Problem Statement

Task 1

Create a Scala application to find the GCD of two numbers

Task 3

Find square root of number using Babylonian method.
1. Start with an arbitrary positive start value x (the closer to the root, the better).
2.Initialize y = 1.
3. Do following until desired approximation is achieved.
a) Get the next approximation for root using average of x and y
b) Set y = n/x

Task1:-

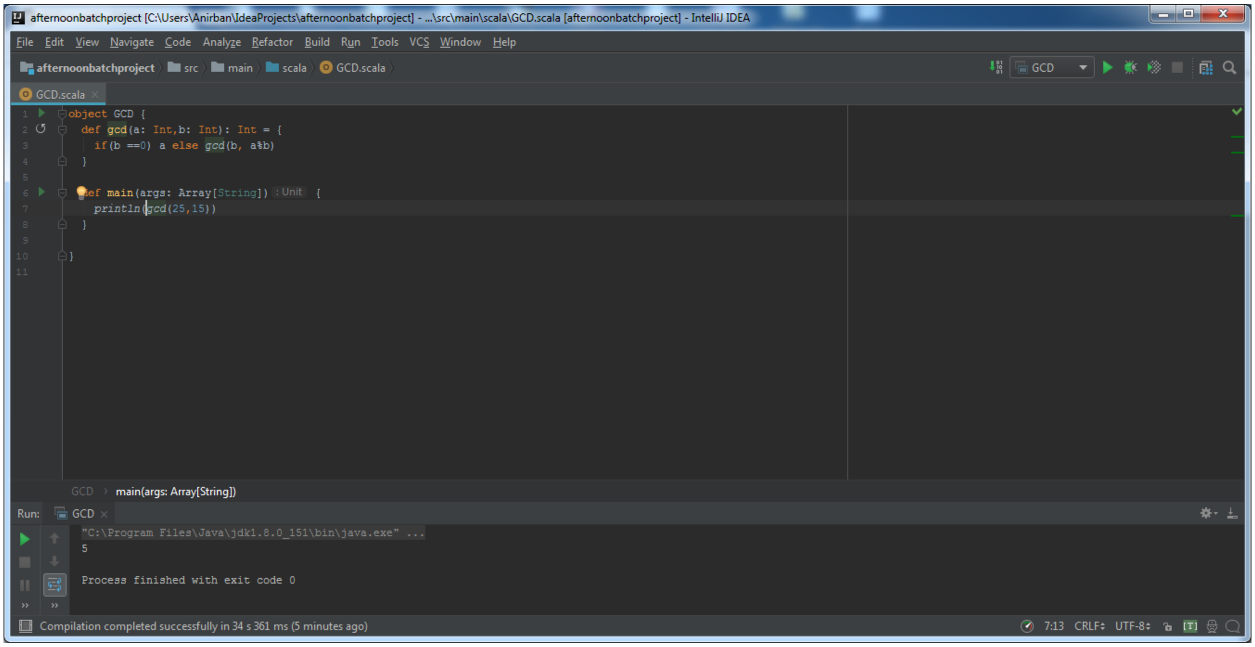
COMMANDS:-

```
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(25,15))
  }

}
```

EXPLANATION:-

Here we find the GCD of two numbers:- 25 and 15.

OUTPUT:-


afternoonbatchproject [C:\Users\Anirban\IdeaProjects\afternoonbatchproject] - ...\src\main\scala\GCD.scala [afternoonbatchproject] - IntelliJ IDEA
File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
afternoonbatchproject src main scala GCD.scala
GCD
GCD.scala
GCD main(args: Array[String])
Run: GCD

