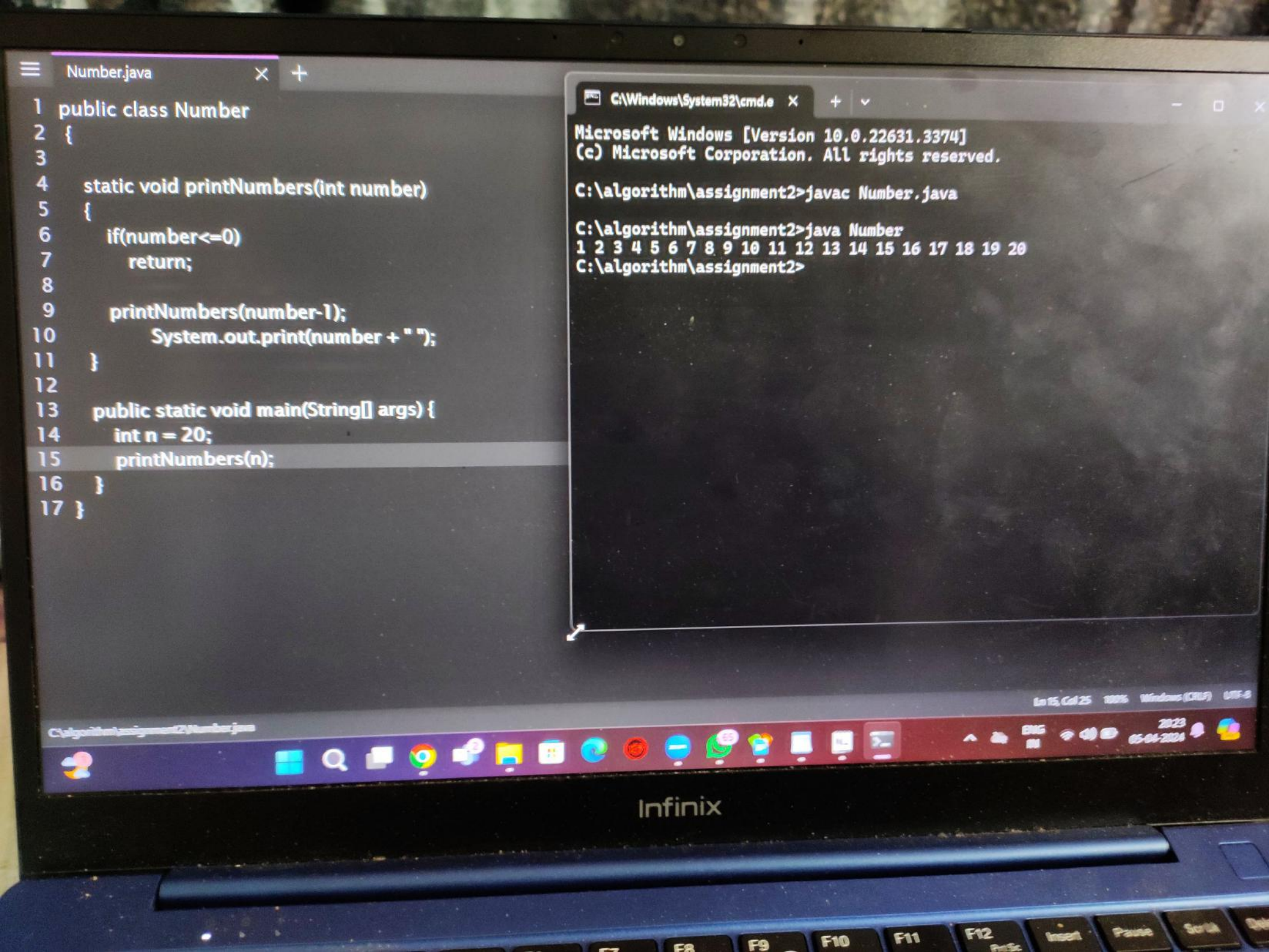
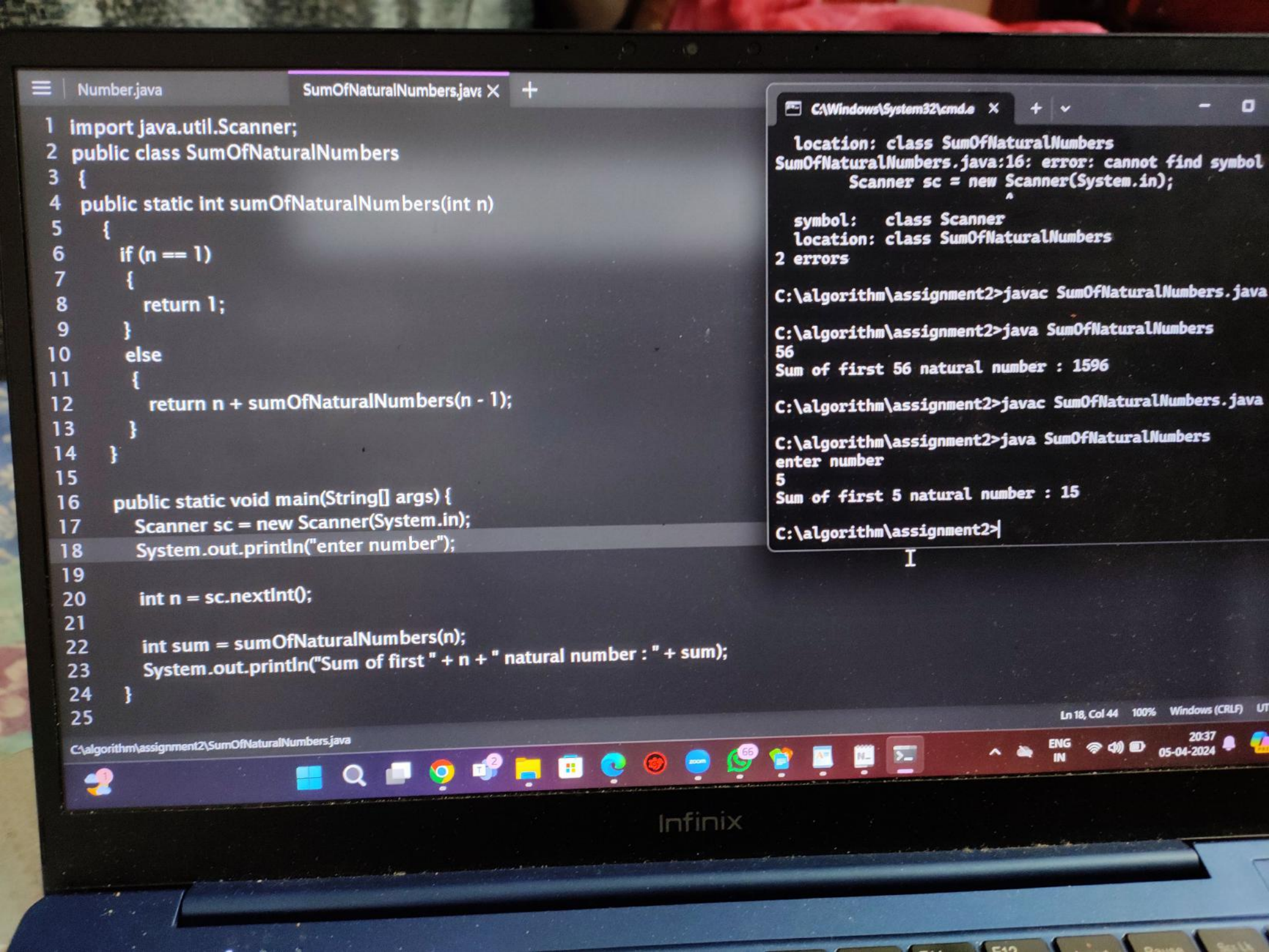
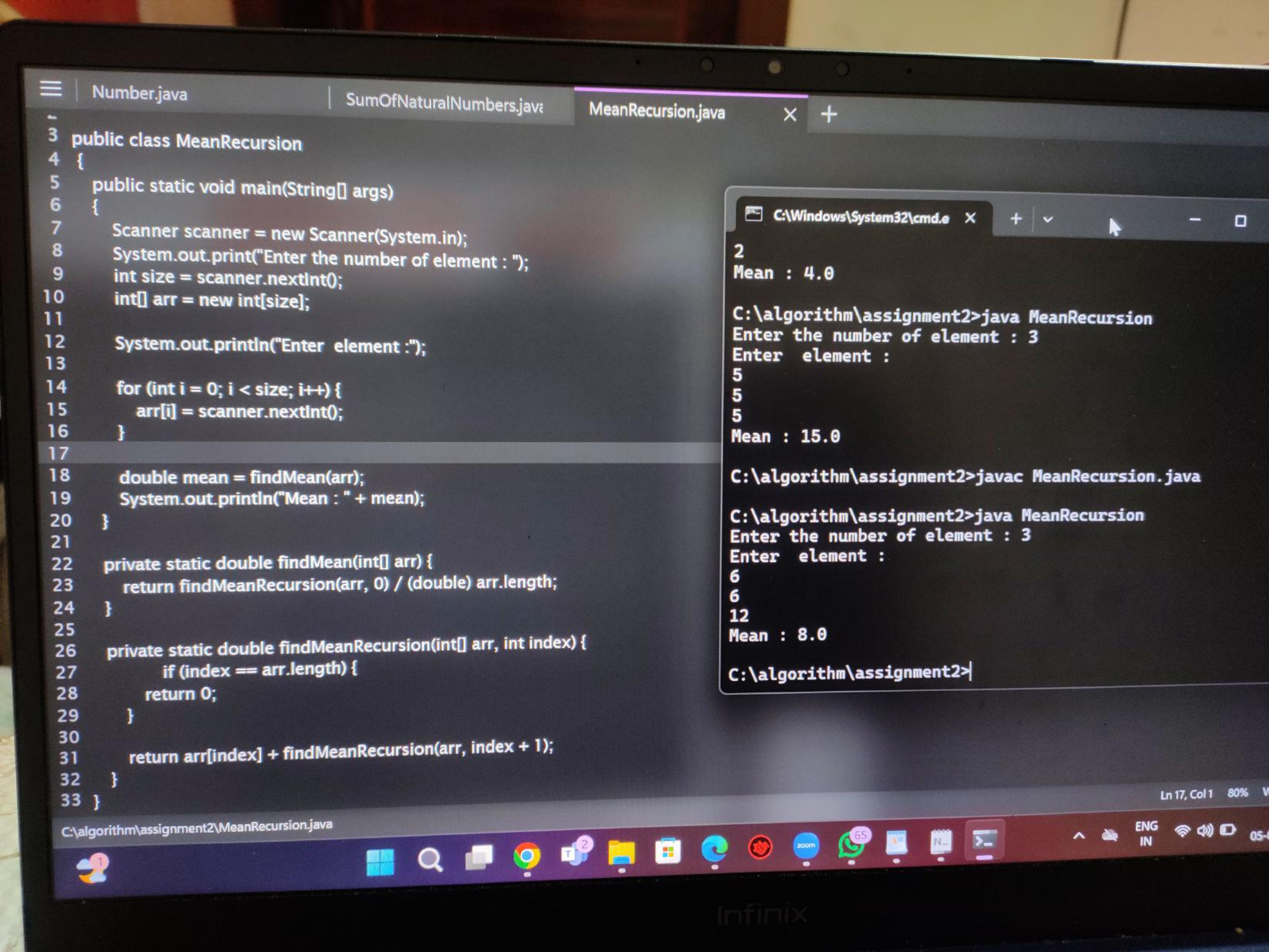
