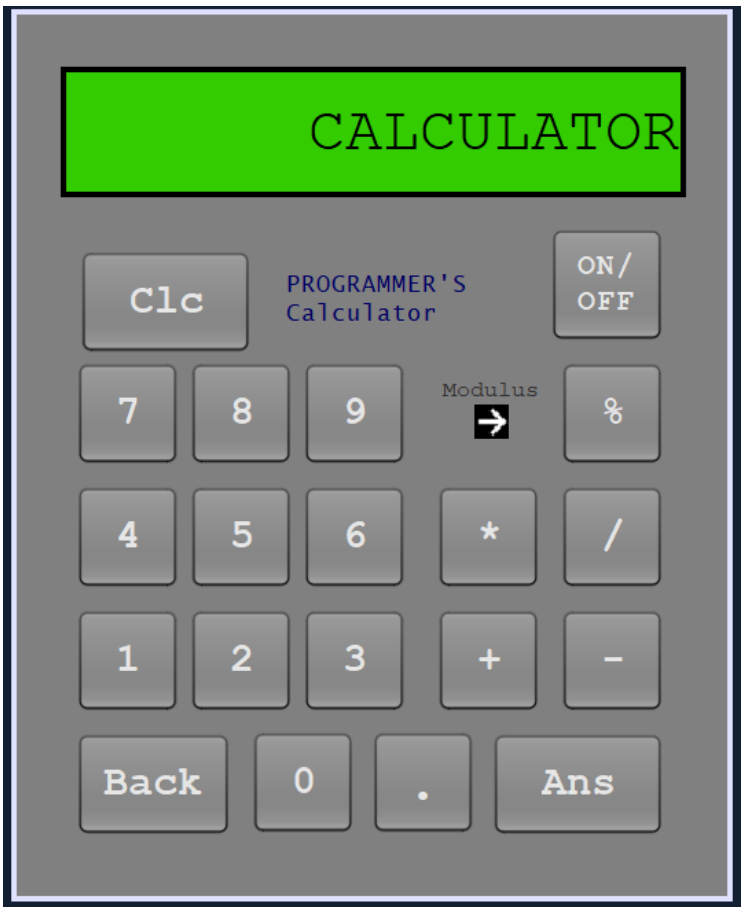
Documentation for the Calculator GUI Application

Developed Using: Apache NetBeans
Database: Not required
Data Structures: None used

GUI Application Interfaces:



(1) Operator Prioritization

The calculator follows a standard order of operations:

- **Highest Priority**: * (multiplication), / (division)
- **Medium Priority**: % (modulus)
- **Lowest Priority**: + (addition), - (subtraction)

(2) Keyboard Key Mappings

The application supports the following keyboard inputs:

- **Numerical Input**: Keys 0-9
- **Operand Input**: Keys +, -, *, /, %
- **Decimal Point**: Key .
- **Backspace**: <-- (deletes the last character)
- **Enter**: = (performs calculation and displays the result)
- **Escape**: Clc (clears the current input)

Note: The ON/OFF functionality is only available via the designated button on the screen.

(3) Application Features and Advancements

- **Decimal Handling**: Supports calculations involving decimals.
- **User-Friendly Interface**: Simple and visually appealing design.
- **Modulus Functionality**: Includes the capability to calculate the modulus (%).
- **Essential Features**:
    - **Back (<--)**: Deletes the last input.
    - **Clear (Clc)**: Clears the current input.
    - **Ans (=)**: Displays the result of the current calculation.
    - **ON/OFF Button**: Powers the calculator on or off.
- **Keyboard Accessibility**: The application is fully operable using keyboard input.

(4) Notable Challenges and Limitations

- **Display Limitations**: The display has limited space for showing large numbers (hint: a maximum limit is set for input).
- **No Input Scroll**: The display does not support scrolling, so any input error must be corrected by deleting characters sequentially from the end.
- **Mathematical Engine**: Uses the Nashorn JavaScript engine, which may be deprecated in future JDK releases.
- **No History Feature**: The application does not maintain a history of previous calculations.

(5) Current Functional Capabilities

- **Startup**:
    - Double-clicking the ON/OFF button toggles the calculator's state. When off, the display shows "CALCULATOR". When on, it displays "0".
- **Input Restrictions**:
    - Operators cannot be the first input; a number must be entered first.
    - Entering an operator after another replaces the previous operator, preventing consecutive operator entries.
- **Decimal Point Handling**:
    - When a decimal point is input directly after an operator, the calculator appends 0 before the point.
- **ON/OFF Functionality**:
    - If the ON/OFF button is pressed during a calculation, the current data is cleared, and "CALCULATOR" is displayed when turned off.