

USER DOCUMENTATION

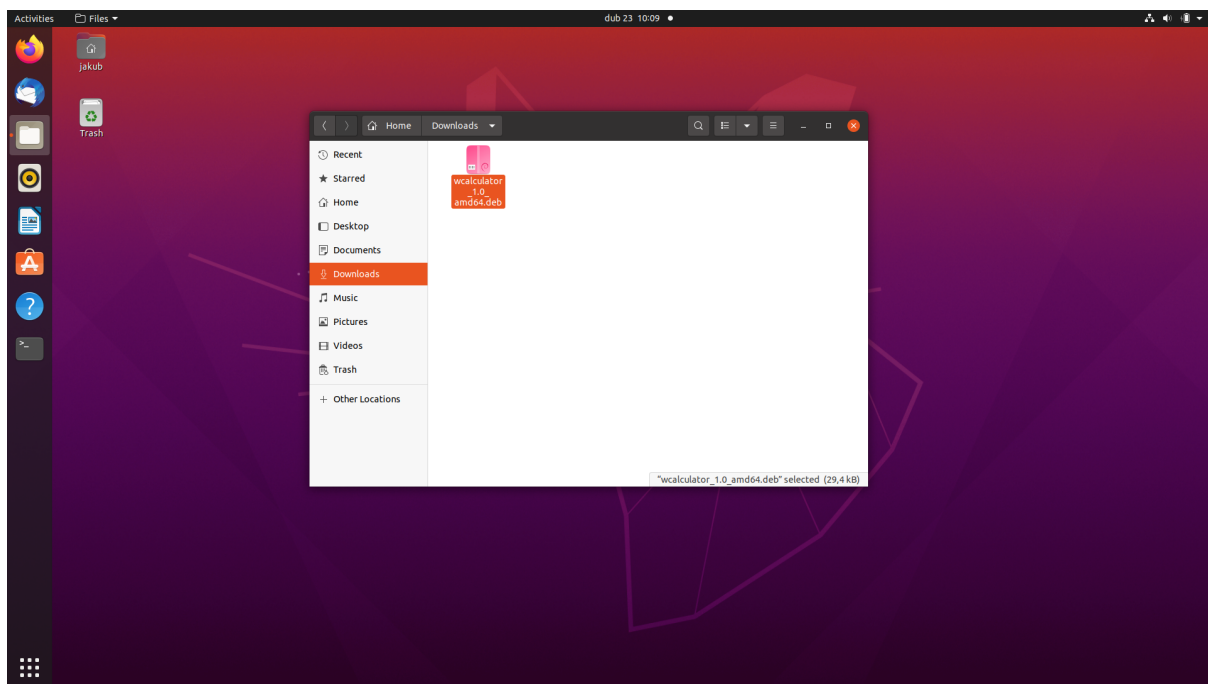
WCalculator

Purpose of Wcalculator

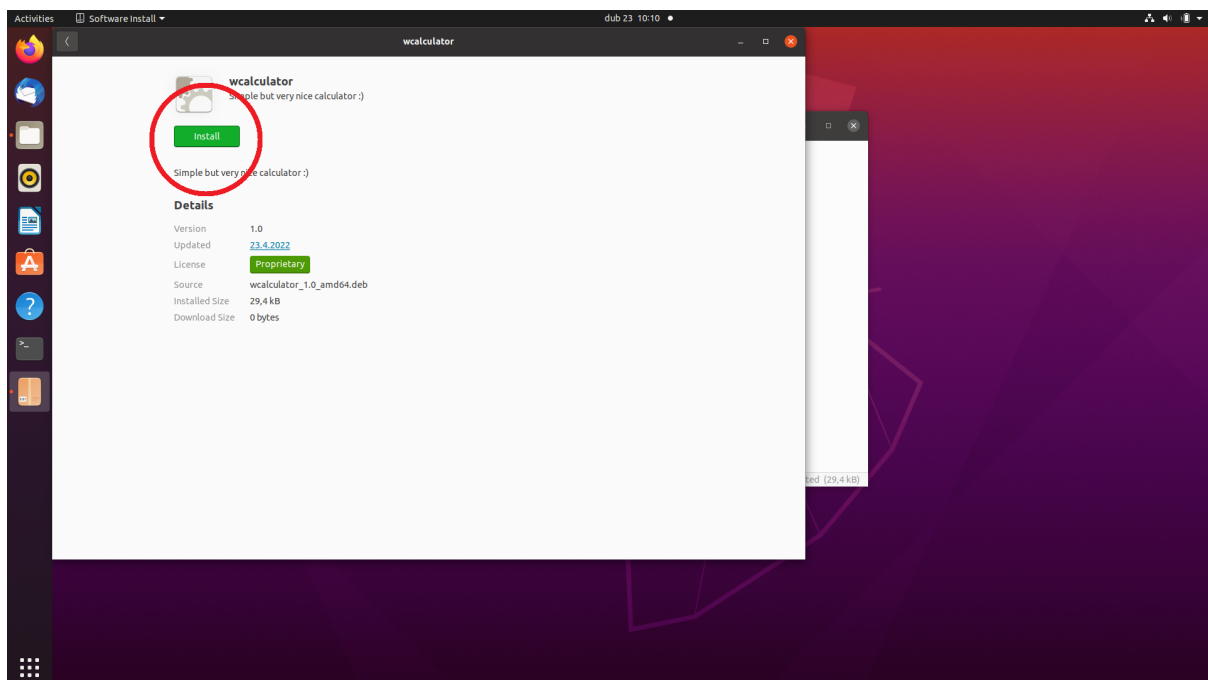
This calculator creates a mistake-proof environment for the user. It can be used for critical applications, like doing math homework, algebra or calculus (in future).

Installation

After downloading the debian package you need to find it in the Download folder and double click on it.

