

*Rational*

-numerator: int  
-denominator: int

```
+Rational()  
+Rational(int numerator_t , int  
denominator_t)  
+Rational(int numerator_t)  
+Rational(const std::string& a)  
+num() const  
+den() const;  
+lcm(int a , int b);  
+set_num (int a);  
+set_den(int a);  
+simplify();  
+from_int_to_string() const;  
+to_double() const;  
+is_positive() const;  
+is_negative() const;  
+is_inf() const;  
+is nan() const;
```

*Rational\_Calc*

```
+Add(Rational a, Rational  
b)  
+Subtract(Rational a,  
Rational b)  
+Multiply(Rational a,  
Rational b)  
+Divide(Rational a,  
Rational b)  
+Pow(Rational a, int pow)  
+Calculate(std::string a,  
Rational a_t, Rational  
b,int n)
```

*Rational\_Processor*

+ choice: string

```
+choice_func()  
+opened(std::string  
file_name)  
+file_operations(std::str  
ing file_name)
```