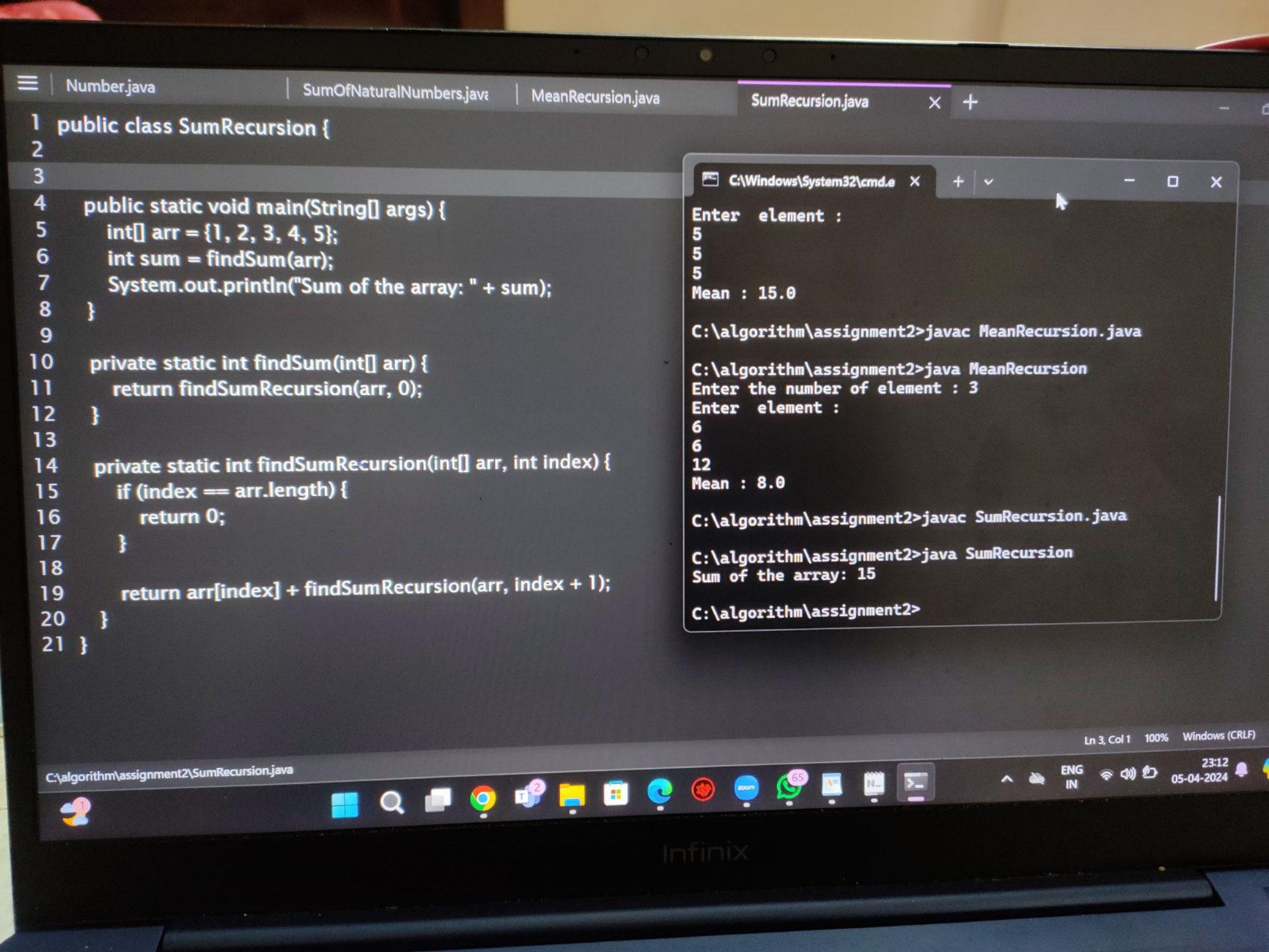
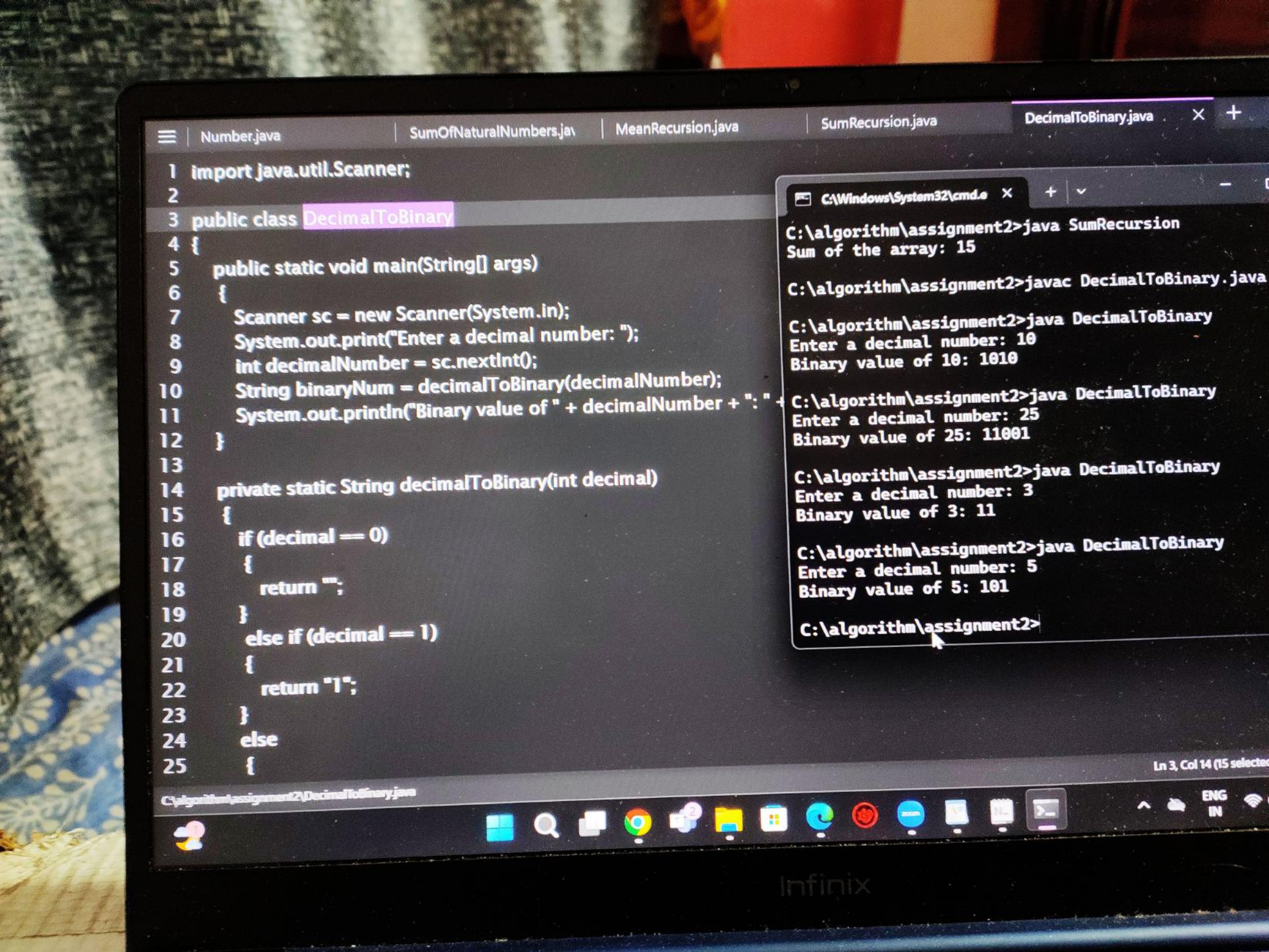

