Assignment 13.1

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

Solution:-

CD (Greatest Common Divisor) or HCF (Highest Common Factor) of two numbers is the largest number that divides both of them.

For example:-

36 = 2 x 2 x 3 x 3

60 = 2 x 2 x 3 x 5
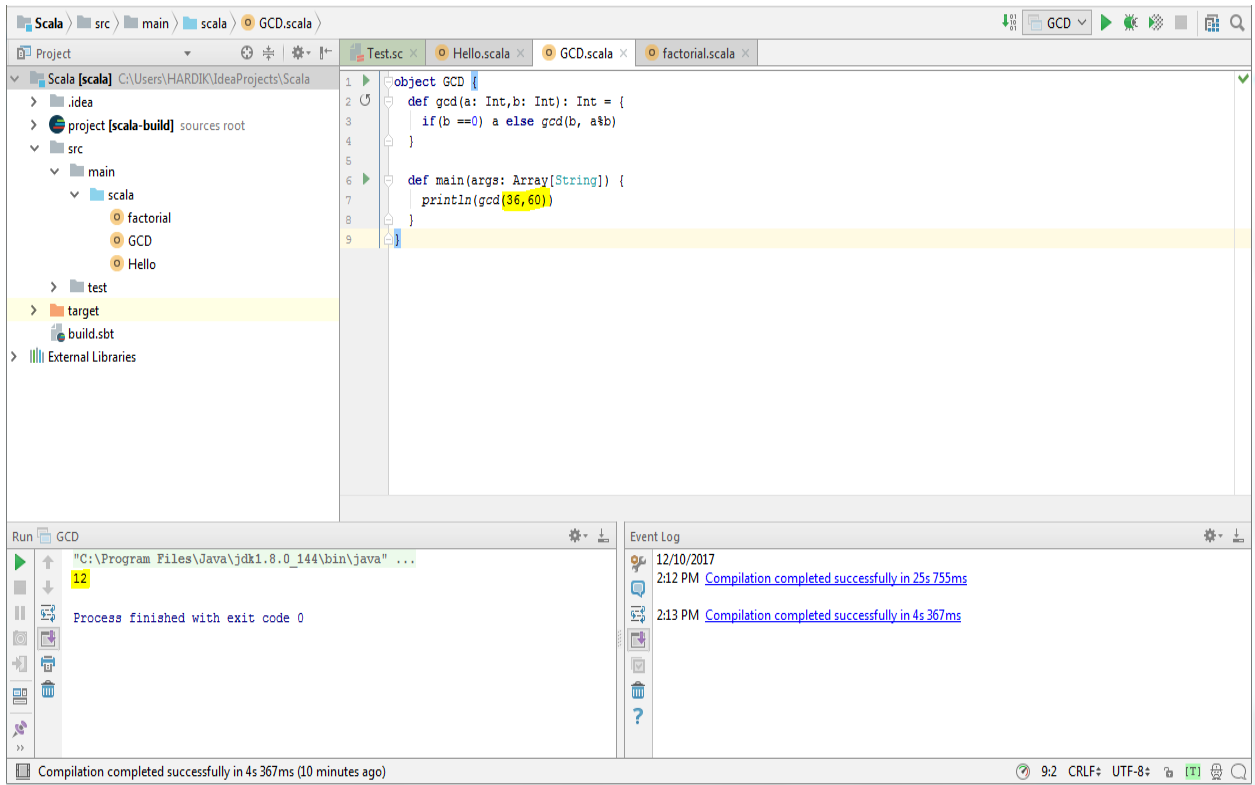
GCD = Mulipication of common factors

= 2 x 2 x 3 = 12

Thus,Scala Application to find GCD of two numbers is as follows:-

```
object GCD {

  def gcd(a: Int,b: Int): Int = {

    if(b ==0) a else gcd(b, a%b)

  }

  def main(args: Array[String]) {

    println(gcd(36,60))

  }

}
```

Test.sc   Hello.scala   GCD.scala   factorial.scala

```scala
object GCD {
  def gcd(a: Int,b: Int): Int = {
    if(b ==0)  a  else  gcd(b, a%b)
  }

  def main(args: Array[String]) {
    println(gcd(36,60))
  }
}
```
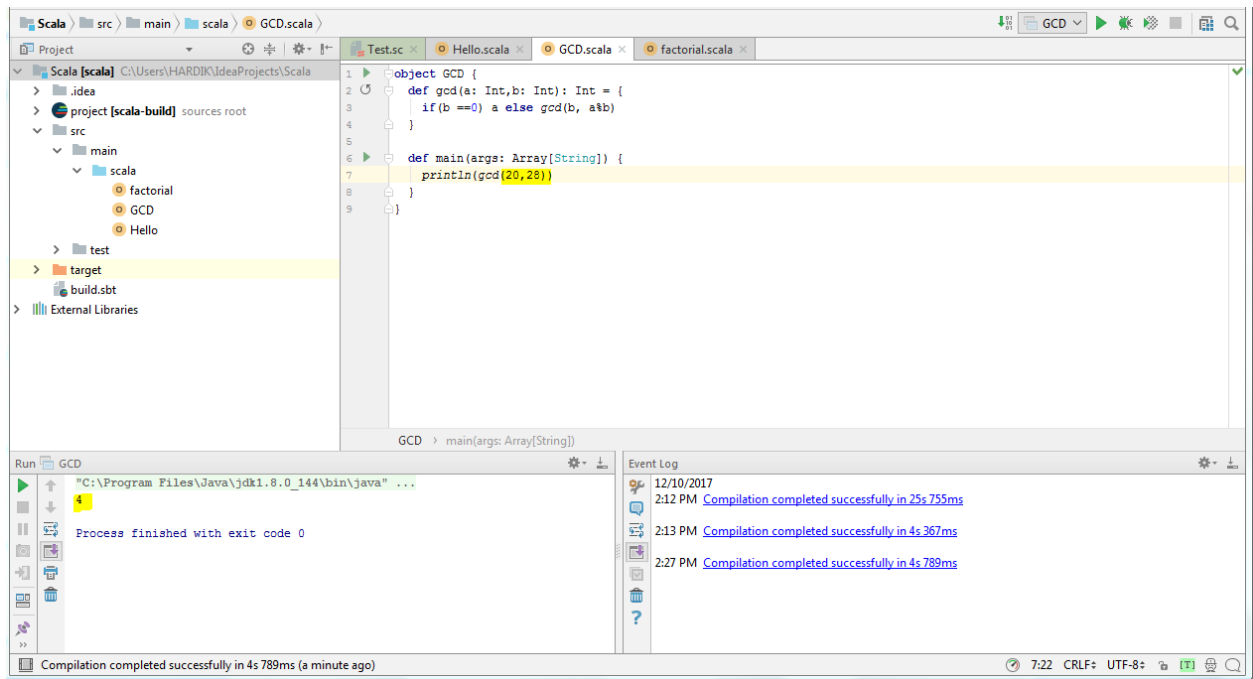
Project

- Scala [scala] C:\Users\HARDIK\IdeaProjects\Scala
  - .idea
  - project [scala-build] sources root
  - src
    - main
      - scala
        - factorial
        - GCD
        - Hello
    - test
  - target
  - build.sbt
- External Libraries

Run   GCD

```
"C:\Program Files\Java\jdk1.8.0_144\bin\java" ...
12

Process finished with exit code 0
```

Compilation completed successfully in 4s 367ms (10 minutes ago)   9:2 CRLF UTF-8 [T]

Than now try with other set of numbers as 20 and 28

20 = 4 x 5

28 = 4 x 7

GCD = 4

Submitted By:-

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