

Assignment 16

Task1

Create a calculator to work with rational numbers.

//With auxilary constructor

```
class Calc (a:Int, b:Int) {  
  
    def this (a:Int) = this (a,2);  
    def sum() : Int = a+b;  
    def sub() : Int = a-b;  
    def mul() : Int = a*b;  
    def div() : Int = a/b;  
    def gcd(a: Int,b: Int): Int = {  
        if(b ==0) a else gcd(b, a%b)  
    }  
}  
  
object Calc{  
    def main(args: Array[String]) {  
        val cal2 = new Calc(7);  
        println("Addition =" + cal2.sum());  
        println("Difference =" + cal2.sub());  
        println("Product =" + cal2.mul());  
        println("Division =" + cal2.div());  
        println("GCD = " + cal2.gcd(25,15));  
    }  
}
```

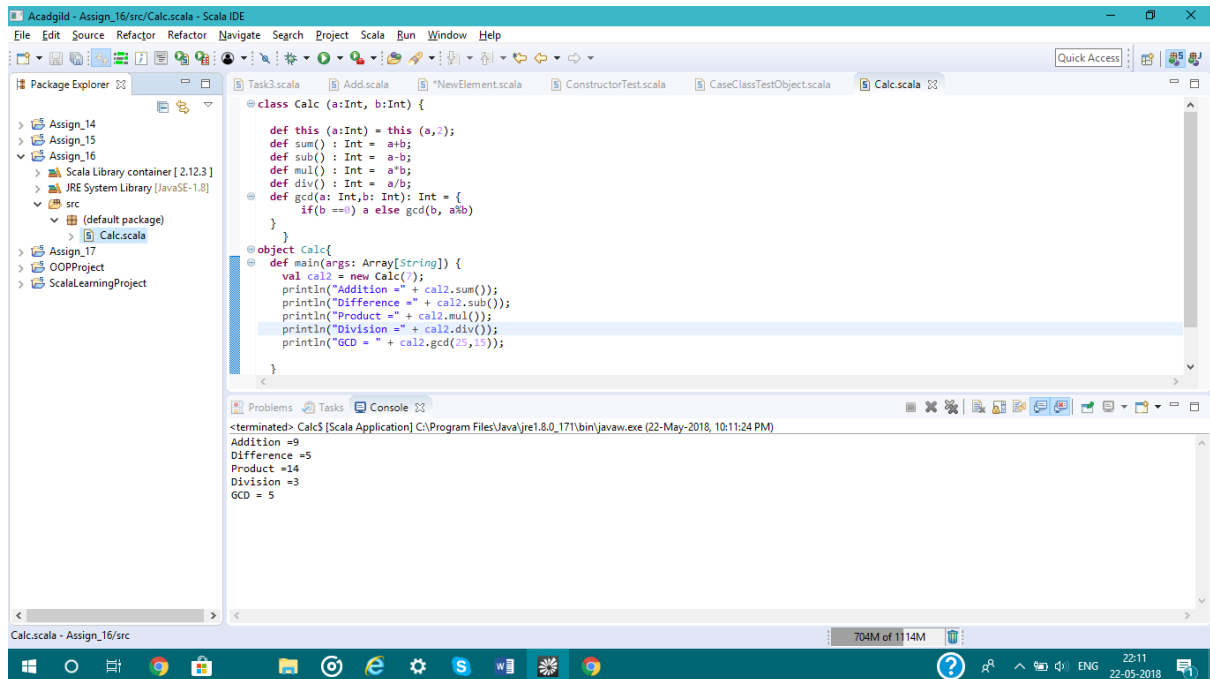
//method overloading

```
class Calc2 {
  def sum(a:Int, b:Int):Int =a+b;
  def sum(a:Int, b:Double) : Double = a+b;
  def sub(a:Int, b:Int):Int =a-b;
  def sub(a:Int, b:Double) : Double= a-b;
  def mul(a:Int,b:Int) : Int = a*b;
  def mul(a:Int, b:Double) : Double =a*b;
  def div(a:Int,b:Int) : Int = a/b;
  def div(a:Int, b:Double) : Double =a/b;
}
object Calc2{
  def main(args: Array[String]) {
    val cal2 = new Calc2();
    println("Addition =" + cal2.sum(7,5));
    println("Addition with Double =" + cal2.sum(7,5.5));
    println("Difference =" + cal2.sub(7,5));
    println("Difference with Double =" + cal2.sub(7,5.5));
    println("Product =" + cal2.mul(3,2));
    println("Product with Double =" + cal2.mul(3,2.5));
    println("Division =" + cal2.div(6,3));
    println("Division with Double =" + cal2.div(6,3.0));

  }
}
```

Screenshots

//with auxiliary constructor



//method overloading