Number.java
1 public class Number
2 {
3
4 static void printNumbers(int number)
5 {
6 if(number<=0)
7 return;
8
9 printNumbers(number-1);
10 System.out.print(number + " ");
11 }
12
13 public static void main(String[] args) {
14 int n = 20;
15 printNumbers(n);
16 }
17 }
C:\Windows\System32\cmd.e
Microsoft Windows [Version 10.0.22631.3374]
(c) Microsoft Corporation. All rights reserved.
C:\algorithm\assignment2>javac Number.java
C:\algorithm\assignment2>java Number
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
C:\algorithm\assignment2>
Infinix


Number.java
SumOfNaturalNumbers.java
import java.util.Scanner;
public class SumOfNaturalNumbers
{
public static int sumOfNaturalNumbers(int n)
{
if (n == 1)
{
return 1;
}
else
{
return n + sumOfNaturalNumbers(n - 1);
}
}
public static void main(String[] args) {
Scanner sc = new Scanner(System.in);
System.out.println("enter number");
int n = sc.nextInt();
int sum = sumOfNaturalNumbers(n);
System.out.println("Sum of first " + n + " natural number : " + sum);
}
C:\Windows\System32\cmd.e
location: class SumOfNaturalNumbers
SumOfNaturalNumbers.java:16: error: cannot find symbol
Scanner sc = new Scanner(System.in);
^
symbol: class Scanner
location: class SumOfNaturalNumbers
2 errors
C:\algorithm\assignment2>javac SumOfNaturalNumbers.java
C:\algorithm\assignment2>java SumOfNaturalNumbers
56
Sum of first 56 natural number : 1596
C:\algorithm\assignment2>javac SumOfNaturalNumbers.java
C:\algorithm\assignment2>java SumOfNaturalNumbers
enter number
5
Sum of first 5 natural number : 15
C:\algorithm\assignment2>
Ln 18, Col 44
100%
Windows (CRLF)
C:\algorithm\assignment2\SumOfNaturalNumbers.java
ENG
IN
20:37
05-04-2024
Infinix


