Lab 08

```cpp
//Definition of the class rectangleType
//The increment, decrement, arithmetic, and relational
//operator functions are nonmembers of the class.


#include <iostream>

using namespace std;

class rectangleType
{
        //Overload the stream insertion and extraction operators
    friend ostream& operator<<(ostream&, const rectangleType&);
    friend istream& operator>>(istream&, rectangleType&);

        //Overload the arithmetic operators
    friend rectangleType operator+(const rectangleType&,
                                   const rectangleType&);
    friend rectangleType operator-(const rectangleType&,
                                   const rectangleType&);
    friend rectangleType operator*(const rectangleType&,
                                   const rectangleType&);
    friend rectangleType operator/(const rectangleType&,
                                   const rectangleType&);


    //Overload the increment and decrement operators
friend rectangleType operator++(rectangleType&);
    //pre-increment
friend rectangleType operator++(rectangleType&, int);
    //post-increment
friend rectangleType operator--(rectangleType&);
    //pre-decrement
friend rectangleType operator--(rectangleType&, int);
    //post-decrement

    //Overload the relational operators
friend bool operator==(const rectangleType&,
                       const rectangleType&);
friend bool operator!=(const rectangleType&,
                       const rectangleType&);
friend bool operator<=(const rectangleType&,
                       const rectangleType&);
friend bool operator<(const rectangleType&,
                      const rectangleType&);
friend bool operator>=(const rectangleType&,
                       const rectangleType&);
friend bool operator>(const rectangleType&,
                      const rectangleType&);
```

```cpp
public:
    void setDimension(double l, double w);
    double getLength() const;
    double getWidth() const;
    double area() const;
    double perimeter() const;

        //Constructors
    rectangleType();
    rectangleType(double l, double w);

private:
    double length;
    double width;
};
```

Please implement the nonmember function definition and main of the given class.

END