Project Title: Multi-Functional Calculator

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Agenda

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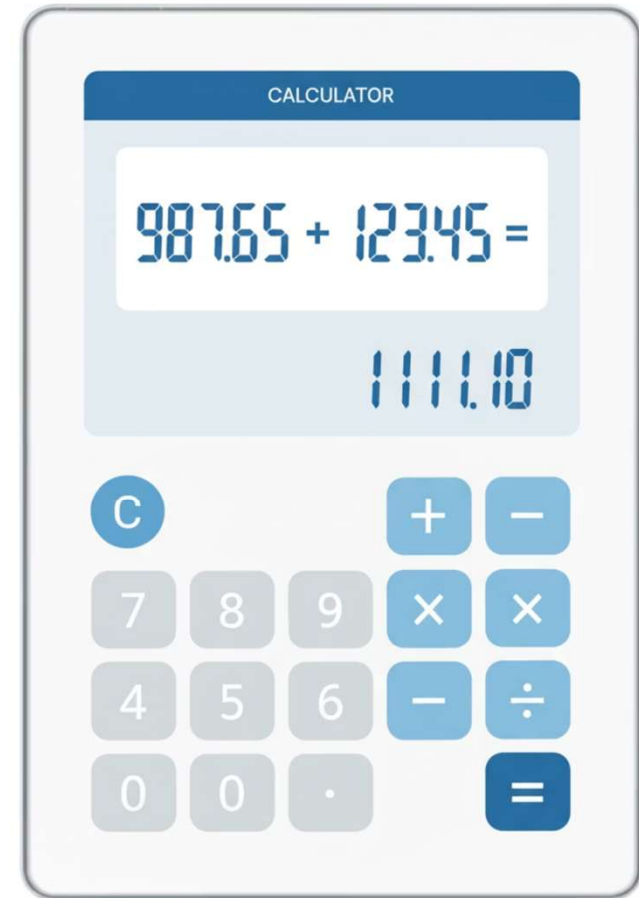4 **Applications**

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Introduction

The Multi-Functional Calculator is a console-based application developed using the C programming language. The project is designed to perform multiple mathematical operations using a menu-driven interface.

It helps in understanding fundamental programming concepts such as functions, switch-case statements, and loops. This project improves logical thinking and problem-solving skills.

Tools and Technologies

Programming Language: C

Compiler: GCC

Editor: Visual Studio Code

Operating System: Windows

Concepts Used:

- Functions
- Switch-case statements
- Loops
- Menu-driven programming

Project Working

Addition

```
PS C:\Users\kumar\OneDrive\Desktop\Learn
 ; if ($?) { gcc Multi_Functional_Calcu
Calculator }

--- Multi-Functional Calculator ---
1. Addition
2. Subtraction
3. Multiplication
4. Division
5. Square Root
6. Power
0. Exit
Enter your choice: 1
Enter first number: 25
Enter second number: -25
Result: 0.00
```

Subtraction

```
--- Multi-Functional Calculator ---
1. Addition
2. Subtraction
3. Multiplication
4. Division
5. Square Root
6. Power
0. Exit
Enter your choice: 2
Enter first number: 25
Enter second number: 26
Result: -1.00
```

Multiplication

```
--- Multi-Functional Calculator ---
1. Addition
2. Subtraction
3. Multiplication
4. Division
5. Square Root
6. Power
0. Exit
Enter your choice: 3
Enter first number: 6
Enter second number: 20
Result: 120.00
```

Division

```
--- Multi-Functional Calculator ---
1. Addition
2. Subtraction
3. Multiplication
4. Division
5. Square Root
6. Power
0. Exit
Enter your choice: 4
Enter dividend: 25
Enter divisor: 5
Result: 5.00
```

Square Root

```
--- Multi-Functional Calculator ---
1. Addition
2. Subtraction
3. Multiplication
4. Division
5. Square Root
6. Power
0. Exit
Enter your choice: 5
Enter number: 36
Result: 6.00
```

Power

```
--- Multi-Functional Calculator ---
1. Addition
2. Subtraction
3. Multiplication
4. Division
5. Square Root
6. Power
0. Exit
Enter your choice: 6
Enter base: 5
Enter power: 3
Result: 125.00
```

Exit

```
--- Multi-Functional Calculator ---
1. Addition
2. Subtraction
3. Multiplication
4. Division
5. Square Root
6. Power
0. Exit
Enter your choice: 0
Calculator Closed
PS C:\Users\kumar\OneDrive\Desktop\Learning\C\Project> []
```

Applications

- Basic mathematical calculations

- Learning tool for C programming students

- Practice for menu-driven programs

- Educational demonstrations

Advantages

✓	💡
Simple and user-friendly	**Easy to understand and modify**
🎓	⚙️
Improves C programming fundamentals	**Modular and efficient design**

Future Scope

Adding advanced mathematical operations

Implementing graphical user interface (GUI)

Storing calculation history

Converting into a desktop or mobile application

Thank You