Assignment 13.1:

Problem Statement:
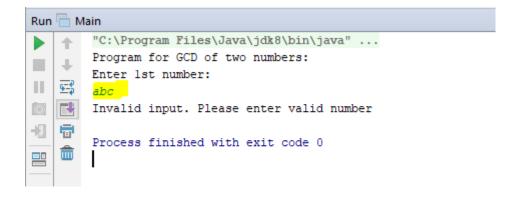
Create a Scala application to find the GCD of two numbers.

Program:

```scala
import scala.annotation.tailrec

object Main {
  @tailrec
  def gcd(a: Int, b: Int): Int =
    if (b == 0) a else gcd(b, a % b)

  def main(args: Array[String]): Unit = {
    println("Program for GCD of two numbers:")
    var num1:Int = 0
    var num2:Int = 0
    try {
      println("Enter 1st number:")
      num1 = scala.io.StdIn.readLine().toInt

      println("Enter 2st number:")
      num2 = scala.io.StdIn.readLine().toInt

      print("GCD of the entered numbers is: "+gcd(num1,num2))
    }catch {
      case ex: Exception =>{
        println("Invalid input. Please enter valid number")
      }
    }
    //println(gcd(27, 18))
  }
}
```

Output:

Case 1: Enter invalid input

```
Run    Main
    "C:\Program Files\Java\jdk8\bin\java" ...
    Program for GCD of two numbers:
    Enter 1st number:
    abc
    Invalid input. Please enter valid number

    Process finished with exit code 0
```

Case 2: Enter both valid inputs

```
Run    Main
    "C:\Program Files\Java\jdk8\bin\java" ...
    Program for GCD of two numbers:
    Enter 1st number:
    5
    Enter 2st number:
    10
    GCD of the entered numbers is: 5
    Process finished with exit code 0
```