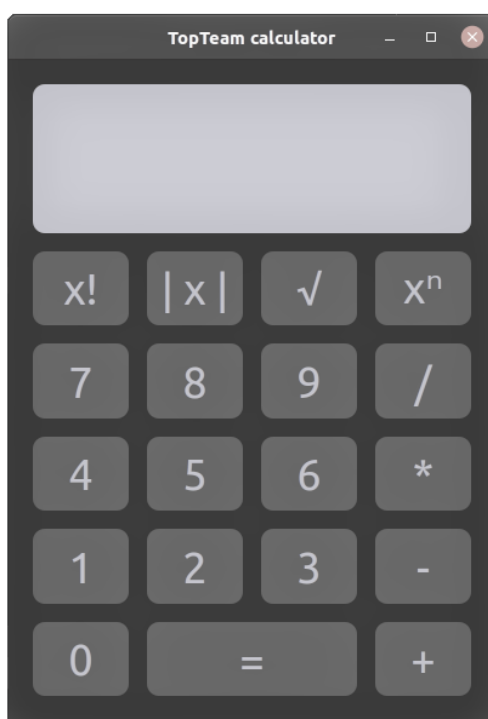




# USER MANUAL

## for TopTeam Calculator



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# 1 Introduction

This project is a result of an excellent team work in order to achieve the best results of the product. It has been built with Python tools and it is primarily intended for OS Ubuntu.

The TopTeam Calculator is a simple GUI application that implements basic mathematical functions along with some special functions described in 3.2.

Its purpose is to perform simple operations, or special features that make any calculation easy and approachable. It comes with smooth and elegant design that results in easy to use application, for all users regardless of their skills or experiences with similar softwares.

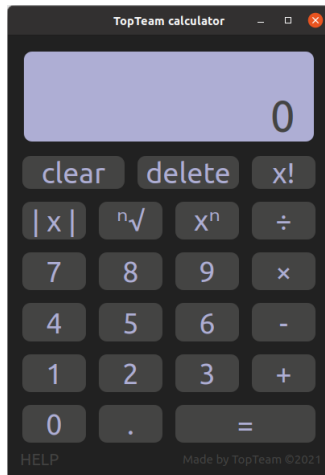
Though it provides all the possibilities that common user needs, it sets firm foundation for future development. In product is to be included innovations such as graphs or conversions between numeral systems.



## 1.1 Caution

This user manual guides you through initial steps such as installation and launch of the calculator software, shows how to safely uninstall it and explains all the features the application provides.

It is recommended to every user to scroll through this manual before using the application.



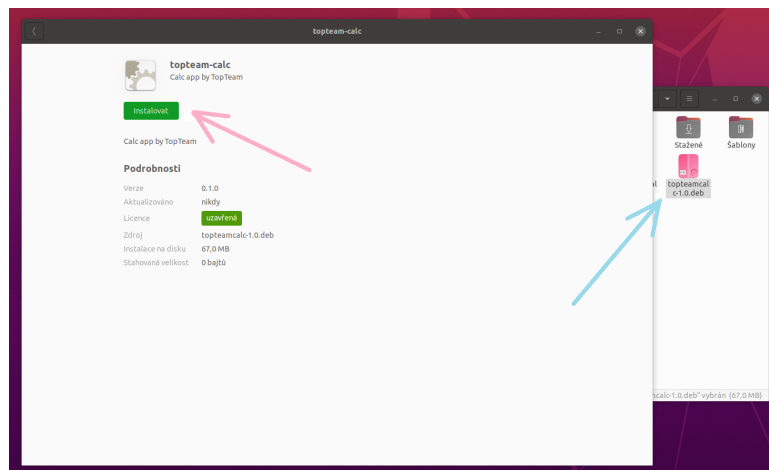
- Read it carefully and follow the instructions, the authors are not responsible for any possible damage or harm caused by the software
- Do not interfere with the source code so its functionality is not endangered
- Do not use the source code without quoting as it is strictly forbidden
- Feel free to contact the authors in case of any complications

