

Program with a Class Rational Number

```
#include<iostream>
using namespace std;
class Rational
{
private:
    int p;
    int q;
public:
    Rational()
    {
        p=1;
        q=1;
    }
    Rational(int p,int q)
    {
        this->p=p;
        this->q=q;
    }
    Rational(Rational &r)
    {
        this->p=r.p;
        this->q=r.q;
    }
    int getP(){return p;}
    int getQ(){return q;}
    void setP(int p)
    {
        this->p=p;
    }
    void setQ(int q)
    {
        this->q=q;
    }
    Rational operator+(Rational r)
    {
        Rational t;
        t.p=this->p*r.q+this->q*r.p;
        t.q=this->q*r.q;
        return t;
    }
    friend ostream & operator<<(ostream &os,Rational &r);
};
```

```
ostream & operator<<(ostream &os, Rational &r)
{
    os<<r.p<<"/"<<r.q;
    return os;
}
int main()
{
    Rational r1(3,4), r2(2,5), r3;

    r3=r1+r2;
    cout<<"Sum of "<<r1<<" and "<<r2<<" is "<<r3<<endl;
}
```