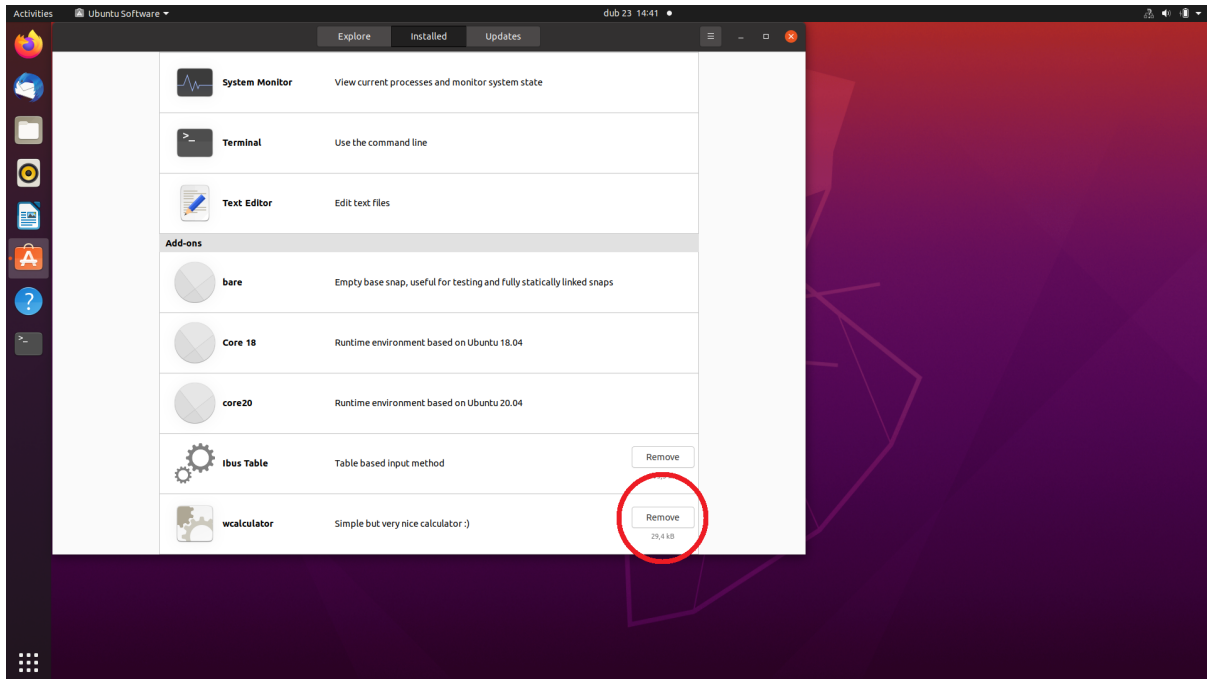


The installation will start after clicking on the Install button. You have to have root privileges to install an application. Enter your password if it is required and after a while installation will be done.



Uninstallation

To uninstall WCalculator go to Ubuntu software app and find WCalculator and click on remove button.



Manual compilation, installation, uninstallation

Installation

To compile Wcalculator, you have to install few dependencies: qt5-qmake, make, qtdeclarative5-dev, g++. To install them run this command:

```
sudo apt install qt5-qmake make qtdeclarative5-dev g++
```

After successfully installing dependencies, clone WCalculator repository by running this command:

```
git clone https://gitlab.com/fit-vut-izp-team/ivs-calculator.git
```

Open terminal in folder, where you clone the repository, then run this command sequence:

```
cd ivs-calculator/build  
qmake  
sudo make -j8 install
```

sudo make shortcut

Uninstallation

Open terminal in repository, then run this command sequence:

```
cd build  
(in case of missing Makefile) qmake  
sudo make rm_shortcut  
sudo make uninstall
```

To remove dependencies you installed and don't need anymore run this command:

```
sudo apt autoremove
```

Compilation

Open terminal in repository, then run this command sequence:

```
cd build  
(in case of missing Makefile) qmake  
make -j8
```

Executable named "wcalculator" will be compiled in the build directory.

Running the program

You can find WCalculator in applications menu or type in "wcalculator" in terminal.

User Interface

WCalculator allows only one operation. To calculate complex math expressions you can use the "Ans" button. To write expressions in WCalculator you can use buttons in WCalculator or your keyboard. If you cannot push a certain button it means that the expression you would have written doesn't have logical meaning.

General constraints

- You can perform only one operation at a time
- You can type as much operands as operation takes