## 2 Activation of the product

### 2.1 Installation

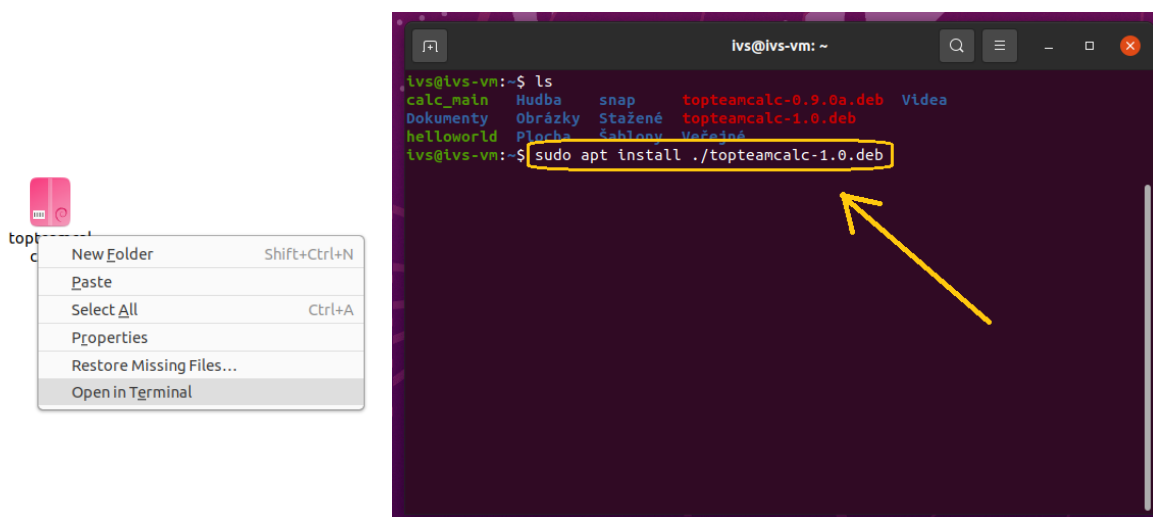
After downloading the installer, place it into preferred directory. There are two ways to approach the installation.

The GUI interfece offers simple possibility to double-click on the icon of the installer file and then click the *Install* button.



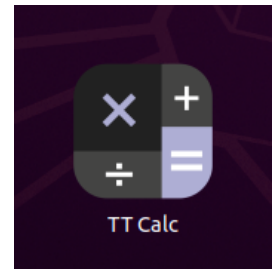
Or you can install it by the commands in terminal. Just right-click inside the directory with the installer file, click on the "Open in terminal" option and write the following command:

```
sudo apt install ./topteamcalc-1.0.deb
```



## 2.2 Running the program

Now the installed application can be launched by typing `topteam-calc` into the command line or simply search for its icon *TTCalc* and double-click on it.



## 2.3 Uninstallation

For uninstallation write `sudo apt purge topteam-calc` in command line, so it can remove the application from your device.

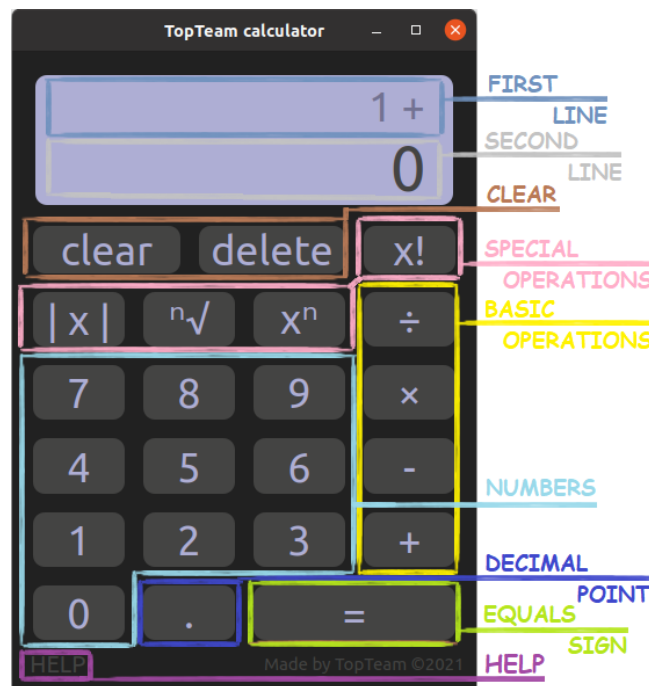
```
ivs@ivs-vm: ~/Plocha
ivs@ivs-vm:~/Plocha$ apt search topteam
Řadí se... Hotovo
Fulltextové hledání... Hotovo
ti-teams/focal,focal 4.17 all
Teams -- a PostScript font covering ASCII and basic Cyrillic

topteam-calc/now 0.1.0 all [instalovaný,lokální]
Calc app by TopTeam

ivs@ivs-vm:~/Plocha$ sudo apt purge topteam-calc
[sudo] heslo pro ivs:
Načítají se seznamy balíků... Hotovo
Vytváří se strom závislostí
Načítají se stavové informace... Hotovo
Následující balíky byly nainstalovány automaticky a již nejsou potřeba:
  libexpat1-dev libpython3-dev libpython3.8-dev python-pip-whl python3-dev
  python3-pip python3-wheel python3.8-dev zlib1g-dev
Pro jejich odstranění použijte „sudo apt autoremove“.
Následující balíky budou ODBRANĚNY:
  topteam-calc*
0 aktualizováno, 0 nově instalováno, 1 k odstranění a 18 neaktualizováno.
Po této operaci bude na disku použito dalších 0 B.
Chcete pokračovat? [Y/n]
```

