

Scala Programing

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The "MathUtils" object contains the factorial method. This method calculates the factorial of a given number using recursion. If the number is 0 or 1, it returns 1. Otherwise, it recursively calls itself with n - 1 and multiplies the result by n. The "Main" object contains the main method where you can test the factorial method. In this example, it calculates the factorial of the number 4 and 10 and prints the result.

Code:

```
object MathUtils {  
  def factorial(n: Int): BigInt = {  
    if (n == 0 || n == 1) {  
      1  
    } else {  
      n * factorial(n - 1)  
    }  
  }  
}  
  
object Main {  
  def main(args: Array[String]): Unit = {  
    val number1 = 0  
    val result1 = MathUtils.factorial(number1)  
    println(s"The factorial of $number1 is: $result1")  
    val number2 = 1  
    val result2 = MathUtils.factorial(number2)  
    println(s"The factorial of $number2 is: $result2")  
  }  
}
```

Output1:

Output:

The factorial of 0 is: 1

The factorial of 1 is: 1

Output2:

Output:

The factorial of 4 is: 24

The factorial of 7 is: 5040