrázek 3: Programing mode layout

3.4 Plot

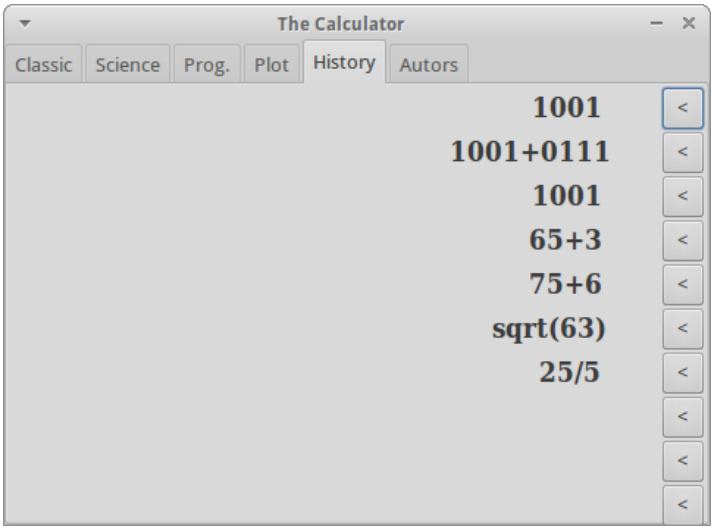
Mode plot can draw specified function.



Obrázek 4: Plot mode layout

3.5 History

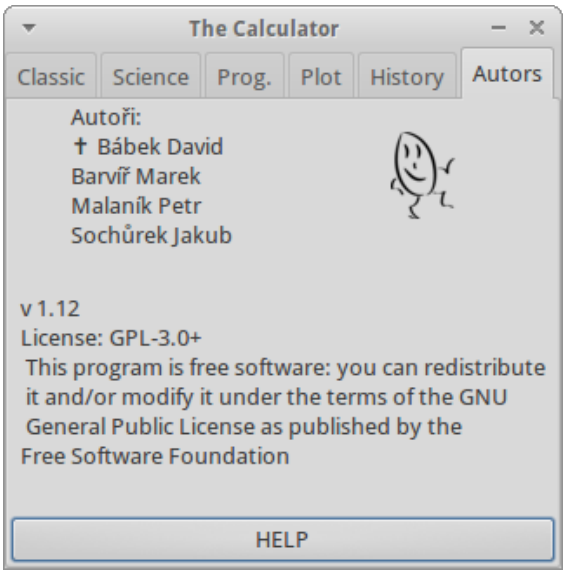
We can see our calculations in the history bookmaks. After clicking the button a given calculation it can be replace in entry window.



Obrázek 5: History layout

3.6 Autors

Autors bookmakr includes a names of autors of the project and a link to help. After click of help button displays window with help.



Obrázek 6: Autors layout

4 Using functions

There is important corect entry for an inserting of the dates.

Brackets

There has to be an even number of the brackets.

Power

There must be written exponent(a) and trustee(b) in a power. Example: $a \wedge$b

Square root

There must be written root base(a) in a square root. Example: $sqrt(a)$

Logarithm

There must be written an argument(a) in logarithm. Example: $ln(a)$

Factorial

We put a number(n), which must be possitive in factorial. Example: $n!$

Modulo

There must be written dividend(a) a factor(b) in modulo. Example: $a\%b$

Goniometric functions

In all goniometric functions we puts only a number(a),which it we calculate.
Example: $sin(a)$, $cos(a)$, $tg(a)$, $cotg(a)$

Logical operations

We puts two numbers(a,b), which it done the operation.
Example: $a\&b$, $a \mid b$, $a\, xor\, b$