

Welcome

lab6a.java 9+ X

lab6a.java > lab6a > add()

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1  import java.lang.Math;
2  public class lab6a{
3      // one rational number will be input as "num1/den1" and the other as
4      // "num2/den2"
5      int num1, num2, den1, den2;
6      int num_result, den_result;
7      public lab6a(int num1, int num2, int den1, int den2){
8          this.num1 = num1;
9          this.num2 = num2;
10         this.den1 = den1;
11         this.den2 = den2;
12     }
13     // add two rational numbers and return the result in the same format
14     // "num/den"
15     public String add(){
16         if (den1 == den2){
17             num_result = num1 + num2;
18             den_result = den1;
19         }
20         else{
21             num_result = (num1*den2) + (num2*den1);
22             den_result = den1*den2;
23         }
24         return num_result+"/"+den_result;
25     }
26     // subtract two rational numbers and return the result in the same format
27     // "num/den"
28     public String subtract(){
29         if (den1 == den2){
30             num_result = num1 - num2;
31             den_result = den1;
32         }
33         else{
34             num_result = (num1*den2) - (num2*den1);
35             den_result = den1*den2;
36         }
37         return num_result+"/"+den_result;
38     }
39     // multiply two rational numbers and return the result in the same format
40     // "num/den"
41     public String multiply(){
42         num_result = num1*num2;
43         den_result = den1*den2;
44         return num_result+"/"+den_result;
45     }
46     // divide two rational numbers and return the result in the same format
47     // "num/den"
48     public String divide(){
49         //throwing divideByZero exception is the denominator is zero
50         if (den2 == 0){
51             throw new ArithmeticException("Divide by zero");
52         }
53         else{
54             num_result = num1*den2;
55             den_result = den1*num2;
56             return num_result+"/"+den_result;
57         }
58     }
59     // compare two rational numbers and return the result in the same format
60     // "num/den"
61     public String compare(){
62         if (num1/den1 == num2/den2){
63             return "Both numbers are equal";
64         }
65         else if (num1/den1 > num2/den2){
66             return "First number is greater";
67         }
68         else{
69             return "Second number is greater";
70         }
71     }
72     // convert both rational numbers to floating point and return the result
73     public String convert(){
74         return "First number in floating point: "+(float)num1/den1+"; Second
75         number in floating point: "+(float)num2/den2;
76     }
77     // find absolute value of both rational numbers and return the result
78     public String absolute(){
79         return "Absolute value of first number: "+Math.abs(num1/den1)+";
80         Absolute value of second number: "+Math.abs(num2/den2);
81     }
82 }
83
84

```