**User Manual for C++ Calculator**

**Introduction**

Welcome to the C++ Calculator This software is designed to parse and evaluate arithmetic expressions containing operators such as +, -, \*, /, %, and ^. It also supports parentheses for defining precedence and grouping in expressions.

**Purpose**

The purpose of this software is to provide a user-friendly tool for evaluating mathematical expressions quickly and accurately. Whether you are a student, a programmer, or anyone working with mathematical expressions, this program will help you parse and evaluate expressions with ease.

**Features**

* Support for basic arithmetic operators: +, -, \*, /, %, and ^.
* Ability to handle parentheses for defining precedence and grouping.
* Quick and accurate evaluation of expressions.
* User-friendly interface for input and output.

**Getting Started**

**Inputting Expressions**

1. Open the program.
2. You'll see an input command line where you can enter your arithmetic expression.
3. Type the expression using valid operators and parentheses.

**Example:**

**(5 + 3) \* 2**

**Operators and Functions**

The program supports the following operators:

* Addition: **+**
* Subtraction: **-**
* Multiplication: **\***
* Division: **/**
* Modulus: **%**
* Exponentiation: **^**

**Evaluating Expressions**

1. Enter the expression on the input line.
2. Press ENTER.
3. The result will be displayed on the output line.

Example:

Input: (5 + 3) \* 2

Output: 16

**Troubleshooting**

**Common Issues**

1. **Invalid Expression:** Check for typos or missing operators.

**Solutions**

If you encounter any issues, refer to the FAQ section.

**Glossary of Terms**

* **Expression:** A mathematical statement containing operators, variables, and constants.
* **Operator:** A symbol indicating a mathematical operation (e.g., +, -, \*, /).
* **Parentheses:** Symbols used to group expressions and define precedence.

**Examples**

**Basic Expression**

**Input:**

5 + 3 \* 2

**Output:**

11

**FAQ**

1. **Q: How do I handle complex expressions with multiple operators?**
   * A: Use parentheses to define the order of operations.
2. **Q: What should I do if the program gives an error?**
   * A: Check for typos. Refer to the troubleshooting section for assistance.

Congratulations! You are now ready to use the C++ Calculator. If you have any further questions, consult the FAQ.