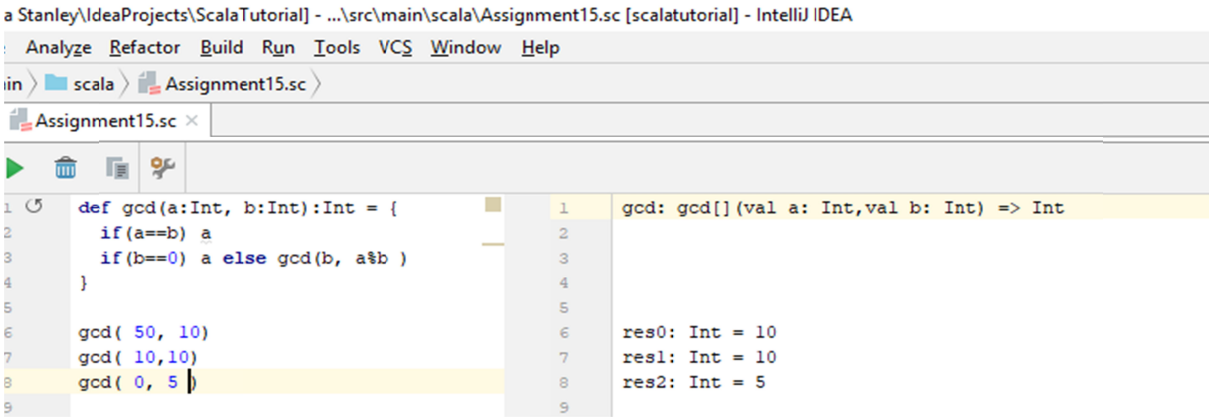
Task 1

Create a Scala application to find the GCD of two numbers



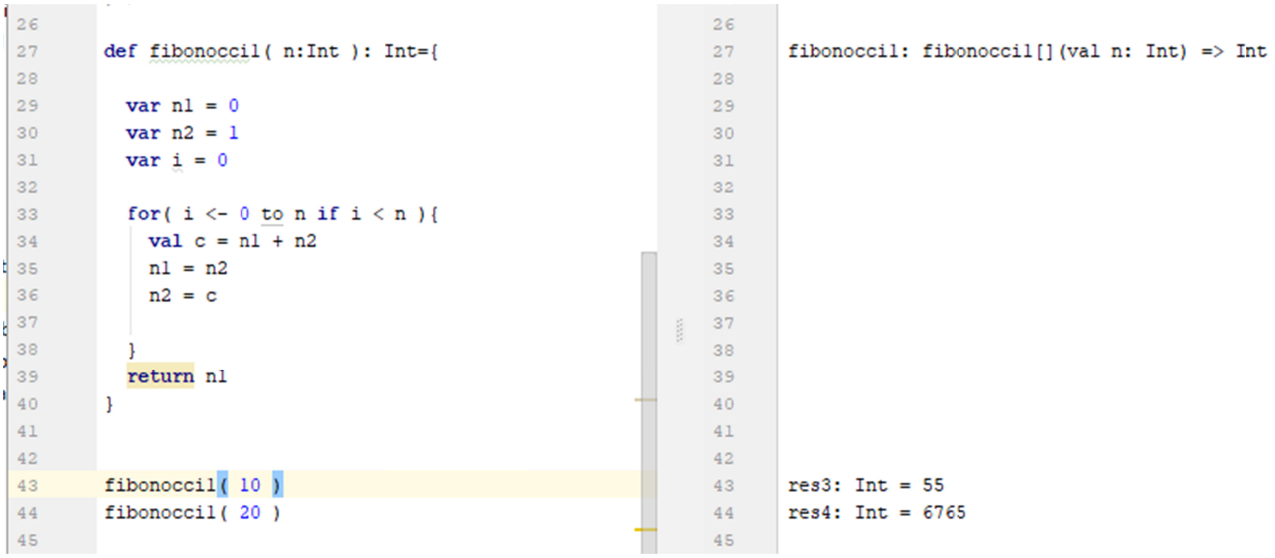
Task 2

Fibonacci series (starting from 1) written in order without any spaces in between, thus

