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, execut it, and nothing happens:
„**libqt5gui5**" library has to be installed on the system, so try command:
„**sudo apt-get install libqt5gui5**" keep in mind this requires **root** access.

Installation process

1. Execute dumdumCalc.deb file to open Ubuntu Software Manager.
2. Click „**Install**" to install the software.

Launch

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

Image 1 Icon in main menu

Uninstallation

You can uninstall program through Ubuntu Software Manager, search for dumdumCalc entry and click „**Unintall**" button.

Show "HELP"

Program control
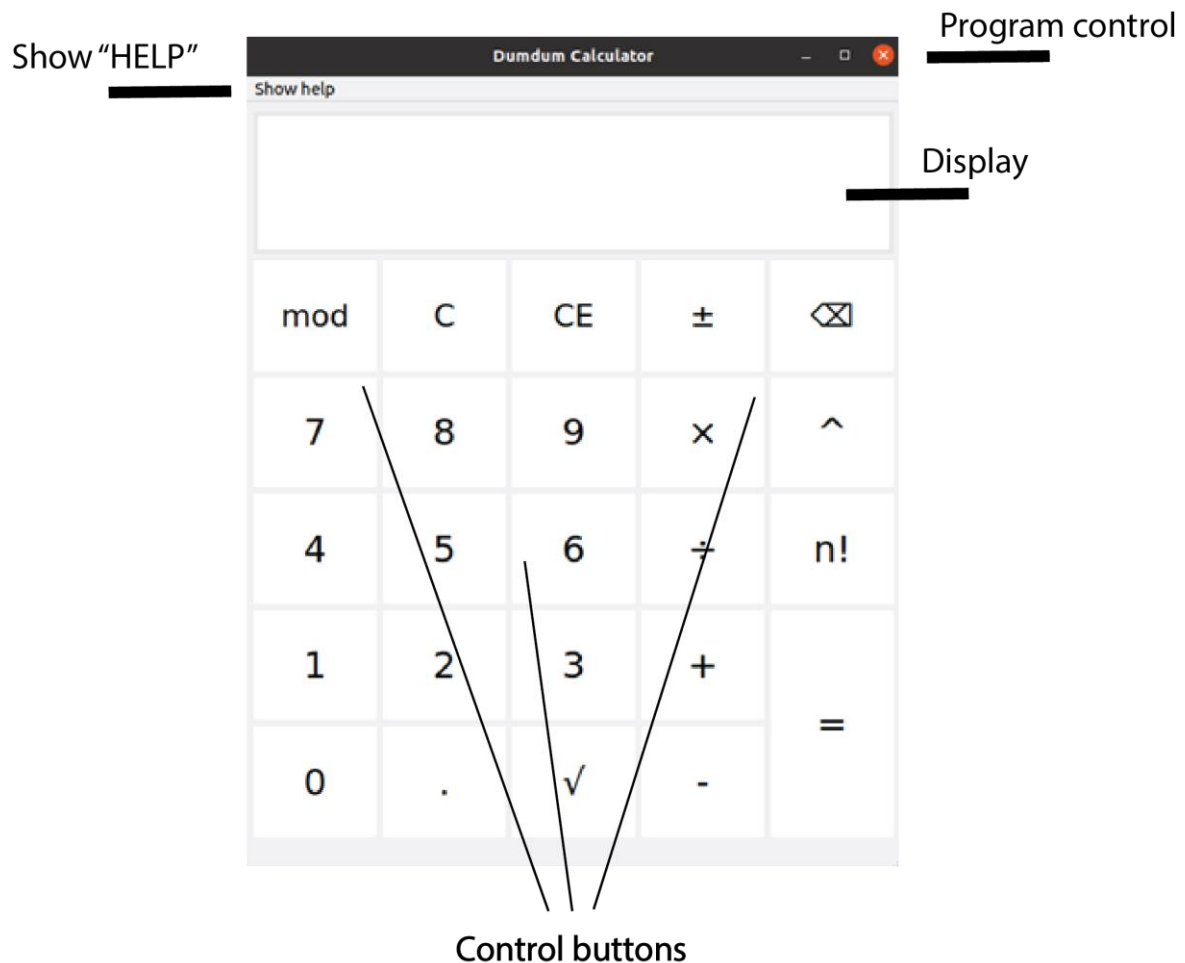
Display

Control buttons

Image 2 Graphic User Interface description

Entering numbers

To enter a number, 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 with **±** button or **S** key.
To insert numbers you can also use standard system shortcut **Ctrl+C** or **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 (**factorial (!) operation uses only one number**). To display the result of chosen operation, please press the **=**. **By clicking = again** you repeat last operation with last displayed result.

Operation list

There is list of operations that can be performed by calculator (and their limits in this calculator):

Symbol	Name	Operands
+	addition	*two real numbers*
-	subtraction	*two real numbers*
×	multiplication	*two real numbers*
÷	division	*first is real number, second (divisor) can't be 0*
mod	modulo	*first is real number, second operand can't be 0*
^	power	*first is real, second is natural number or 0*
√	root	*first is natural number, second is nonnegative (if first is even number) or real (if first is odd)*
!	factorial	*only one operand, it must be natural num. or 0*

Special hotkeys

Program uses these special hotkeys:

Key	Action	Key	Action
0..9	*write 0..9*	%	*mod operation*
-	*minus operation*	*	*multiplicate operation*
+	*plus operation*	Enter	*shows the result*
/	*divide operation*	!	*factorial operation*
.	*writes dec. point*	<--	*delete last character (backspace)*
,	*writes dec. point*	F1	*shows help*
S	*changes sign*	Esc	*Quit*
C	*cleares display*		
P	*power operation*		
R	*root operation*		

Format

12 valid numbers (it doesn't matter where - whether before or after decimal point, zero before dec. point is not valid number) of results are showed in std. number format (e. g. 12346578912), after that numbers are displayed in exponential form (e.g. 1.12345678912e+12).

Precision

Be careful, if your numbers are too long (more than **12 valid numbers**), the results can lose precision in least significant ciphers and they will be rounded. So, please, take it into your consideration, when you make highly accurate computations.

Help

If you want to see help, please, click on „**Show help**" or press the **F1** button. These are the most common problems, you can encounter:

?! I see letters on display !!!

There are also special situations that you can encounter during the operation:

Exponential form (e)

If there is only one "e", exponential number form is displayed. Its not bug, it's just a scientific notation. More about scientific notation here.

Errors

We are sorry but if the letters are red, error occured. These are some of the most comon errors:

Division By 0 !

Basically, you can't divide by 0

Modulo By 0 !

You can't 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 expresion !

The expression you used doesn't have any solution.

If you see the error, you have to try different expresion.

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 operation does, 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:

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