Number.java
SumOfNaturalNumbers.java
MeanRecursion.java
public class MeanRecursion
{
public static void main(String[] args)
{
Scanner scanner = new Scanner(System.in);
System.out.print("Enter the number of element : ");
int size = scanner.nextInt();
int[] arr = new int[size];
System.out.println("Enter element :");
for (int i = 0; i < size; i++) {
arr[i] = scanner.nextInt();
}
double mean = findMean(arr);
System.out.println("Mean : " + mean);
}
private static double findMean(int[] arr) {
return findMeanRecursion(arr, 0) / (double) arr.length;
}
private static double findMeanRecursion(int[] arr, int index) {
if (index == arr.length) {
return 0;
}
return arr[index] + findMeanRecursion(arr, index + 1);
}
}
C:\Windows\System32\cmd.e
2
Mean : 4.0
C:\algorithm\assignment2>java MeanRecursion
Enter the number of element : 3
Enter element :
5
5
5
Mean : 15.0
C:\algorithm\assignment2>javac MeanRecursion.java
C:\algorithm\assignment2>java MeanRecursion
Enter the number of element : 3
Enter element :
6
6
12
Mean : 8.0
C:\algorithm\assignment2>
Ln 17, Col 1
80%
C:\algorithm\assignment2\MeanRecursion.java
ENG
IN
Infinix


Number.java
SumOfNaturalNumbers.java
MeanRecursion.java
SumRecursion.java
public class SumRecursion {
public static void main(String[] args) {
int[] arr = {1, 2, 3, 4, 5};
int sum = findSum(arr);
System.out.println("Sum of the array: " + sum);
}
private static int findSum(int[] arr) {
return findSumRecursion(arr, 0);
}
private static int findSumRecursion(int[] arr, int index) {
if (index == arr.length) {
return 0;
}
return arr[index] + findSumRecursion(arr, index + 1);
}
}
C:\Windows\System32\cmd.e
Enter element :
5
5
5
Mean : 15.0
C:\algorithm\assignment2>javac MeanRecursion.java
C:\algorithm\assignment2>java MeanRecursion
Enter the number of element : 3
Enter element :
6
6
12
Mean : 8.0
C:\algorithm\assignment2>javac SumRecursion.java
C:\algorithm\assignment2>java SumRecursion
Sum of the array: 15
C:\algorithm\assignment2>
Ln 3, Col 1
100%
Windows (CRLF)
C:\algorithm\assignment2\SumRecursion.java
ENG
IN
23:12
05-04-2024
infinix