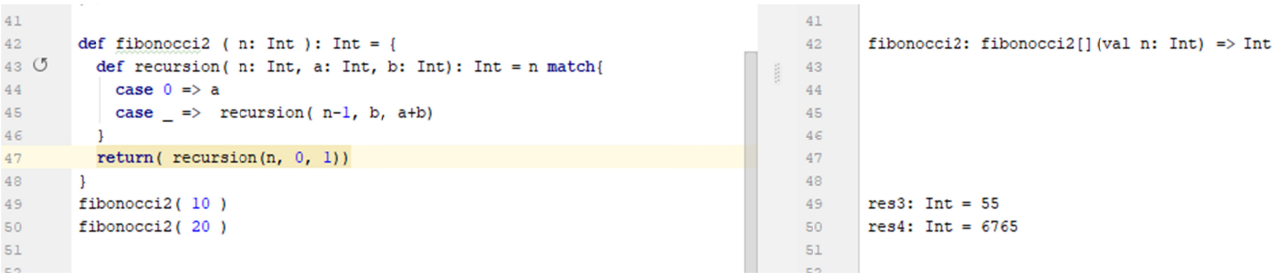
producing a sequence of digits.

Write a Scala application to find the Nth digit in the sequence.

➢ Write the function using standard for loop



➢ Write the function using recursion



Task 3

Find square root of number using Babylonian method.

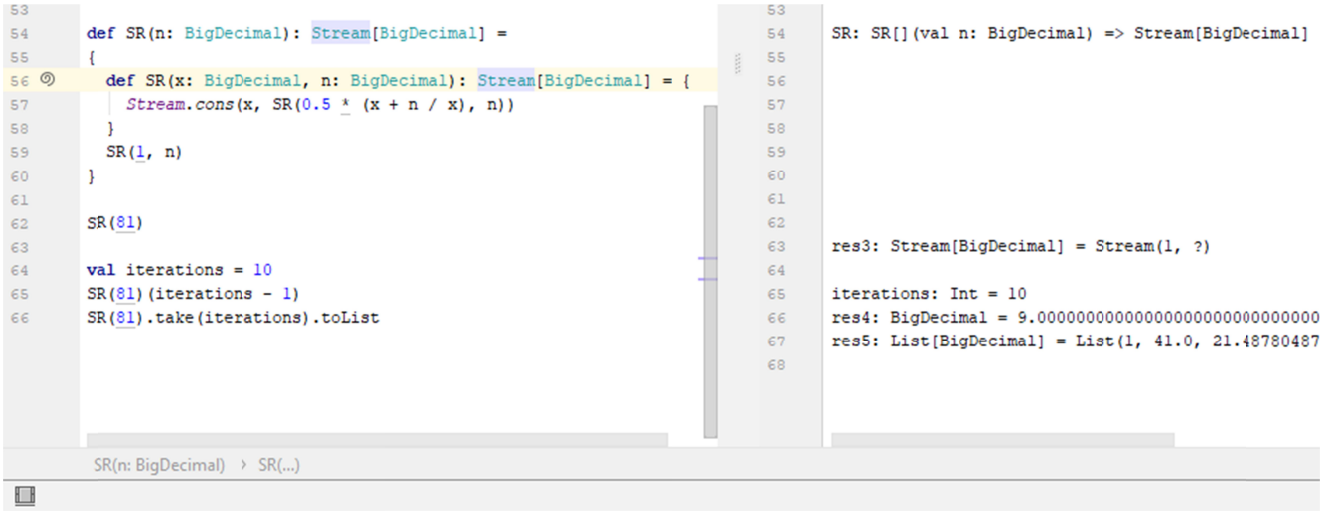
1. Start with an arbitrary positive start value x (the closer to the root, the better).

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



Output:

SR: SR[](val n: BigDecimal) => Stream[BigDecimal]

res3: Stream[BigDecimal] = Stream(1, ?)

iterations: Int = 10

res4: BigDecimal = 9.000000000000000000000000000000000

res5: List[BigDecimal] = List(1, 41.0, 21.487804878048780487804878049,
12.628692450375128041859306220758 01, 9.521329066772004602215646432912058,
9.014272376994607516886591168570482, 9.000011298790216061592675931729374,
9.000000000007092361115353800790776, 9.000000000000000000000002794532566,
9.000000000000000000000000000000000)