



SCALA - SESSION II

Assignment

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Course: Big Data Hadoop & Spark Training

Assignment 1 –Create a Scala application to find the GCD of two numbers.

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Introduction

In this assignment, we are going to use **IntelliJ IDE** to create a SCALA application to find GCD of two numbers.

Problem Statement

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

Task: GCD of two numbers

Before going to create a SCALA application, we will just see the overview of GCD formula.

Greatest Common Divisor (GCD) of two or more integers, which are not all zero, is the largest positive integer that divides each of the integers.

For example, the **gcd of 8 and 12 is 4.**

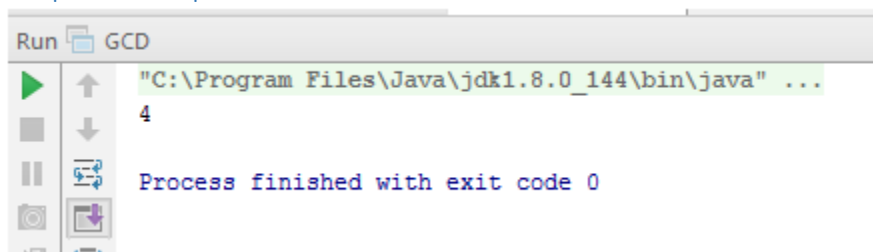
Scala Application using IntelliJ

In the below scala code, we are going to find the gcd of the two numbers 12 and 8.

```
package Assignmane_13_1                                //package which we created

object GCD //a new object GCD is created
{
    def gcd(a: Int,b: Int): Int = {                    // declaring a function gcd
        if(b == 0) a else gcd(b, a%b)                 2 integer variables a,b
    }
    def main(args: Array[String])                    // Our main function takes in a named
    {                                                  parameter args which is an Array of String.
        println(gcd(12,8))                            // print the result
    }
}
```

Required Output





Screen Shot

The screenshot shows an IDE interface with the following components:

- Project Explorer (Left):** Displays the project structure for 'Assignment_13_1 [assignment_13_1]'. The 'src/main/scala' directory is expanded, showing a file named 'GCD'. The 'target' directory is highlighted in yellow.
- Code Editor (Center):** Displays the content of 'GCD.scala'. The code defines a package, an object, and two methods: 'gcd' and 'main'.

```
1 package Assignment_13_1
2
3 object GCD
4 {
5     def gcd(a: Int, b: Int): Int = {
6         if (b == 0) a else gcd(b, a % b)
7     }
8     def main(args: Array[String]) {
9         println(gcd(12, 8))
10    }
11 }
12
```
- Run Console (Bottom):** Shows the execution of the 'GCD' object. The command executed is `"C:\Program Files\Java\jdk1.8.0_144\bin\java" ...`. The output is `4`, and the process finished with exit code 0.