

SCALA PROGRAMMING

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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

```
1 object MathUtils {
2     def factorial(n: Int): BigInt = {
3         if (n == 0 || n == 1) {
4             1
5         }
6         else {
7             n * factorial(n - 1)
8         }
9     }
10 }
11 object Main {
12     def main(args: Array[String]): Unit = {
13         val number1 = 4
14         val result1 = MathUtils.factorial(number1)
15         println(s"The factorial of $number1 is: $result1")
16         val number2 = 10
17         val result2 = MathUtils.factorial(number2)
18         println(s"The factorial of $number2 is: $result2")
19     }
20 }
```

Output

Output:

```
The factorial of 4 is: 24
The factorial of 10 is: 3628800
```

GitHub Link: <https://github.com/arj1-1n/Scala>