Number.java
SumOfNaturalNumbers.ja
MeanRecursion.java
SumRecursion.java
DecimalToBinary.java
1 import java.util.Scanner;
2
3 public class DecimalToBinary
4 {
5 public static void main(String[] args)
6 {
7 Scanner sc = new Scanner(System.in);
8 System.out.print("Enter a decimal number: ");
9 int decimalNumber = sc.nextInt();
10 String binaryNum = decimalToBinary(decimalNumber);
11 System.out.println("Binary value of " + decimalNumber + ": "
12 }
13
14 private static String decimalToBinary(int decimal)
15 {
16 if (decimal == 0)
17 {
18 return "";
19 }
20 else if (decimal == 1)
21 {
22 return "1";
23 }
24 else
25 {
C:\Windows\System32\cmd.e
C:\algorithm\assignment2>java SumRecursion
Sum of the array: 15
C:\algorithm\assignment2>javac DecimalToBinary.java
C:\algorithm\assignment2>java DecimalToBinary
Enter a decimal number: 10
Binary value of 10: 1010
C:\algorithm\assignment2>java DecimalToBinary
Enter a decimal number: 25
Binary value of 25: 11001
C:\algorithm\assignment2>java DecimalToBinary
Enter a decimal number: 3
Binary value of 3: 11
C:\algorithm\assignment2>java DecimalToBinary
Enter a decimal number: 5
Binary value of 5: 101
C:\algorithm\assignment2>
Ln 3, Col 14 (15 selected
ENG
IN
Infinix

Number.java | SumOfNaturalNumb | MeanRecursion.java | SumRecursion.java | DecimalToBinary.java | SumOfDigit.java

```java
import java.util.Scanner;

public class SumOfDigit
{
    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter  number: ");
        int number = sc.nextInt();
        System.out.println("Sum of digits of " + number + " : " + sumO
    }

    private static int sumOfDigits(int number)
    {
        if (number == 0)
        {
            return 0;
        }

        int lastDigit = number % 10;
        return (lastDigit + sumOfDigits(number / 10));
    }
}
```

C:\Windows\System32\cmd.e

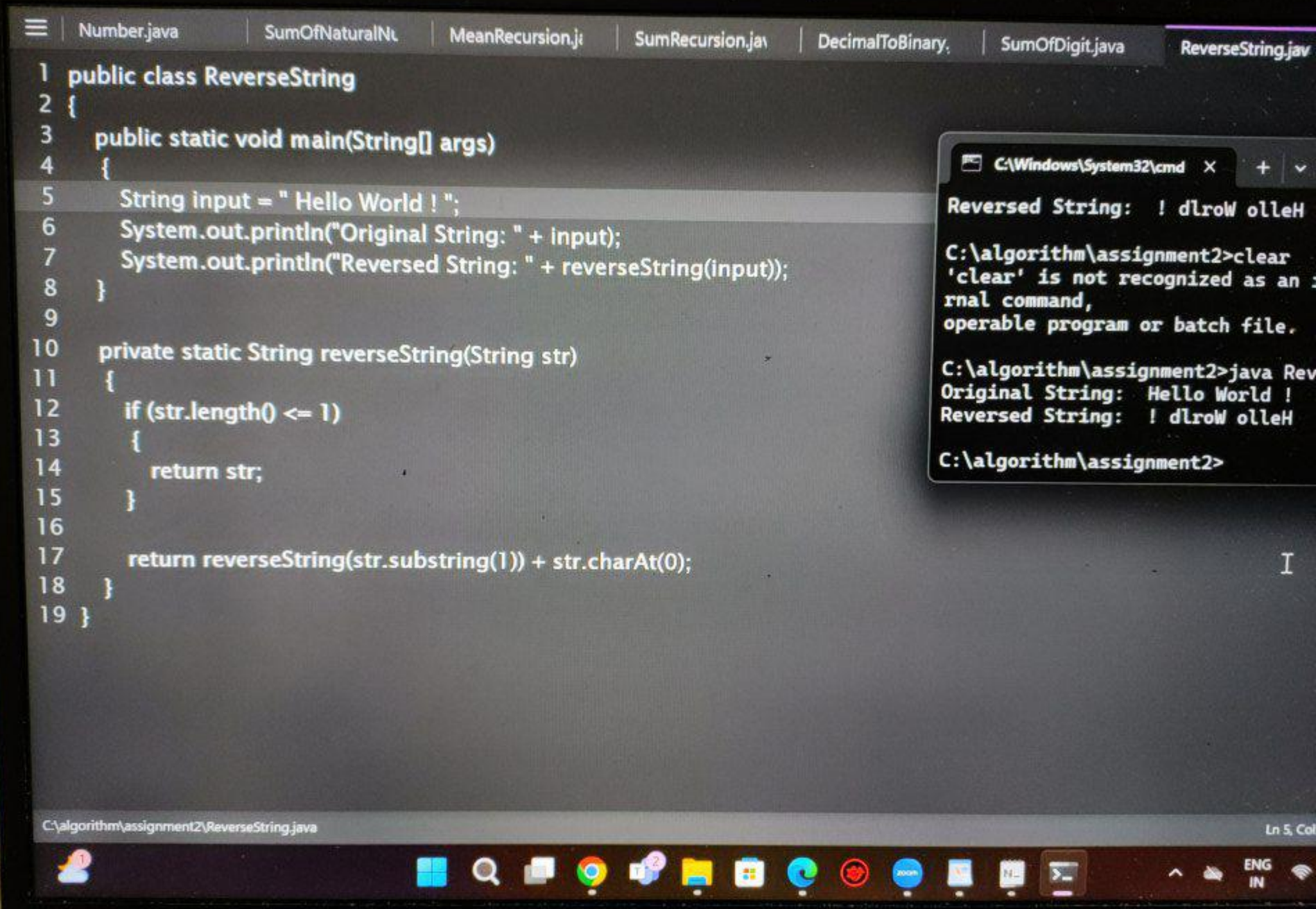
```
Binary value of 25: 11001

C:\algorithm\assignment2>java DecimalToBinary
Enter a decimal number: 3
Binary value of 3: 11

C:\algorithm\assignment2>java DecimalToBinary
Enter a decimal number: 5
Binary value of 5: 101

C:\algorithm\assignment2>javac SumOfDigit.java

C:\algorithm\assignment2>javac SumOfDigit
error: Class names, 'SumOfDigit', are only accepted
nnotation processing is explicitly requested
1 error

C:\algorithm\assignment2>java SumOfDigit
Enter  number: 67
Sum of digits of 67 : 13

C:\algorithm\assignment2>
```

