

```
#ifndef RATIONAL_H
#define RATIONAL_H

#include <iostream>
using namespace std;

// Rational ADT: class description
class Rational {
public:
    // default constructor
    Rational();
    // a second constructor
    Rational(int numer, int denom = 1);

    // some arithmetic and stream facilitators
    Rational Add(const Rational &r) const;
    Rational Multiply(const Rational &r) const;
    void Insert(ostream &sout) const;
    void Extract(istream &sin);

private:
    // data members
    int numerator;
    int denominator;

    // private functions
    void Reduce();
};

#endif
```