



# User manual

## dumdumCalculator

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## Use case

Calculator is used for basic mathematical function like addition, subtraction, multiplication, division, root, power, modulo and factorial.

## License

This app is provided with license [GPLv3](#).

## Installation

### Prerequisites

All libraries **should be installed automatically**, BUT:

If you install the app, executed it, but you cannot see something try this:

„**libqt5gui5**“ library has to be installed on the system

„**sudo apt-get install libqt5gui5**“, requires **root** access.

### Installation process

Execute dum dumCalc.deb file to open Ubuntu Software Manager. Click „Install“ to install said software.

### Launch

1. You can launch the application through main menu
2. Anywhere with command: „**calculator**“.



*Image 1 Icon in main menu*

## Uninstallation

You can uninstall program through Ubuntu Software Manager, with entry for dum dumCalc and clicking „**Uninstall**“ button.

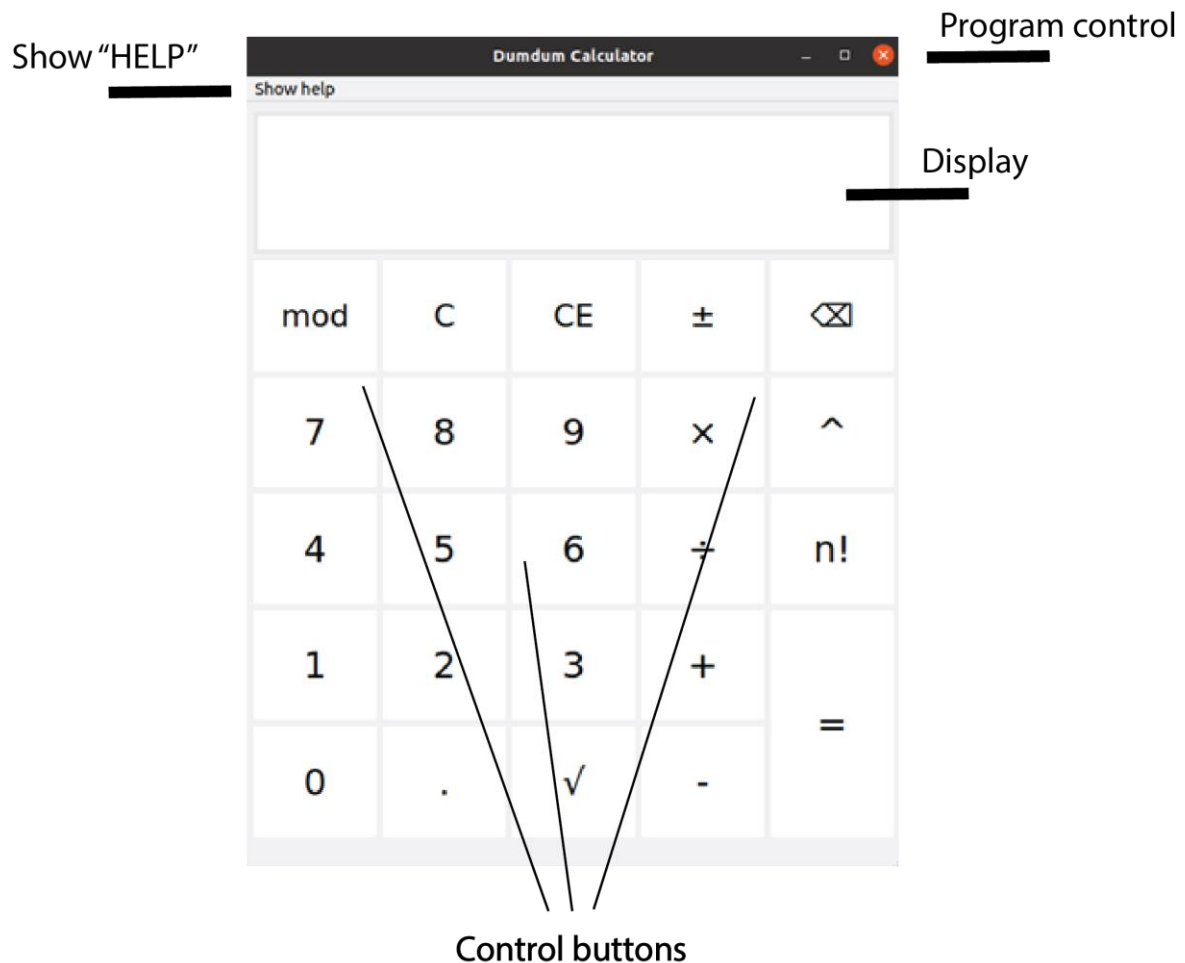


Image 2 Graphic User Interface description

## Entering numbers

To enter a number into the calculator, left-click the digit buttons on screen or use your computer keyboard. You can also enter decimal point by clicking to button or to "." on your keyboard. If you want to calculate with negative numbers the best way is to write positive equivalent and then change sign by button in window or **S** key. To insert numbers you can also use well-known key sequences **Ctrl+C** and **Ctrl+V**.

## Using operations

After you enter a number, you can choose a mathematical operation by clicking the operation symbol, or by typing it on the keyboard. After entering the operation, you can enter second number (**if you use ! function - there is of course only one operand**). To display the result of chosen operation, please press the =.

## Special hotkeys

Program uses these special hotkeys:

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Key	Action	Key	Action
0..9	writes 0..9	%	uses mod
-	uses - operation	*	uses multiplication
+	uses + operation	Enter	shows the result
/	uses / operation	!	uses factorial operation
.	writes dec. point	<--	del last inserted number (backspace)
,	writes dec. point	F1	shows help
S	changes sign	Esc	End the calculator
C	cleares display		
P	uses power		
R	use root		

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## Format

12 valid numbers (it doesnt depend where - whether before or after decimal point, zero is not valid number) of results are showed in std. number format (e.g. 12346578912), than numbers are showed in exponential form (e.g. 1.123456789123e+12)

## Precision

Be careful, if your numbers are too long (about 15 valid numbers), the results can lost their precision in least significant ciphers, so you must take it into your consideration.

## Help

If you want to show help during your computations, please, click on „**Show help**“ or press the **F1** button. There are most common problems, you can meet:

?! I see letters on display !!!

There are also special situations that you can meet during the computation:

Exponential form (e)

If there is only one "e", you are showed probably exponential form of number. Its not bug, its just a scientific notation. More about scientific notation [here](#).

## Errors

We are sorry but if the letters are red, errors occurred. There are some reasons of most common errors:

### Division By 0!

Basically, you cant divide by 0

### Modulo By 0!

You cant do modulo with 0 as a second operand

### Only Integers!

The operation you chose can compute only with whole numbers (in this calculator)

### Only Positive Numbers!

You can pass only positive numbers to operation you chose

### Undefined expression!

The expression you passed in doesn't have any solution.

If you see the error, just write new numbers and errors should be gone...

### Infinity

We are sorry, your numbers are too high (or low) to show them. But we can tell you if it is positive or negative high number! If you see this, just write new numbers...

### What operation XY does?

If you don't know, what some operations does with operands see:

<https://en.wikipedia.org/wiki/Arithmetic>.

### I installed app, executed it, but i can't see anything?!

There are may be problems with libraries that are necessary to run calculator.

For more information see [Installation](#).

## Contact

If there are bugs that are not mentioned in documentation or you want to give feedback to our team, you can contact us by email:

[dumdumteam2021@gmail.com](mailto:dumdumteam2021@gmail.com)