Vysoké učení technické v Brně
Fakulta informačních technologií

Documentation for the 2nd IVS project
Team **SMC (Small Golden Cock)**

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1 Introduction

This documentation provides comprehensive details for the Calculator Project developed as part of the IVS Project. The calculator supports basic mathematical operations including addition, subtraction, multiplication, and division, along with advanced features such as factorial calculation, exponentiation, and nth root calculations. It offers both a a graphical user interface (GUI) using the tkinter library in Python.

2 Installation and Uninstallation

2.1 System Requirements

- Operating System: Windows 10/Ubuntu 22.04, 64-bit

- Python Version: Python 3.8 or newer

- Additional Libraries: tkinter (included in standard Python library)

2.2 Installing the Program

2.2.1 From the Source

1. Download the source code zip from the project repository.

2. Unzip the project directory.

3. Navigate to the `src` directory in the terminal or command prompt.

4. Run the command: `python3 app.py` to start the application.

2.2.2 Using an Installer

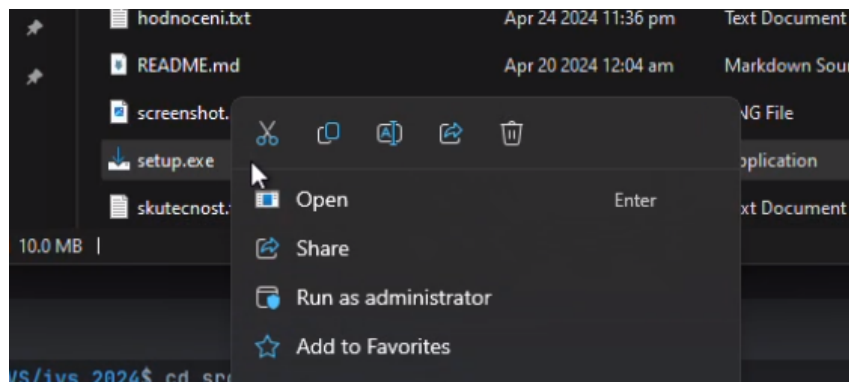1. Double-click `setup.exe` installer file.

Figure 1: Setup executable file.

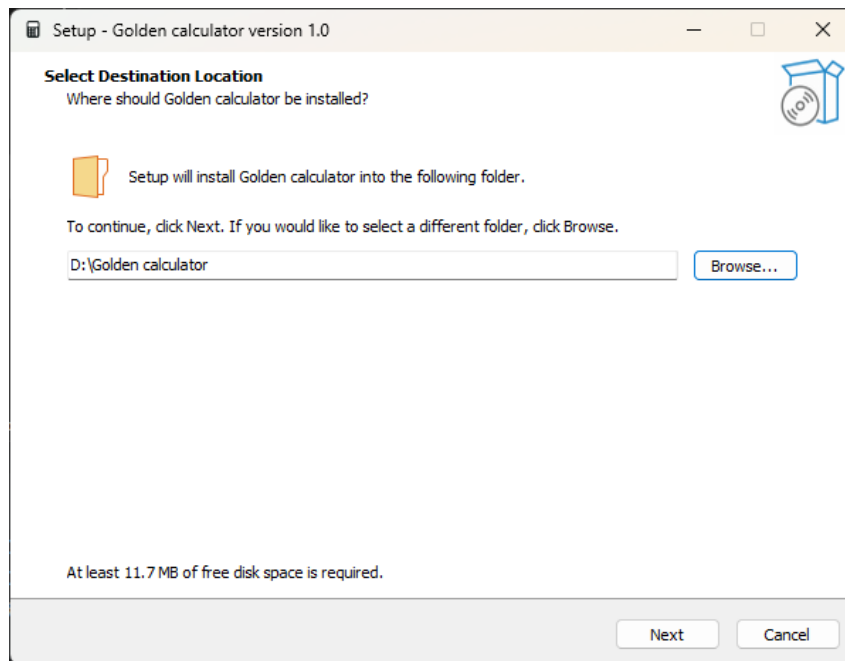2. Follow the on-screen instructions to install the application.

Figure 2: Setup window.

2.3 Uninstalling the Program

2.3.1 Using the Uninstaller

1. Navigate to the installation directory.

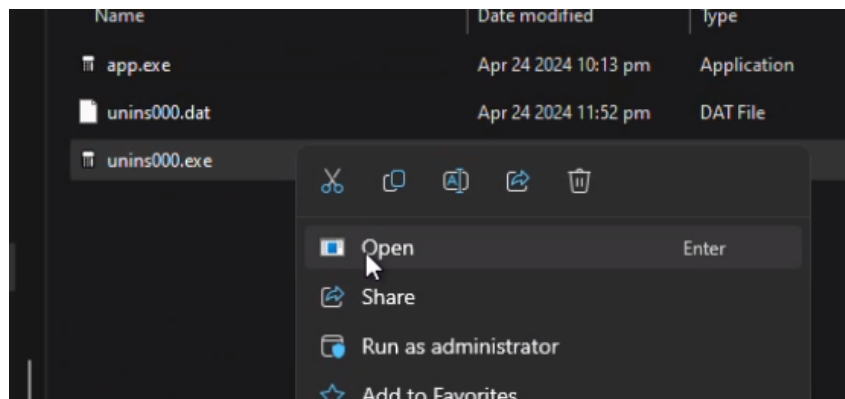2. Run the `unins000.exe` uninstaller.

