

JAIN UNIVERSITY
SUBJECT :- SCALA PROGRAMMING
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QUESTION:-


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 = 4
    val result1 = MathUtils.factorial(number1)
    println(s"The factorial of $number1 is: $result1")
    val number2 = 10
    val result2 = MathUtils.factorial(number2)
    println(s"The factorial of $number2 is: $result2")
  }
}
```

HelloWorld.scala

3zmhcvdn3 

NEW

SCALA RUN 

```
1
2 object MathUtils {
3   def factorial(n: Int): BigInt = {
4     if (n == 0 || n == 1) {
5       1
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 }
21
```

STDIN

Input for the program (Optional)

Output:

The factorial of 4 is: 24

The factorial of 10 is: 3628800