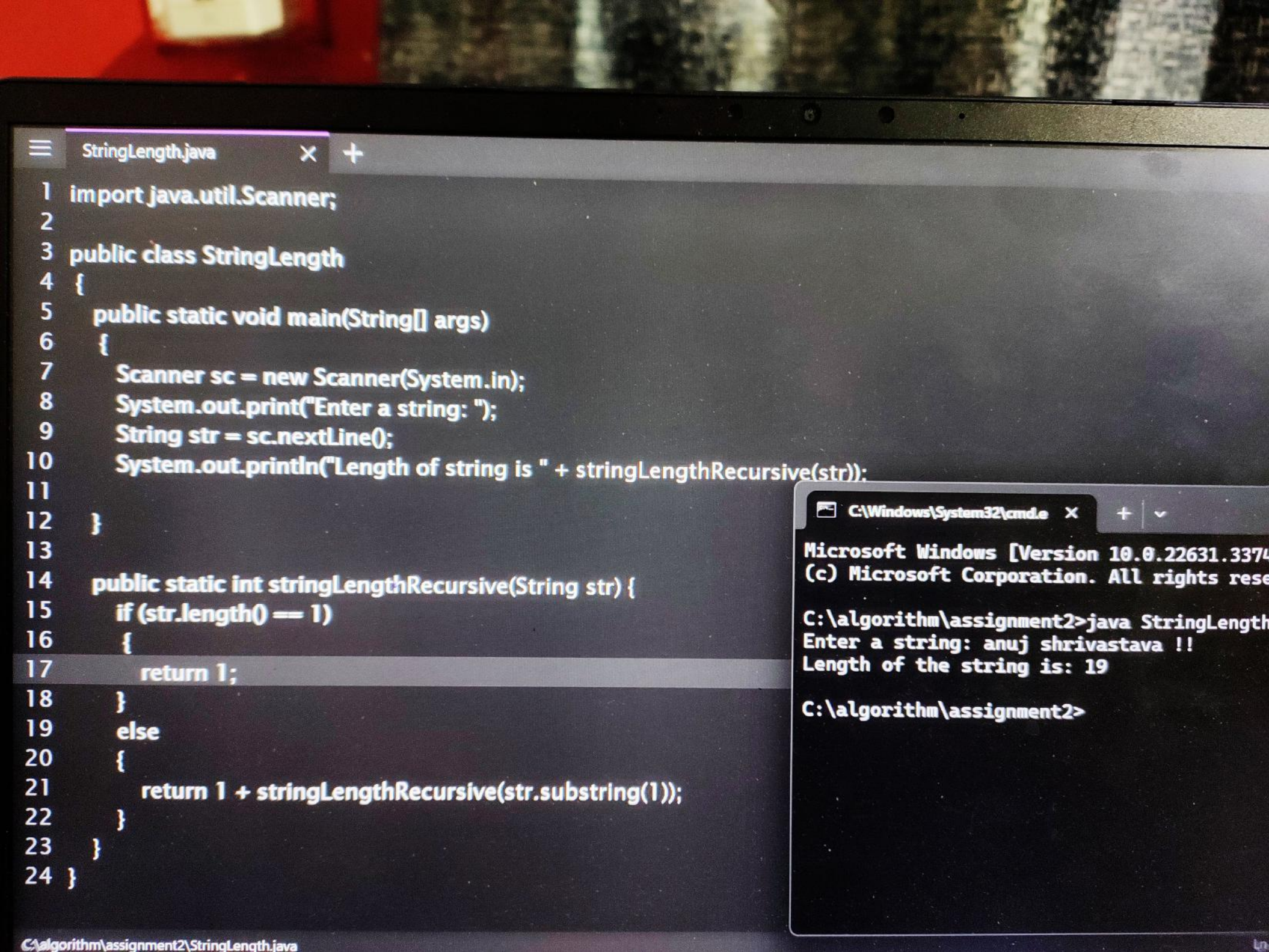
Ln 16, Col 9

C:\algorithm\assignment2\SumOfDigit.java

ENG
IN

Infinix


Number.java
SumOfNaturalNu
MeanRecursion.j
SumRecursion.jav
DecimalToBinary.
SumOfDigit.java
ReverseString.jav
1 public class ReverseString
2 {
3 public static void main(String[] args)
4 {
5 String input = " Hello World ! ";
6 System.out.println("Original String: " + input);
7 System.out.println("Reversed String: " + reverseString(input));
8 }
9
10 private static String reverseString(String str)
11 {
12 if (str.length() <= 1)
13 {
14 return str;
15 }
16
17 return reverseString(str.substring(1)) + str.charAt(0);
18 }
19 }
C:\Windows\System32\cmd
Reversed String: ! dlroW olleH
C:\algorithm\assignment2>clear
'clear' is not recognized as an
rnal command,
operable program or batch file.
C:\algorithm\assignment2>java Rev
Original String: Hello World !
Reversed String: ! dlroW olleH
C:\algorithm\assignment2>
C:\algorithm\assignment2\ReverseString.java
Ln 5, Col
ENG
IN

