**Complex Number Calculator**

**By**

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**Introduction**

A **Complex Number Calculator** is a program that enable users to easily input two real and two imaginary numbers that can be simplify Addition, Subtraction, Multiplication and Division. It is a multiple administrative program. It implements the basic operations of complex numbers.

The calculator will simplify any basic complex expression. It will perform addition, subtraction, multiplication, division. In this program I use C++ language for code.

**Aim**

To develop a system that can **Add**, **Sub, Multiply**, **Division** operations of Complex Numbers.

**Objectives**

The main objective of the C++ portfolio on “**Complex Number Calculator**” is to implements the basic operations of complex numbers. The complex number calculator is able to calculate complex numbers when they are in their algebraic form. It allows to perform the basic arithmetic operations: addition, subtraction, division, multiplication of complex numbers where user have to input two Complex numbers.

**Methodology**

A **complex number** is an ordered pair of two real numbers (a, b).

* a is called the real part of (a, b).
* b is called the imaginary part of (a, b).

To represent a complex number, we use the algebraic notation, z = a + ib with i^2 = -1. The **complex number calculator**, allows to perform many operations such as Add, sub, multiply and division on complex numbers. The **complex number calculator** is also called an imaginary number calculator. The complex symbol notes is i.

**Addition of complex numbers:** The **complex number calculator** allows to **calculates** the **sum** of **complex numbers,** to calculate the sum of complex numbers (4-3i) and (-8+2i), after calculation the result (-4-i) is returned.

**Subtraction of complex numbers:** The **complex number calculator** allows to **calculates** the **difference** of **complex numbers,** to calculate the subtract of complex numbers (4-3i) and (-8+2i), after calculation the result (12-5i) is returned.

**Multiplication of complex numbers:** The **complex number calculator** allows to **calculates** the **Multiply** of **complex numbers,** to calculate the multiplication of complex numbers (4-3i) and (-8+2i), after calculation the result (-26+32i) is returned.

**Division of complex numbers:** The **complex number calculator** allows to **calculates** the **Divided** of **complex numbers,** to calculate the division of complex numbers (4-3i) and (-8+2i), after calculation the result (-19/34 + 8/34) or (-0.323529) is returned.