User Guide for Calculator 1.0.0 and stddev 1.0.0

by Lucenext

Installation guide

- `Python 3.10.12` or higher is required
- Open directory **`install/`**
- **Calculator:**
  - Run: **`sudo dpkg -i ivs-calculator-1.0.0-Linux.deb`**
- **Standard Deviation:**
  - Run: **`sudo dpkg -i ivs-stddev-1.0.0-Linux.deb`**
- This will likely ask for a password

To run the program, simply run the command **`calculator`** or **`stddev`** respectively

To uninstall run: **`sudo apt remove ivs-calculator`**
`sudo apt remove ivs-stddev`

Manual installation:

- `pyinstaller` recommended
- Change directory to **`repo/src/`**
- Run:
  - **`pyinstaller --onefile --paths=. calculator.py`**
  - **`pyinstaller --onefile --paths=. stddev.py`**
- This generates the **`build/`** and **`dist/`** directories
- Change directory to **`dist/`**
- Run **`calculator`** or **`stddev`**

If pyinstaller fails, the program can be run using the **`makefile`** in **`repo/src/`**.

Usage

Calculator

The Lucenext calculator offers a variety of mathematical operations, all of them well documented in the in-built hint, as shown in Figure 1.

The calculator is also able to change the numeric base with their respective buttons, as shown in Figure 1. Switching the calculator to a non-decimal base (binary or octal) disables certain functions and limits the range of accessible numbers.

Input is possible using a mouse and for basic operations and numbers, a keyboard. Possible keyboard input: numbers `0..9`, `[+]`, `[-]`, `[*]`, `[/]`, `[,]` and to evaluate, use `Enter`.

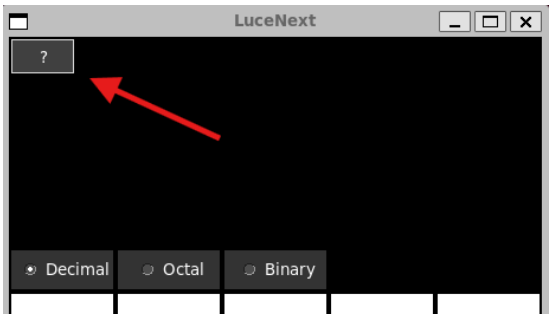

Figure 1

Standard Deviation

The stddev program calculates the standard deviation of all numbers received from `stdin`. Input is received as numbers separated by either `spaces`, `tabs`, or `new lines`. It is also possible to redirect a file to `stdin`, for example: **`stddev < file.txt`**

Stddev returns an error message if invalid or no input is given.

The result is printed to `stdout` without any other text.

Profiling

Automatic profiling of the script stddev.py can be run with: **`./profile.sh`**
It might be necessary to first run: **`chmod +x ./profile.sh`**