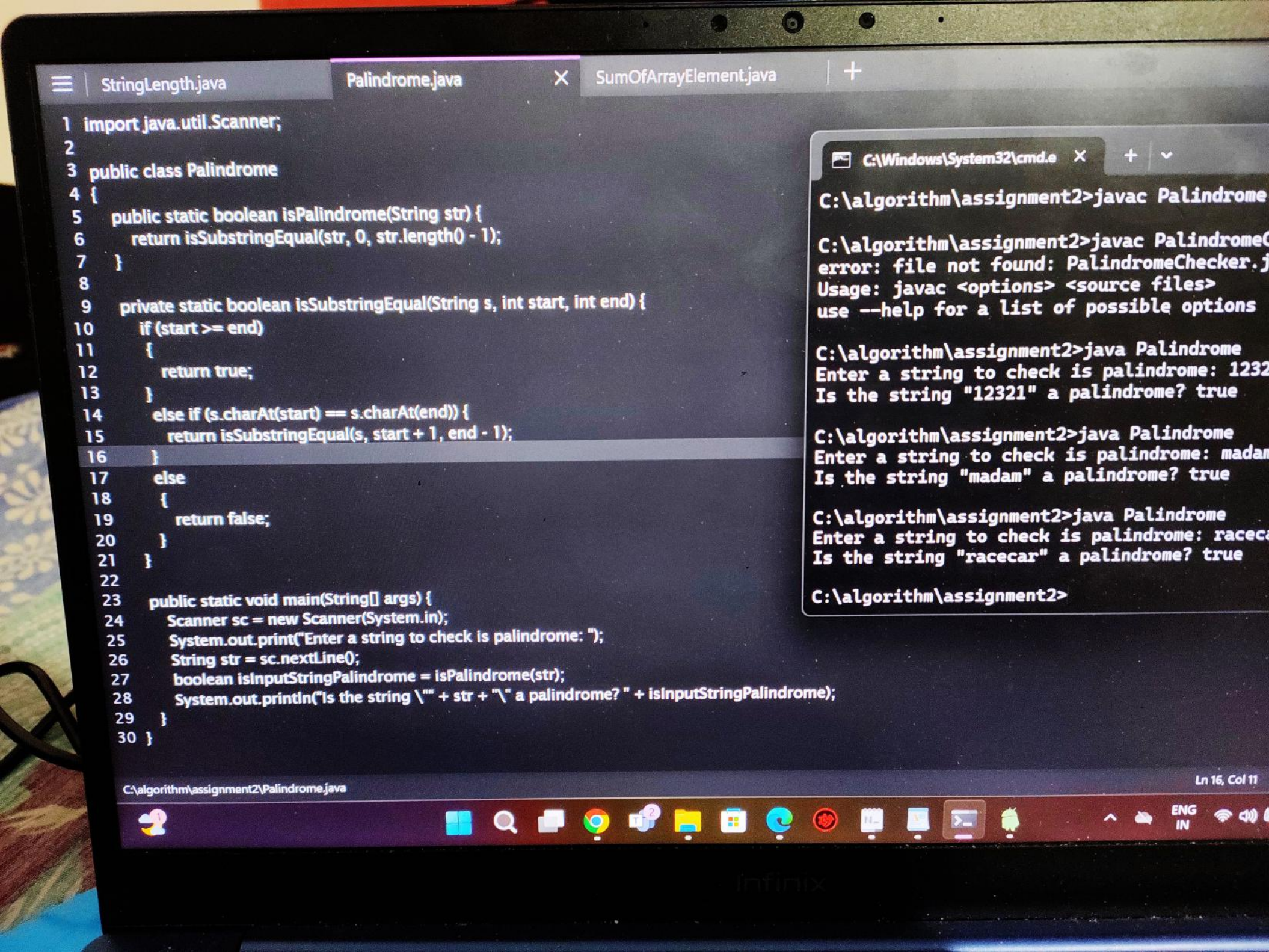

StringLength.java
1 import java.util.Scanner;
2
3 public class StringLength
4 {
5 public static void main(String[] args)
6 {
7 Scanner sc = new Scanner(System.in);
8 System.out.print("Enter a string: ");
9 String str = sc.nextLine();
10 System.out.println("Length of string is " + stringLengthRecursive(str));
11
12 }
13
14 public static int stringLengthRecursive(String str) {
15 if (str.length() == 1)
16 {
17 return 1;
18 }
19 else
20 {
21 return 1 + stringLengthRecursive(str.substring(1));
22 }
23 }
24 }
C:\Windows\System32\cmd.e
Microsoft Windows [Version 10.0.22631.3374
(c) Microsoft Corporation. All rights rese
C:\algorithm\assignment2>java StringLength
Enter a string: anuj shrivastava !!
Length of the string is: 19
C:\algorithm\assignment2>
C:\algorithm\assignment2\StringLength.java