### 3 User Interface

The user interface of the program consists of two essential parts. This refers to the display of the calculator and several keys under it. Both of them are described in following sections 3.1, 3.2.



#### 3.1 Display

This part shows all the actions made either by the user or the software. The functionality of the application works only with the latest state of the calculations. These are sequentially updated and calculated leaving the last remembered calculation on the screen. Regarding to the character of update they are displayed into two sub-parts.

##### 3.1.1 First Line

First line of the screen is used for showing an actual state of the first part of the expression which is about to be calculated. This refers to the first member of the operation and its sign or other operation related symbol. In the meantime, this is updated from the second line after sign button is pressed.

##### 3.1.2 Second Line

The other part of the screen refers to display of insertion. This shows the latest number being inserted. After it is submitted with sign button it is processed and moved to upper line. In case the equals button is pressed it displays the result of the operation in here. If any error occurs, the notice of it appears in here. It may be either *nan* or *Math Error* for undefined operations, or *Too large!* when the format of the number exceeds the supported range.

## 3.2 Functions of keys

This section focuses on the keyboard part of the interface. After clicking on certain button within the interface or pressing corresponding key on the computer keyboard it notifies the software and it does its work. The function of individual buttons differs particularly, so the form they interact or visualise themselves on the screen can be divide into several groups further described in following subsections.

### 3.2.1 Numbers

This part consists of keys "0" - "9" ordered in user-friendly way. The numerical keys insert corresponding digit into the second line until it is interrupted by other type of function key so it may be further processed.

### 3.2.2 Decimal point

The key with decimal point serves as decimal separator of integer and fractional part of the number. If its pressed without any earlier number insert, its pre-decimal part is set to zero.

### 3.2.3 Basic operations

On the right side, the basic operation signs can be found. After pressing one of these, the expression undergoes two steps. Firstly, if the expression is in the process it is evaluated and the result appears in upper part of the screen. Secondly, together with moving the number, corresponding sign is inserted next to, waiting for finishing the operation. If it is chosen before any number is set, the first operand is set to zero. If keys from this group are pressed repeatedly in succession, only the latest update is considered.

### 3.2.4 Special operations

This includes power or root functions, absolute value and factorial. It is strictly mandatory to adhere to mathematical rules in follow its proper order of typing, otherwise unexpected behaviour may occur.

### 3.2.5 Clear

In case of mistakes or need for clearing of insertion area to start the expression from the beginning, keys from this section may be used. It is key *clear* which erase whole screen and key *delete* which removes only last update.

### 3.2.6 HELP

In bottom left corner HELP can be found. It provides basic instructions in case of confusion with the application. It is shown when it is hovered over with cursor.

## 3.3 Summary

The result of the expression written is based on basic mathematical rules. If expression is mathematically undefined, it displays error. Certain combination of function keys from different sections within unusual or undefined sequence may cause unexpected behaviour. In most cases this is set to zero or error is displayed.