Assignment16:(Scala 3)

Task 1 :

Code for calculator is uploaded as separate file

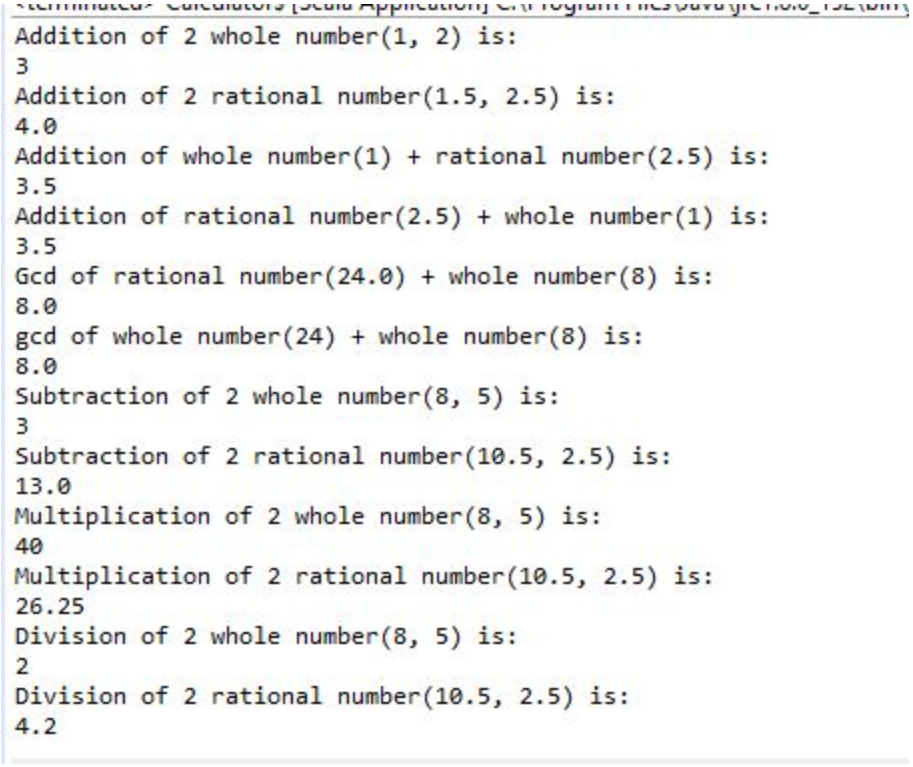
Create a calculator to work with rational numbers. Requirements:
➢ It should provide capability to add, subtract, divide and multiply rational Numbers
➢ Create a method to compute GCD (this will come in handy during operations on rational) Add option to work with whole numbers which are also rational numbers i.e. (n/1)
➢ achieve the above using auxiliary constructors
➢ enable method overloading to enable each function to work with numbers and rational.

Auxiliary Constructors:

As in Java or C++, a Scala class can have as many constructors as you like. They are similar to constructors in Java or C++, with just two differences.

1. The auxiliary constructors are called this. (In Java or C++, constructors have the same name as the class—which is not so convenient if you rename the class.)
2. Each auxiliary constructor *must* start with a call to a previously defined auxiliary constructor or the primary constructor.

Output:


Addition of 2 whole number(1, 2) is:
3
Addition of 2 rational number(1.5, 2.5) is:
4.0
Addition of whole number(1) + rational number(2.5) is:
3.5
Addition of rational number(2.5) + whole number(1) is:
3.5
Gcd of rational number(24.0) + whole number(8) is:
8.0
gcd of whole number(24) + whole number(8) is:
8.0
Subtraction of 2 whole number(8, 5) is:
3
Subtraction of 2 rational number(10.5, 2.5) is:
13.0
Multiplication of 2 whole number(8, 5) is:
40
Multiplication of 2 rational number(10.5, 2.5) is:
26.25
Division of 2 whole number(8, 5) is:
2
Division of 2 rational number(10.5, 2.5) is:
4.2