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Main.javaRunOutputClear

```
1 public class AmicableNumbers {
2     // Function to find the sum of proper divisors of a number
3     public static int sumOfDivisors(int number) {
4         int sum = 1; // 1 is a divisor of all numbers
5         for (int i = 2; i <= Math.sqrt(number); i++) {
6             if (number % i == 0) {
7                 sum += i;
8                 if (i != number / i) {
9                     sum += number / i;
10                }
11            }
12        }
13        return sum;
14    }
15
16    // Function to check if two numbers are amicable
17    public static boolean areAmicable(int num1, int num2) {
18        return sumOfDivisors(num1) == num2 && sumOfDivisors(num2) == num1;
19    }
20
21    // Function to calculate the product of two numbers and check if it's a palindrome
22    public static boolean isPalindromeProduct(int num1, int num2) {
23        int product = num1 * num2;
24        String productStr = String.valueOf(product);
25        StringBuilder reversedProductStr = new StringBuilder(productStr).reverse();
26        return productStr.equals(reversedProductStr.toString());
27    }
28
29    public static void main(String[] args) {
30        int num1 = 220;
31        int num2 = 284;
32
33        if (areAmicable(num1, num2)) {
34            System.out.println(num1 + " and " + num2 + " are amicable numbers");
35
36            if (isPalindromeProduct(num1, num2)) {
```

```
java -cp /tmp/9oPapwhLzH/AmicableNumbers
220 and 284 are amicable numbers
Their Product 62480 does not produce a Palindrome

=== Code Execution Successful ===
```

Windows Taskbar

System Tray

Main.java

```

10         }
11     }
12 }
13 return sum;
14 }
15
16 // Function to check if two numbers are amicable
17 public static boolean areAmicable(int num1, int num2) {
18     return sumOfDivisors(num1) == num2 && sumOfDivisors(num2) == num1;
19 }
20
21 // Function to calculate the product of two numbers and check if it's a palindrome
22 public static boolean isPalindromeProduct(int num1, int num2) {
23     int product = num1 * num2;
24     String productStr = String.valueOf(product);
25     StringBuilder reversedProductStr = new StringBuilder(productStr).reverse();
26     return productStr.equals(reversedProductStr.toString());
27 }
28
29 public static void main(String[] args) {
30     int num1 = 220;
31     int num2 = 284;
32
33     if (areAmicable(num1, num2)) {
34         System.out.println(num1 + " and " + num2 + " are amicable numbers");
35
36         if (isPalindromeProduct(num1, num2)) {
37             System.out.println("Their Product " + (num1 * num2) + " produces a Palindrome");
38         } else {
39             System.out.println("Their Product " + (num1 * num2) + " does not produce a Palindrome");
40         }
41     } else {
42         System.out.println(num1 + " and " + num2 + " are not amicable numbers");
43     }
44 }
45 }

```

Output

```
java -cp /tmp/9oPapwhLzH/AmicableNumbers
220 and 284 are amicable numbers
Their Product 62480 does not produce a Palindrome

=== Code Execution Successful ===
```


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Main.javaRunOutputClear

```
1 import java.util.Scanner;
2
3 public class AmicableNumberss {
4     // Function to find the sum of proper divisors of a number
5     public static int sumOfDivisors(int number) {
6         int sum = 1; // 1 is a divisor of all numbers
7         for (int i = 2; i <= Math.sqrt(number); i++) {
8             if (number % i == 0) {
9                 sum += i;
10                if (i != number / i) {
11                    sum += number / i;
12                }
13            }
14        }
15        return sum;
16    }
17
18    // Function to check if two numbers are amicable
19    public static boolean areAmicable(int num1, int num2) {
20        return sumOfDivisors(num1) == num2 && sumOfDivisors(num2) == num1;
21    }
22
23    // Function to calculate the product of two numbers and check if it's a palindrome
24    public static boolean isPalindromeProduct(int num1, int num2) {
25        int product = num1 * num2;
26        String productStr = String.valueOf(product);
27        StringBuilder reversedProductStr = new StringBuilder(productStr).reverse();
28        return productStr.equals(reversedProductStr.toString());
29    }
30
31    public static void main(String[] args) {
32        Scanner scanner = new Scanner(System.in);
33
34        System.out.println("Enter the first number:");
35        int num1 = scanner.nextInt();
36    }
```

```
java -cp /tmp/ERlJ2n68g0/AmicableNumberss
Enter the first number:
6
Enter the second number:
256
6 and 256 are not amicable numbers

=== Code Execution Successful ===
```

Windows Taskbar

System Tray



Output

Clear

```
java -cp /tmp/ER1J2n68g0/AmicableNumbers$
Enter the first number:
6
Enter the second number:
256
6 and 256 are not amicable numbers

=== Code Execution Successful ===
```