- You can only write at the end of expression
- Maximum length of expression is 23 characters

Buttons “0 - 9”

These buttons can be used to write any number. Zero can be the first number of expression only when after that follows a decimal point

Button “.”

Character means decimal point. Before and after this character has to be number otherwise wcalculator does not allow to write operation. You can only type one point in row and for one number

Button “+”

Means addition.

Button “-”

Can be used as operation subtraction or negation of number.

Button “*”

Means multiplication.

Button “/”

Means division. Divisor cannot be zero.

Button “^”

Calculates n-th power of number. Exponent has to be written after the character “^” and base before. Exponent has to be a natural number including 0.

Button “√”

Calculates the n-th root of the number. Degree has to be written before character “√” and radicand after. Degree can be any real number except 0,

radicant cannot be 0 and in case of even degree, radicant cannot be negative real number.

Button “!”

Calculates factorial of number. “!” has to be after the number. Number has to be a positive integer (natural number including 0). After you type !, you can only evaluate expression, clear it or modify it by deleting characters.

Button “log”

Calculates logarithm with base of 10. Number has to be positive and written after “log”.

Button “Ans”

The button “Ans” is represents the value of the last valid result. It can be used as a normal number at any operation.

Button “C”

Deletes the whole expression on display.

Button “del”

Delete the last character on display.

Button “=”

Computes expression on display (if possible). After the result is displayed, you can start writing a new expression by typing a number or pressing the “C” and type a new expression.

Math ERROR

It means that desired operation is not mathematically correct, result is infinity, or operation is not supported in wcalculator. To learn more read functionality of buttons.