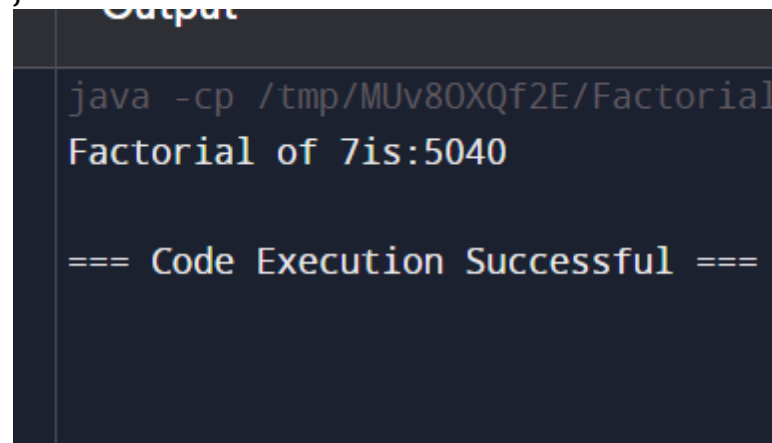


1.write a java program of factorial number using recursion method

```
public class Factorial {  
    public static int factorial(int n) {  
        if (n<=1) {  
            return 1;  
        } else {  
            return n*factorial(n-1);  
        }  
    }  
    public static void main(String[] args) {  
        int number=7;  
        int result=factorial(number);  
        System.out.println("Factorial of "+number+"is:"+result);  
    }  
}
```



The screenshot shows a terminal window with a dark background. At the top, the word "Output" is written in a light blue font. Below it, the command `java -cp /tmp/MUv80XQf2E/Factorial` is entered. The output of the program is displayed in a light blue font: `Factorial of 7is:5040`. At the bottom, a status message `=== Code Execution Successful ===` is shown in a light blue font.

2.fibonacci using recursion

```
public class Fibonacci {  
    public static int fibonacci(int n) {  
        if (n<=1) {  
            return n;  
        } else {  
            return fibonacci(n-1)+fibonacci(n-2);  
        }  
    }  
    public static void main(String[] args) {  
        int count=10;  
        System.out.print("Fibonacci series: ");  
        for (int i=0;i<count;i++) {  
            System.out.print(fibonacci(i)+" ");  
        }  
    }  
}
```

```
java -cp /tmp/cyav9p1wHR/Fibonacci
Fibonacci series: 0 1 1 2 3 5 8 13 21 34
=== Code Execution Successful ===
```

3.palindrome using recursion

```
public class Palindrome {
    public static boolean isPalindrome(String str, int start, int end) {
        if (start >= end) {
            return true;
        }
        if (str.charAt(start) != str.charAt(end)) {
            return false;
        }
        return isPalindrome(str, start + 1, end - 1);
    }
    public static void main(String[] args) {
        String word = "racecar";
        boolean result = isPalindrome(word, 0, word.length() - 1);
        if (result) {
            System.out.println(word + " is a palindrome.");
        } else {
            System.out.println(word + " is not a palindrome.");
        }
    }
}
```

4.print the given number in reverse order

```
public class ReverseSeries {
    public static void printReverse(int n) {
        if (n < 1) {
            return;
        }
        System.out.print(n + " ");
        printReverse(n - 1);
    }
    public static void main(String[] args) {
        int number = 10;
    }
}
```

```
    printReverse(number);  
  }  
}
```

```
java -cp /tmp/S8yoscMYN0/ReverseSerie  
10 9 8 7 6 5 4 3 2 1  
=== Code Execution Successful ===
```

5.add the given series using recursion

```
public class SeriesSum {  
    public static int addSeries(int n) {  
        if (n <= 0) {  
            return 0;  
        }  
        return n + addSeries(n - 1);  
    }  
    public static void main(String[] args) {  
        int number = 5;  
        int sum = addSeries(number);  
        System.out.println("Sum of series from 1 to " + number + " is: " + sum);  
    }  
}
```

```
n      Output  
java -cp /tmp/1ZokacSnZX/SeriesSum  
Sum of series from 1 to 5 is: 15  
=== Code Execution Successful ===
```