main.cpp

Share Run

Output

```cpp
#include <iostream>
using namespace std;

class Example {
    int sum;

    public:
        int a;
        int b;

    public:
        void displaySum(int inputA, int inputB)
        {
            a = inputA;
            b = inputB;
            sum = a + b;

            cout << a << " + " << b  << " = " << sum << endl;
        }
};

int main ()
{
    Example e1;

    e1.displaySum(5, 27);
    return 0;
}
```

```
/tmp/o8zI33WJ31.o
5 + 27 = 32


=== Code Execution Successful ===
```

main.cpp

Share Run

Output

```cpp
#include <iostream>
using namespace std;

class Student {
    private:
        string name;
        int rollNo;

    public:
        void acceptData()
        {
            cout << "Student Name: ";
            getline(cin, name);
            cout << "Roll Number: ";
            cin >> rollNo;
        }

        void displayData()
        {
            cout << "Student Name: " << name << endl;
            cout << "Roll Number: " << rollNo << endl;
        }
};

int main()
{
    Student s1;

    cout << "Enter Data" << endl;
    s1.acceptData();

    cout << "\nDisplaying Data" << endl;
    s1.displayData();

    return 0;
}
```

```
/tmp/E6902amSsf.o
Enter Data
Student Name: Student 1
Roll Number: 12

Displaying Data
Student Name: Student 1
Roll Number: 12


=== Code Execution Successful ===
```

main.cpp

Share Run

```cpp
#include <iostream>
using namespace std;

class Number {
    private:
        int value;

    public:
        void setValue(int v)
        {
            value = v;
        }

        int getSquare()
        {
            return value * value;
        }
};

int main()
{
    Number num;
    int x;

    cout << "Number: ";
    cin >> x;

    num.setValue(x);
    cout << "Square of " << x << " is " << num.getSquare() << endl;

    return 0;
}
```

Output

```
/tmp/YaQaR6WISw.o
Number: 5
Square of 5 is 25


=== Code Execution Successful ===
```

main.cpp

Share Run

```cpp
#include <iostream>
using namespace std;

class Student {
    private:
        string name;
        int rollNo;

    public:
        void acceptData()
        {
            cout << "Student Name: ";
            getline(cin, name);
            cout << "Roll Number: ";
            cin >> rollNo;
        }

        void displayData()
        {
            cout << "Student Name: " << name << endl;
            cout << "Roll Number: " << rollNo << endl;
        }
};

int main()
{
    Student s1;

    cout << "Enter Data" << endl;
    s1.acceptData();

    cout << "\nDisplaying Data" << endl;
    s1.displayData();

    return 0;
}
```

Output

```
/tmp/E6902amSsf.o
Enter Data
Student Name: Student 1
Roll Number: 12

Displaying Data
Student Name: Student 1
Roll Number: 12


=== Code Execution Successful ===
```

struct and class are mostly similar in functionality
the main difference is that by default, when no access specifier is defined:
struct: Members and Methods are public
class: Members and Methods are private

Both structs and classes can have
Data members (variables)
Member functions (methods)
Constructors and destructors
Inheritance
Polymorphism

main.opp

Share Run

Output

```
#include <iostream>
using namespace std;

class Room {
    private:
        double length;
        double breadth;
        double height;

    public:
        void setDimensions(double l, double b, double h)
        {
            length = l;
            breadth = b;
            height = h;
        }

        double calculateArea()
        {
            return length * breadth;
        }

        double calculateVolume()
        {
            return length * breadth * height;
        }
};

int main()
{
    Room room;
    double length, breadth, height;

    cout << "Length: ";
    cin >> length;
    cout << "Breadth: ";
    cin >> breadth;
    cout << "Height: ";
    cin >> height;

    room.setDimensions(length, breadth, height);

    cout << "Area: " << room.calculateArea() << endl;
    cout << "Volume: " << room.calculateVolume() << endl;

    return 0;
}
```

```
/tmp/0iDfQEhAsv.o
Length: 12.5
Breadth: 18.25
Height: 26.2
Area: 228.125
Volume: 5976.88


=== Code Execution Successful ===
```

main.cpp

Share Run

Output

```
#include <iostream>
using namespace std;

class Mean {
    private:
        double num1;
        double num2;

    public:
        void assign(double a, double b)
        {
            num1 = a;
            num2 = b;
        }

        void displayMean()
        {
            double mean = (num1 + num2) / 2;
            cout << "The mean of " << num1 << " and " << num2 << " is " << mean << endl;
        }
};

int main()
{
    Mean meanObj;

    meanObj.assign(4, 8);
    meanObj.displayMean();

    return 0;
}
```

```
/tmp/J1voFEiYHw.o
The mean of 4 and 8 is 6


=== Code Execution Successful ===
```