# Supreme Calc user manual

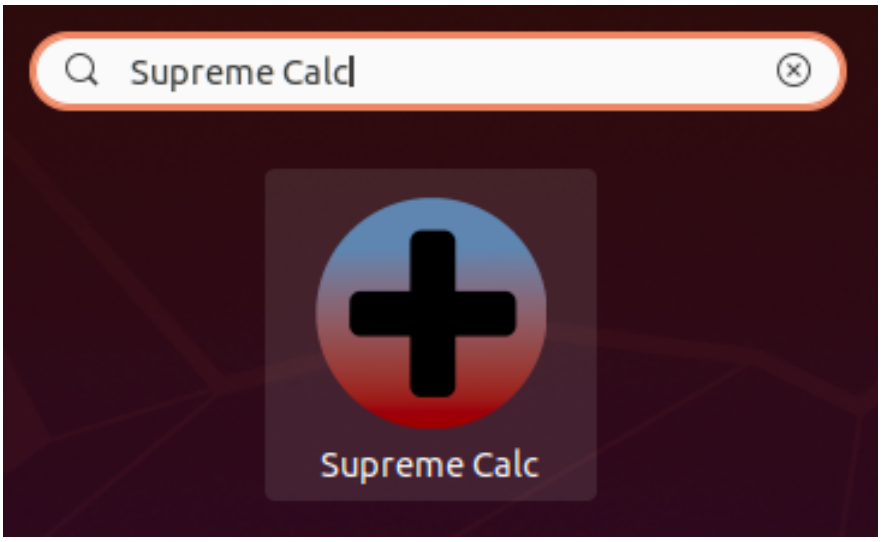
## System requirements

- Ubuntu 20.04 - 64bit or newer
- At least 50MB of free disk space
- Following modules are needed for installation:
  - Python 3.8 or higher – `sudo apt install Python3`
  - pip – `sudo apt install python3-pip`
  - kivy – `Python3 -m pip install kivy`
  - xclip – `sudo apt install xclip`
  - pytest – `sudo apt install python3-pytest`

## Intallation

- Before installing, please read the whole installation process first
- To install the application, enter the terminal and go to folder, where you want to download the GitHub repository (further refered to as a *repository folder*)
- In the repository folder, type in `git clone https://github.com/jkalend/IVS-calc.git` to download the repository
- Before installing you will need root privileges, then type in following commands one by one:
  - `cd IVS-calc`
  - `cd src`
  - `make pack`
  - `cd ../..`
  - `unzip xkalen07_xkubin27_xstrei06_xmashl00.zip`
    ↑ (Start from here if you already have the .zip file)
  - `cd xkalen07_xkubin27_xstrei06_xmashl00`
  - `cd install`
  - `./install` – this will install the application
- The application is now installed.
  (note that the application itself is installed to `~/.local/share/applications`).
  To launch, search for *Supreme Calc* in your applications menu and click the icon.

- The icon should look like this:




# Uninstallation

- To uninstall the application, enter the terminal and go to the repository folder, where you downloaded the GitHub repository and/or where you unzipped the .zip file.
- Now type in following commands one by one:
  - `cd install`
  - `./uninstall` – this will uninstall the application
- The application is now uninstalled. You can delete all downloaded and created files from the repository folder by using the following command:
  - `rm -rf xkalen07_xkubin27_xstrei06_xmashl00.zip (IVS-calc)`

# Usage

**General use:**

- AC – clears the entire display
- DEL – deletes selected or previous character (you can select multiple characters by holding shift and using arrows)
- HELP – opens user manual
- Calculator always returns result as floating point number
- In case of invalid input or mathematical error displays an error message
- Calculator takes input from keyboard or by clicking on buttons
- Calculator window can be resized by pulling the edges or fullscreened by clicking the square in upper right corner

**Basic arithmetical operations:**

- + addition
- − subtraction
- * multiplication
- / division

**Advanced mathematical operations:**

- % modulo – residue after division
  - Example: 13%7 = 6
  - Example: -4%6 = -4
- ! factorial
  - Example: 4! = 4*3*2*1 = 24
- ^ exponentiation
  - Example: 5^3 = 125
  - Example: 2^-1 = 0.5
- $\sqrt{}$ root
  - Example: 4$\sqrt{}$16 = 2
  - Example: $\sqrt{}$36 = 6

**Special characters:**

- . floating point
- = equals - displays result of an operation
- ( ) opening and closing brackets - brackets can change precedence of operations, include/exclude sign from operations or "pack" together multiple operations as an argument to another operation
  - Example: -4^2 = -16
  - Example: (-4)^2 = 16
  - Example: (4+2*3)/2 = 5

## Calculator interface