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

  def main(args: Array[String]) : Unit  {
    println(gcd(25,15))
  }

}
```

```
"C:\Program Files\Java\jdk1.8.0_151\bin\java.exe" ...
5

Process finished with exit code 0
```

Compilation completed successfully in 34 s 361 ms (5 minutes ago)

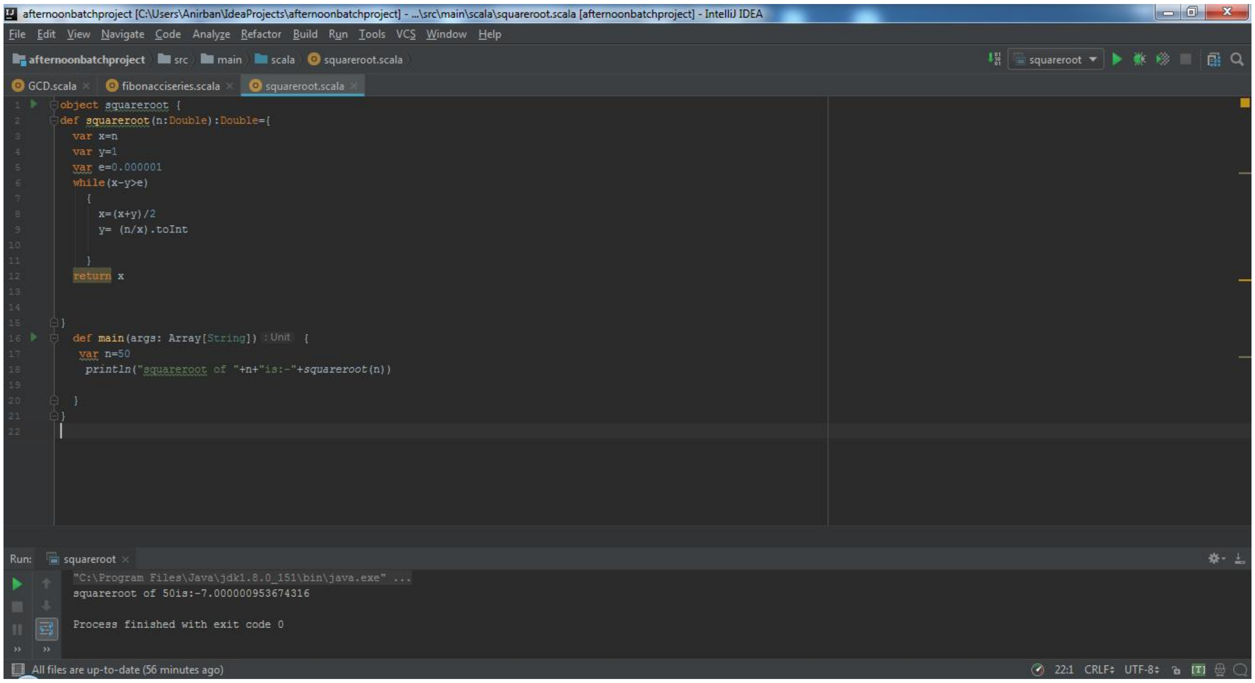
Task3:-

COMMANDS:-

```
object squareroot {
def squareroot(n:Double):Double={
  var x=n
  var y=1
  var e=0.000001
  while(x-y>e)
    {
      x=(x+y)/2
      y= (n/x).toInt

    }
  return x


}
  def main(args: Array[String]) {
   var n=50
    println("squareroot of "+n+"is:-"+squareroot(n))

  }
}
```

EXPLANATION:-Here we found the squareroot of number using Babylonian method.

OUTPUT:-



afternoonbatchproject [C:\Users\Anirban\IdeaProjects\afternoonbatchproject] - ...\src\main\scala\squareroot.scala [afternoonbatchproject] - IntelliJ IDEA
File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
afternoonbatchproject src main scala squareroot.scala
squareroot
GCD.scala
fibonacciseries.scala
squareroot.scala
: Unit
Run:
squareroot
22:1 CRLF UTF-8

```scala
object squareroot {
def squareroot(n:Double):Double={
  var x=n
  var y=1
  var e=0.000001
  while(x-y>e)
    {
      x=(x+y)/2
      y= (n/x).toInt

    }
  return x


}
  def main(args: Array[String])  {
   var n=50
    println("squareroot of "+n+"is:-"+squareroot(n))

  }
}
```

```
"C:\Program Files\Java\jdk1.8.0_151\bin\java.exe" ...
squareroot of 50is:-7.000000953674316

Process finished with exit code 0
```

All files are up-to-date (56 minutes ago)