Figure 3: Uninstalling the program.

3 Working with the Program

3.1 Starting the Application

Double-click the desktop icon or select the program from the start menu.

Figure 4: Calculator window.

3.2 Performing Calculations

- Enter numbers and operations using the mouse or keyboard.

- Click '=' or press the enter key to compute the result.

3.3 Using Advanced Features

- For factorial, enter a number followed by '!'.

- For powers, enter the base, followed by '^', then the exponent.

- For roots, enter the index (if other than 2), followed by '$\sqrt{}$', and then the number.

3.4 Accessing Help:

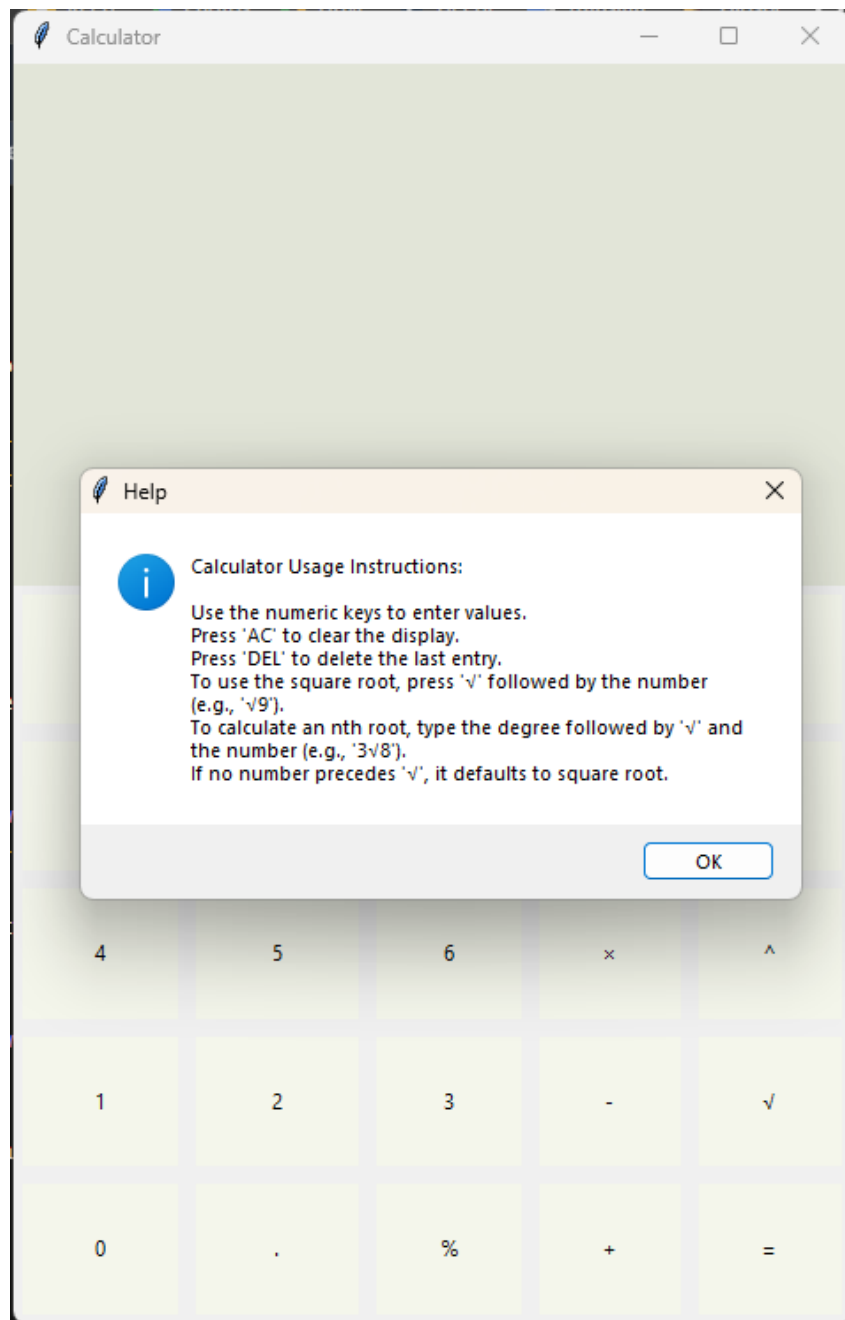Click the '?' button on the GUI to view help about using the calculator.

Figure 5: Calculator help window.

4 Conclusion

This calculator is designed to be intuitive and easy to use, providing both basic and advanced mathematical functions. Help feature provides guidance on using the calculator's advanced features.

The work on this project was carried out by Maksim Kalutski, Volodymyr Kaznacheiev, Murad Mikogaziev and Mikhail Pushkarev from the Faculty of Information Technologies of the Brno University of Technology.