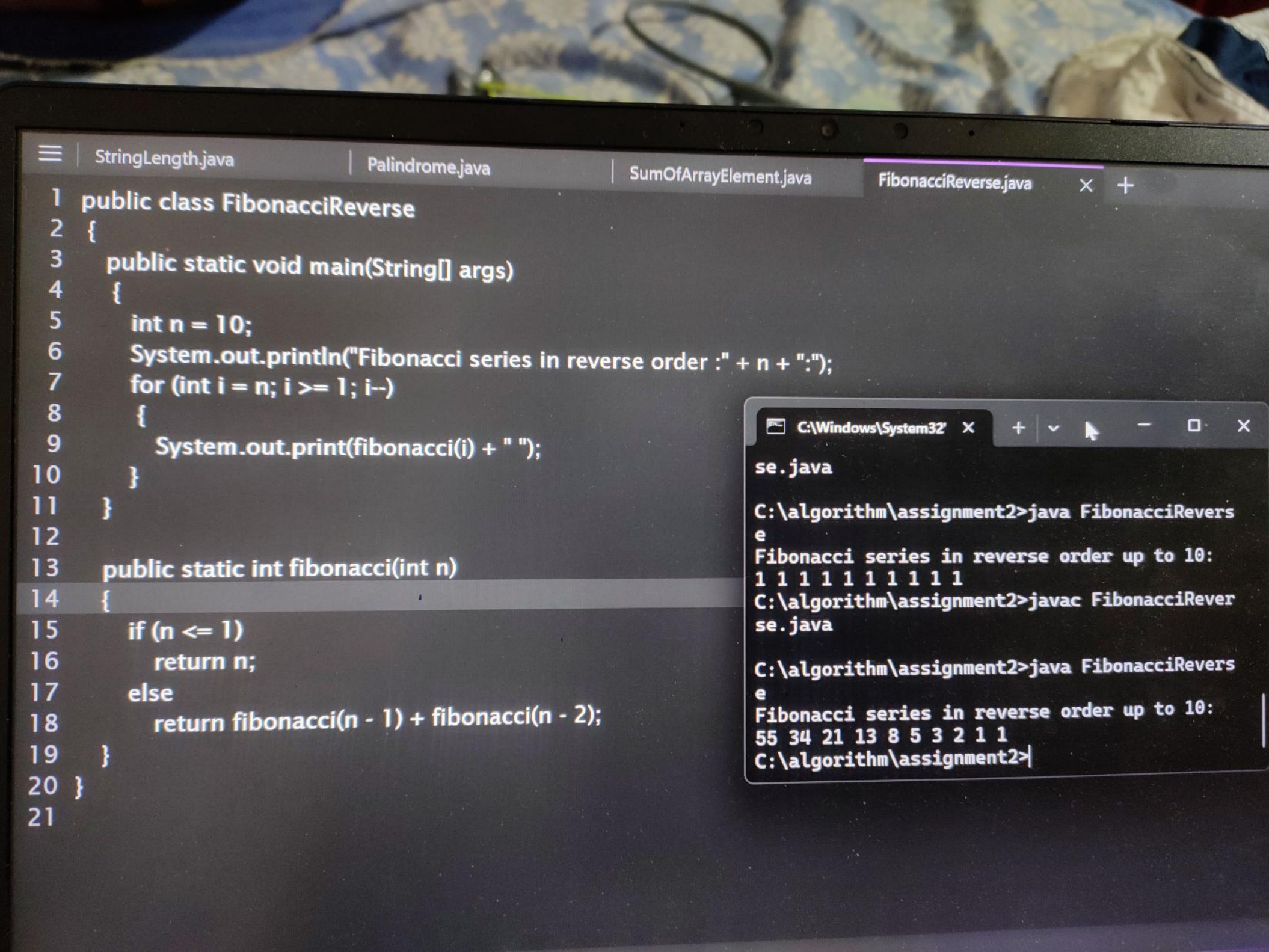
StringLength.java | Palindrome.java | SumOfArrayElement.java

```java
import java.util.Scanner;

public class SumOfArrayElement
{
   public static void main(String[] args)
   {
      Scanner sc = new Scanner(System.in);
      System.out.print("Enter the size of the array: ");
      int arrSize = sc.nextInt();
      int[] arr = new int[arrSize];

      System.out.println("Enter the elements of the array:");
      for (int i = 0; i < arrSize; i++)
      {
         System.out.print("element" + (i + 1) + ": ");
         arr[i] = sc.nextInt();
      }
System.out.println("Sum of array elements :" + calculateSumRecursive(arr, 0));
      }

   public static int calculateSumRecursive(int[] arr, int index)
   {
      if (index == arr.length)
      {
         return 0;
      }
      else {
         return arr[index] + calculateSumRecursive(arr, index + 1);
      }
   }
}
```

C:\Windows\System32\cmd.e

```
C:\algorithm\assignment2>javac SumOfArra

C:\algorithm\assignment2>java SumOfArray
Enter the size of the array: 2
Enter the elements of the array:
element1: 12
element2: 15
Sum of array elements :27

C:\algorithm\assignment2>
```


StringLength.java
Palindrome.java
SumOfArrayElement.java
1 import java.util.Scanner;
2
3 public class Palindrome
4 {
5 public static boolean isPalindrome(String str) {
6 return isSubstringEqual(str, 0, str.length() - 1);
7 }
8
9 private static boolean isSubstringEqual(String s, int start, int end) {
10 if (start >= end)
11 {
12 return true;
13 }
14 else if (s.charAt(start) == s.charAt(end)) {
15 return isSubstringEqual(s, start + 1, end - 1);
16 }
17 else
18 {
19 return false;
20 }
21 }
22
23 public static void main(String[] args) {
24 Scanner sc = new Scanner(System.in);
25 System.out.print("Enter a string to check is palindrome: ");
26 String str = sc.nextLine();
27 boolean isInputStringPalindrome = isPalindrome(str);
28 System.out.println("Is the string \"" + str + "\" a palindrome? " + isInputStringPalindrome);
29 }
30 }
C:\Windows\System32\cmd.e
C:\algorithm\assignment2>javac Palindrome
C:\algorithm\assignment2>javac PalindromeC
error: file not found: PalindromeChecker.j
Usage: javac <options> <source files>
use --help for a list of possible options
C:\algorithm\assignment2>java Palindrome
Enter a string to check is palindrome: 1232
Is the string "12321" a palindrome? true
C:\algorithm\assignment2>java Palindrome
Enter a string to check is palindrome: madam
Is the string "madam" a palindrome? true
C:\algorithm\assignment2>java Palindrome
Enter a string to check is palindrome: racec
Is the string "racecar" a palindrome? true
C:\algorithm\assignment2>
C:\algorithm\assignment2\Palindrome.java
Ln 16, Col 11
ENG
IN


StringLength.java
Palindrome.java
SumOfArrayElement.java
FibonacciReverse.java
public class FibonacciReverse
{
public static void main(String[] args)
{
int n = 10;
System.out.println("Fibonacci series in reverse order :" + n + ":");
for (int i = n; i >= 1; i--)
{
System.out.print(fibonacci(i) + " ");
}
}
public static int fibonacci(int n)
{
if (n <= 1)
return n;
else
return fibonacci(n - 1) + fibonacci(n - 2);
}
}
C:\Windows\System32
se.java
C:\algorithm\assignment2>java FibonacciRevers
e
Fibonacci series in reverse order up to 10:
1 1 1 1 1 1 1 1 1 1
C:\algorithm\assignment2>javac FibonacciRever
se.java
C:\algorithm\assignment2>java FibonacciRevers
e
Fibonacci series in reverse order up to 10:
55 34 21 13 8 5 3 2 1 1
C:\algorithm\assignment2>